Wealth Effects of Hedge Fund Activism

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Abstract

Do hedge funds add value to the companies they target or reap short-term benefits at the expense of others? This paper looks at the impact of shareholder activism on bondholders' wealth through the prism of bondholder-shareholder-manager conflicts as opposed to that of the activism literature, which exclusively focuses on the bilateral shareholder-manager conflicts. We use a comprehensive hand-collected database of activist SEC filings between January 1996 and March 2008. We run a battery of univariate and cross-sectional tests for the full sample and for different groups segmented by default risk, hedge fund activity, level and type of covenant protection, debt seniority and outcome of the activity. In the short-run, although we find some evidence that hedge funds transfer wealth from bondholders in the subsample of "investment-grade" bonds and "capital structure-related" activism, the expropriation is pronounced mostly for the "weakly protected" bonds and activism targeting shorter-term "strategic types of corporate changes". For the full sample and other subgroups we do not find that expropriation of wealth is a major source of stockholder gains. We show that the initial positive bond reaction is offset over extended time frames and that target bonds underperform their benchmarks starting one year after activist filing significantly by 3 percent to 5 percent *per year* for the full sample. Consistent with this finding, our results reveal that there is a greater incidence of downgrades than upgrades in the same time frame as return underperformance.

Keywords: Hedge funds, Shareholder activism, Managerial monitoring, Wealth expropriation, Corporate governance

JEL Codes: G34, G30, G23, G14

1 Introduction

Hedge funds appear to be the next generation activist investors in the arena that was once dominated by pension funds and mutual funds, however, the research in this area is still somewhat nascent. Activist hedge funds have shaken up boardrooms and forced radical changes at many publicly traded firms that they have invested in. They have successfully pushed firms for restructuring, sales, increased dividend payments, and other corporate actions that have directly benefited themselves and perhaps other shareholders. Overall, hedge funds are having an effect. However, what is good for them might not be good for the company nor for other stakeholders. In other words, hedge fund activism that benefits stockholders may not necessarily benefit bondholders.[1] Corporate finance theory suggests that there are potential agency conflicts among different classes of stakeholders in a firm and that some actions taken by management will benefit one class of stakeholder at the expense of others.

The decision by hedge funds to attack a firm is mostly associated with the intention of changing its financial and governance structure and ultimately increasing the value of its shares. General consensus until recently was that activist hedge funds are focused on a short-term strategy, intended solely to tally big profits by demanding quick value-enhancing changes — such as the sale of inefficient divisions, a split-up or sale of the company — in the target firms. Recent literature documents the positive wealth effects of hedge fund activism experienced by stockholders, but there is no evidence of its effect on bondholders.[2,3] Is the positive return to shareholders the result of a decrease in agency costs or the result of wealth expropriation from bondholders? Are hedge

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[1] Anecdotal stories about the potential influence of hedge fund activism on bondholders do exist. For example, it is reported that activist hedge fund managers pressing technology companies to hike debt levels or be acquired as part of a leveraged buyout is leading to poorer credit quality and transferring business risk to bondholders (www.thedeal.com, 2008). Similarly, in a letter sent to shareholders by the CSX (targeted by the activist The Children's Investment Fund) states that "*A close look reveals a concerning mix of bad math, flawed assumptions and half truths. Given that this group is attempting to replace five members of the CSX Board with its own block of nominees and has made numerous suggestions to reduce CSX's investment-grade debt rating to "junk" status, it is important to set the record straight*" (Reuters, 2008).

[2] For instance, Brav et al. (2006), Klein and Zur (2006), Clifford (2007) find that the announcement of hedge fund activism generates positive and significant excess stock returns in the short-run.

[3] One exception is the 2007 report by Moody's Investors Service, where the rating agency concludes that the expansion of shareholder power has been increasing potential credit risk, to the detriment of bondholders and long-term shareholders. For details, see Byrd et al. (2007).

funds allies in the pursuit of shareholder value, or are they speculators who seek to gain a short-term edge at the expense of the corporation and other owners?[4]

There are at least four reasons for our focus on the hedge fund industry. First, hedge funds can be seen as in the group of the most sophisticated and often most feared investors and rational arbitrageurs, and it is important to understand their contributions to capital markets. Second, it is viable that hedge fund activism does not create value for shareholders but just expropriates wealth from bondholders. A thorough investigation of bondholder reaction to activism is needed to further shed light on the issue. Third, evidence on bondholders may help us discriminate between competing hypotheses that could explain the observed stock return reactions — namely, the managerial monitoring hypothesis versus the wealth expropriation hypothesis. Although each of these hypotheses is consistent with a positive stock price reaction, the predicted bond price reaction is different. In particular, the managerial monitoring hypothesis implies that bond prices should increase, whereas the wealth transfer hypothesis implies that bond prices should decrease. Finally, as a general indicator of scale, the Hedgefund.net reveals that the hedge fund industry managed around $3 trillion at its peak in the summer of 2008.[5] With so much money in circulation, imposing new rules on the lightly-regulated hedge fund industry has been an important agenda for policy makers. We believe that examining the impact of hedge fund activism on securities other than common stocks is important to broaden our understanding of its policy-related implications.

The net effect of hedge fund activism on bondholders' wealth is theoretically not unambiguous and requires empirical resolution. On one hand, monitoring of managers by the activist hedge funds will be favorable to bondholders if the managerial incentive constraints are binding. On the other hand, the presence of such activist hedge funds can have an adverse impact on bond prices if it exacerbates the bondholder-shareholder conflict and leads to wealth redistribution.[6] We

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[4]Evidence suggests that corporate events are associated with significant wealth transfer effects between common stockholders and bondholders. Several papers have investigated the price movement of stocks and bonds around the announcement of corporate events like leveraged buyouts (Warga and Welch (1993)), share repurchases (Dann (1981)), spin-offs (Parrino (1997)), mergers and acquisitions (Billet, King and Mauer (2004), Low, Makhija and Sanders (2006)), dividend announcements (Handjinicolaou and Kalay (1984)).

[5]Hedgefund.net reports that total estimated assets managed by hedge funds decreased by 12.4% in the first quarter of 2009 to $1.69 trillion after peaking in the second quarter near $3 trillion. The first quarter decline follows a decline of falling 32.5% in 2008 and an increase of 32.9% in 2007.

[6]For instance, Cremers et al. (2007) show that large shareholders help bondholders by monitoring managers, but

carefully test the costs and benefits to bondholders from hedge fund activism and take into account the three-way interaction amongst bondholders, shareholders and managers using a comprehensive hand-collected database of activist SEC filings between January 1996 and March 2008.

We find that target bondholders earn a significantly positive mean excess return of 2.01 percent during the nine-day announcement period surrounding the announcement. Our study identifies a rich set of differences in target bond returns when we segment the sample by several bond and activism characteristics. Stratifying the data into two broad categories of hedge fund activity — general and specific — we find that bondholders of firms targeted by hedge funds with a specific action plan experience larger excess bond returns than firms targeted by hedge funds without a specific plan. Activism that targets governance-related issues — such as replacing CEOs, curbing CEO compensation, seeking board representation — is associated with the largest positive excess bond returns. In contrast, activism aimed at changing business strategies in target firms — including the quick sale of all or part of target assets, spin-offs, mergers with other companies — generates an average loss of -1.25 percent. Moreover, we classify the outcomes of activism events as successful and unsuccessful and look at the abnormal returns around the announcement period of the activism in an attempt to see whether the initial reaction depends on the outcome of targeting. We find no direct evidence that the initial impact of hedge fund activism on bondholders' wealth depends on the outcome of the targeting.

The influence of activism should be greatest for firms with greater financial risk, as they are closer to the default boundary. This asymmetry is derived, in part, from the fact that bondholders with noninvestment-grade debt stand to reap greater benefits if the bond is upgraded and realize less of a downside loss if it is downgraded since the debt already carries a low rating. By contrast, investment-grade bonds recognize little advantage if it is upgraded but substantial risk if the bond is downgraded. To examine this premise, we break down the data into investment- and noninvestment-grade bonds based on the individual bond's ratings and find that bond returns are related to this designation. Consistent with this prediction, we show that while investment grade target bonds experience an average loss of -1.46 percent, below investment-grade target bonds experience an

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their presence also increases the likelihood of hostile takeovers that can hurt bondholders.

average gain of 2.18 percent around the event period.

To measure the extent to which a particular bond issue is protected by the actions of other stakeholders of the target firm, we construct a "covenant protection index" in the spirit of the governance index constructed by Gompers et al. (2003). We find that bonds with strong covenant protection experience statistically significant positive abnormal returns; bonds with weak covenant protection, however, suffer wealth losses, consistent with Asquith et al. (1990) and Billett et al. (2004). We also observe that the bonds with investment restrictions notably have the most positive excess event-returns compared to other subgroups of covenants.

And, in a related vein, we uncover the impact of activism on target bondholders over longer post-event windows — up to two years. We show that the initial positive bond reaction is offset over extended time frames and that target bonds significantly *underperform* their benchmarks starting one year after activist filing, by 3 percent to 5 percent *per year.* Consistent with this finding, our results reveal that there is a greater incidence of downgrades than upgrades in the same time frame as return underperformance. Comparing the rating changes of our sample bonds with that of a peer group, within the same industry and with the same credit rating at the time of the activism, we find a significant difference in the rating changes between these two groups — the target bonds have a higher likelihood of credit rating downgrade than their non-target peers. We conclude that activist hedge funds do not create value for bondholders in the long-run; instead they just create a temporary price shift in short-run bond prices.

In sum, (1) in the short-run, although we find weak evidence that hedge funds transfer wealth from bondholders in the subsample of "investment-grade" debt and "capital structure-related" activism, the bondholder losses for these subgroups can at best comprise a small percentage of about 4 to 11 percent of the equity gain; (2) for activism targeting "strategic types of corporate changes" — such as proposals to sell some or part of target assets, to spin-off, or to merge with another company — and for the "weakly protected" bond series, we observe that the wealth transfer hypothesis can account for a fraction as high as 29 percent and 18 percent, respectively, of the wealth gains experienced by shareholders; (3) overall, for the full sample and other subgroups, we do not find that expropriation of wealth is a major source of stockholder gains in the short-run;

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(4) by contrast, target bonds underperform their benchmarks within one year after the activism; (5) consistent with the long-run results, we find that target bonds are more likely to have their debt ratings downgraded than upgraded one year after the event day.

We organize the paper as follows. Section 2 provides a broad overview of activism and develops the testable hypothesis regarding the effect of hedge fund activism on target firm bondholders. Section 3 describes the data, sample construction and methodology and provides the descriptive statistics. Section 4 discusses the empirical tests and results. Section 5 reports the results from further robustness checks, and Section 6 concludes.

2   Activism, Monitoring and Agency Cost of Debt

A long-standing literature examines the implications of bondholder–shareholder conflicts for the agency cost of debt. As is well known, agency costs of debt arise because bondholders can be hurt by excessive payouts to shareholders; by claim dilution due to subsequent issuance of debt of higher priority; by asset substitution involving a shift toward high risk projects that benefit shareholders (Jensen and Meckling (1976)); by under-investment when firms forego positive NPV projects if they principally benefit the bondholders (Myers (1977)); and, by acquisitions that increase leverage and affect debt seniority (Warga and Welch (1993)).

However, in practice, because of the separation between corporate ownership and control, managers have a major influence on the operational, investment, and financial decisions of the firm. Managerial agency risk arises for outside investors because managers have the propensity to engage in self-serving behavior, and there is asymmetric information between insiders and outsiders (e.g., Jensen and Meckling (1976) and Holmstrom and Tirole (1989)). Moreover, shareholders cannot costlessly separate corporate managers involuntarily from control. Such separation typically requires a successful proxy motion by shareholders (Fluck (1999)); or a takeover (Shleifer and Vishny (1986)); or bankruptcy (Zwiebel (1996)). Managers can therefore entrench themselves because of transaction costs in shareholder activism, in the market for corporate control, and in the bankruptcy process.

Entrenchment allows self-interested managers significant flexibility to pursue their own agenda, and they can threaten bondholder interests in a variety of ways. In particular, risky investment choices by entrenched managers to increase the size of assets under their control, i.e., 'empire-building' (Jensen (1986, 1993) and Stulz (1990)) can increase the default risk. Furthermore, existing bondholders will be hurt if management issues senior debt to finance these risky investments. Finally, entrenched managers may exploit their control over financial and investment policy to indulge in self-dealing that reduces liquid assets and endangers debtors.

The rationale for shareholder activism surfaces from the necessity to become active monitors and resolve the manager-shareholder agency conflicts inherent in target corporations. Monitoring of managers by large institutional investors, and in our case by the activist hedge funds, would increase the value of the firm's assets by preventing waste of free cash flow, and by pushing the firm to take value-enhancing actions (Barclay et al. (1992), Bhojraj et al. (2003)), and by guarding against opportunistic managerial behavior like perquisite consumption, overcompensation, shirking of effort and other actions that decrease firm value. All in all, better managerial decision-making and limited opportunistic behavior benefit all stakeholders of the firm. Hence, if activism is perceived to have a positive influence on the value of the firm, both shareholders and bondholders should react positively to the announcement of targeting (since both parties will benefit from the increase in firm value). Under the *managerial monitoring hypothesis*, we expect bond and stock prices to react positively to the announcement of activism.

Alternatively, activism can be detrimental to the value of corporate debt and induce redistribution of wealth between creditors and shareholders through large dividend payouts, investments in high-variance projects with negative NPVs, additional debt issuance, or redistribution of corporate assets to shareholders that could otherwise be used to service debt. This suggests that the previously documented positive shareholder reaction to activism may be partially financed by expropriating bondholder wealth. If activism is perceived to reap benefits at the expense of bondholders, then bondholders should react negatively to the announcement of targeting. Hence, the *wealth transfer hypothesis* predicts that changes in equity and bond values will be negatively correlated. Thus, we expect bonds to react negatively and stocks to react positively to the announcement of activism.

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Our test design maintains the distinction between these two types of predictions.

3   Data and Empirical Test Design

3.1   Data and Sample Selection

The Securities and Exchange Commission (SEC) requires that any person or entity that owns 5 percent or more of a public company's stocks file a schedule 13-D, within 10 days of purchasing the shares. Any change in the facts that are reported in the 13-D, such as an increase or decrease in the number of shares held, letters sent to management, etc., require that the person or entity report to the SEC through schedule 13-D/A, a 13-D amendment. Schedule 13-D contains information including the name and address of the filer(s), background information, the number of shares purchased and the percentage of the shares held by the filer(s). It also includes the method of purchase, the exact date of the transaction and the purpose of the transaction (Item 4), which is the most important section of the 13-D.[7] Another important section is the "Materials to be Filed as Exhibits" section. This contains any letters sent to management and elaborates on the 'Purpose of Transaction' section.

We hand-collect the list of activist hedge funds by first performing a search in Factiva for the text strings "activism", "hedge fund", "hedge fund and shareholder activist", "hedge fund and shareholder activism", and "hedge fund and 13-D". This search gives us approximately 140 activist hedge funds. We then examine the SEC Edgar database Schedule 13-D filings that were filed between January 1996 and March 2008 by these activist hedge funds. We identify around 1,610 13-D filings (and 1,762 issues targeted). From these 13-D filings we manually gather: (1) the date of the filing, (2) the number and the percentage of shares held, and (3) the purpose of the transaction. It is important to mention here that, while searching Factiva, we find some instances of hedge fund activism where the fund has not accumulated 5 percent of the shares of the target firm, such as Icahn vs. Time Warner and Pershing Squares vs. McDonald's.[8] We include in our sample all

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[7]The "Purpose of Transaction" section is the most important section of the 13D since it details exactly what the hedge fund is planning to do with its investment (whether to hold the stocks for investment or to pursue in "seeking strategic alternatives").

[8]Icahn Fund Ltd. accumulated 2.6 percent of Time Warner and Pershing Squares collected a 4.9 stake in McDon-

activism events, even if the hedge fund did not file a 13-D. For activism where a schedule 13-D has not been filed, we use the event date as the first date on which the instance of activism makes public headlines. Also, for the non-filers we get the percentage of the target firm's shares held by the fund from the public media. We further search Factiva to collect data on what happened after each event and read the subsequent 13-D filings and any letters sent to management demanding changes. For those that made public headlines, we additionally follow the stories and record the date on which a resolution was reached, either by a proxy contest or by a mutual agreement between the parties.

We obtain financial data on the target firms from COMPUSTAT, and the stock returns are obtained from the Center for Research in Security Prices (CRSP). Accounting and financial data is winsorized at the one percent and 99 percent levels to address the problem of extreme outliers. Finally, we retrieve information on bonds, covenants and credit ratings from the Mergent Fixed Income Securities Database (Mergent FISD) and real-time bond prices from TRACE. Our activism sample has 1,332 (1,610) [1,762] target firms (events) [issues] over a 12-year period from January 1996 to March 2008. From the sample of 1,332 firms, we find bond data for 579 firms covering 741 bonds outstanding.

3.1.1 Activism Characteristics

One instance of activism can target multiple issues. For example, an activist hedge fund might ask a firm to pay special dividends and may nominate a representative from the fund to the board of directors at the same time. Hence these are considered two separate issues but one instance of activism if they are addressed at the same time. There are 112 cases where one or more funds targeted the same firm, and 21 of those were targeted by more than two funds. In addition, there are 29 hedge funds taking an activist position in more than 10 firms.

Hedge fund activism can be divided into two broad categories. The first category is the "General" category where the intention of the activist hedge fund, as stated in the 13-D, is to keep communication with the management of the target firm open. The following excerpt taken from section four of a 13-D (the "Purpose of Transaction" section) is an example of such activism in

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ald's when they launced their activism attacks.

which the fund does not make any specific demands during the filing but keeps the option of communication with management open:

"*The Reporting Persons intend to review their investment in the Issuer on a continuing basis and may engage in discussions with management, the Board of Directors, other shareholders of the Issuer and other relevant parties concerning the business, operations, board composition, management, strategy and future plans of the Issuer.*"[9]

The second category of activism is the "specific" category, where the activist hedge fund files the 13-D and sends a letter to management asking for specific changes which can be further classified in well-defined categories: (1) governance-oriented issues including medium-term activities such as replacing bord members and top management, demanding seats on the target's board of directors, trimming executive compensation etc., (2) capital structure-related demands involving longer-term activities such as share buy-back programs, changes in dividend payouts, equity issuance etc. and (3) strategic alternatives including shorter-term plans such as the quick sale of the company, liquidation of assets, proposals to spin off underperforming divisions, pushing for mergers or acquisitions, etc. An example of aggressive activism would be Schedule 13-D filed by Third Point on July 17, 2006. They sent a letter to the Board of Directors of Sunterra Corporation in which they write the following:

"*We demand that you devote your full resources and attention to selling Sunterra – either in whole or in its two component pieces – as expeditiously as possible.*"[10]

Two detailed examples of general-purpose and specific-purpose activism are presented in Appendix A.

Moreover, specific types of activism can be a lengthy process, and there can be several communications and confrontations between the activist hedge fund and the management of the firm, sometimes leading to lawsuits. As an example, we consider the activism initiated by Nelson Peltz's Trian Fund on Heinz H.J. Company. In February 2006, Heinz became the target of hedge fund activism when Nelson Peltz started seeking co-investors to purchase sizeable stakes in the firm. In

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[9]Source: Schedule 13D filed by Pirate Capital LLC with the SEC on September 27, 2006, indicating a 5.7 percent stake in Glatfelter PH Co.

[10]Source: Schedule 13D filed by Third Point on July 17, 2006, indicating a 9.8 percent stake in Sunterra Corporation.

March 2006, the fund asked for five seats on the board of Heinz, which was initially rejected by the board and led the hedge fund to start a proxy contest. Finally, in September 2006, the results of the annual meeting were announced, and the hedge fund had won two out of the five requested seats. The details and a timeline of this activism is presented in Figure 1.

Hedge fund targets have not always been small firms. Activists have attacked giants such as Time Warner Inc., Blockbuster Inc., Heinz H.J. Co., Motorola Inc., Kraft Foods Inc., among others, to change business strategies. In addition, they have run proxy contests to gain seats on the boards of directors. A recent target of hedge fund activism is Kraft Foods. The activist hedge fund Trian Fund Management LP called on the company to focus on its grocery and frozen-foods brands, which include cheese and pizza, to sell its Post cereals and Maxwell House coffee businesses, and to use the proceeds from those sales to buy back shares. Such proposals or requests from hedge funds are not uncommon. In addition, hedge funds have confronted managers demanding changes in management and business strategies. Moreover, the public criticism of management has not always been polite.

3.1.2 Abnormal Bond Return Calculation

We use real-time bond data from TRACE to calculate abnormal bond returns. TRACE provides bond identification information as well as the date and time of execution, the price, the yield and the trade size. We eliminate 'cancelled', 'corrected' and 'commission trades' and convertible bonds from our sample. It should be noted that none of the bonds in our sample has contractual provisions such as callable or putable features that would have had an impact on their prices.

There are at least three concerns associated with using corporate bond data. The first concern pertains to the infrequent trading activity in corporate bond markets, which is likely to give rise to pricing errors. We address this issue by requiring that bonds trade on at least 10 of the 20 days prior to the event date to be included in our sample (e.g., Cai et al. (2007), Bessembinder et al. (2008)).

Another difficulty is that trading costs vary substantially by trade size (e.g., Edwards et al. (2007), Goldstein et al. (2007)) due to illiquid bond markets. If a bond issue is traded more than

once on the same day, using the closing price to construct the raw return can create noise in return calculations, especially if the last trade is small (Bessembinder et al. (2008)). Subsequently, for issues with more than one trade a day, we make use of all of the information reported for the day instead of relying on the last price. We do this by constructing a daily trade-weighted price, where the weights are the fraction of the day's total transactions accounted for by each trade. We calculate raw bond returns as:[11]

$$r_{it} = \frac{P_t - P_{t-1}}{P_{t-1}}$$

To deal with the problem of extreme outliers, we eliminate observations where the absolute value of the return is greater than 20 percent.

Several methodologies have been used in prior research to calculate abnormal bond returns. Bessembinder et al. (2008) test the mean-adjusted method versus the matching portfolio method and find the latter approach to be more powerful in detecting abnormal performance when it actually exists. Accordingly, we rely on the matching portfolio approach in calculating abnormal bond returns. Specifically, we first form benchmark portfolios and match bond i with one of these benchmark portfolios. We adopt two criteria to construct a benchmark bond portfolio. Our first approach is based on eight major categories of S&P's credit ratings (rating-adjusted). To take into account other bond characteristics besides ratings, we also adopt finer partitions and create benchmark portfolios based on rating categories and time-to-maturity (rating and maturity-adjusted). Since finer partitions reduce the number of matching bonds, we choose the number of benchmark portfolios to ensure a reasonable number of bonds in each portfolio. We split ratings sample into three categories (Superior: AA and above, Other Investment: BBB- to A and Speculative: <BBB-) and time-to-maturity in two categories using the mean time-to-maturity for our sample as our threshold. This gives us a total of six matching portfolios.[12] Then the abnormal return for bond i is the return on bond i in excess of the return on the matching bond portfolio within the same

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[11]For robustness, we also check our results using the last trade (closing) price reported in TRACE (cf. Section 5).
[12]We reexamined the results with the median time-to-maturity threshold for all bonds as well as separate maturity thresholds for investment and noninvestment-grade bonds. We obtain virtually similar results.

event window:

$$ABR_i = r_i^{target} - r_i^{match}$$

where ABR_i is the benchmark-adjusted abnormal bond return, r_i^{target} is the raw return on bond i, and r_i^{match} is the raw return on the bond i's matching (benchmark) portfolio.

Finally, some of our sample firms carry multiple bonds outstanding. Building on earlier bond literature (e.g., Asquith and Wizman (1990)), we use two methods to address this concern:

$1-$ *All-bond sample:* We treat each bond as a separate observation. However, given that many of the bond returns (issued by the same firm) are probably not independent of one another, this approach would overstate the t-statistics and more heavily weight firms with multiple issues in the sample (Eberhart et al. (2002)).

$2-$ *Weighted-average sample:* We treat each firm as a separate observation. The firm's bond-holder returns are measured as a weighted average (based upon market value) of the abnormal returns to the different bond issues:

$$ABR_k = \sum_{i=1}^{N} w_i ABR_i$$

where ABR_k is the weighted average abnormal bond return for firm k, N is the number of bonds outstanding for firm k, and w is the market value weight of bond i. Since the firm's bond returns are not perfectly correlated, this approach corrects the statistical dependence, but it inflates the standard errors and biases the t-statistics downward.[13] A partial summary of bond event studies and methods used to calculate abnormal bond returns is presented in Appendix B.

3.1.3 Abnormal Stock Return Calculation

We measure shareholder excess returns as (i) the market-adjusted return which is the difference between the target companies' daily return and the return on the NYSE/AMEX/NASDAQ value-weighted market index (ii) the size-adjusted return which represents the difference between the

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[13] We also used a r*epresentative bond approach,* where we selected one bond per target based on the median time-to-maturity (Asquith and Wizman (1990)) to rectify this problem.

target firm's return and the mean return for all firms in the same CRSP size decile. Figures 2 to 4 plot the -22 to +22 trading day raw cumulative abnormal returns (CARs) for stocks and the CARs for investment and non-investment grade bonds. We notice that the market's reaction to the activism starts before the announcement date. The early reaction pattern indicates that news tends to be leaked to the market prior to the event date (13-D filing date).

3.1.4   Descriptive Statistics

Table 1 presents the statistics on percentage ownership stakes of the activist hedge funds in target firms. It also presents the holdings of the top five activists. The average ownership of hedge funds in the target firms is 10.5 percent, and the median is 6.74 percent. Table 2 presents the distribution of the activism by year and the programs/issues the activist hedge funds engaged in or addressed. We observe a considerable variation in the types of issues targeted by the activist hedge funds over our sample period. We group the purposes of activism in a number of well-defined categories: (1) general statement of value maximization, (2) governance-related issues, (3) strategic alternatives, (4) capital structure-related issues. It is noteworthy that activist demands are not mutually exclusive, as one activist event could target multiple issues. Of the 1,762 targeted issues, 925 have only a general statement of "communication only" in their purpose of transaction and fall in our "general" category of activism, whereas 837 fall in our "specific" category. We observe that activist funds pursue strategic alternatives and governance-oriented issues more frequently. The table also shows that hedge fund filings grow in number, especially after 2003.

For each target firm, we construct a peer group of non-target firms in the same industry, size and book-to-market batch. Table 3 displays some salient characteristics of target and matched peers in the year before activism. When compared to their respective peers, target firms are smaller (in market value of equity), more profitable (in terms of the ratio of EBITDA to total assets) and less levered. Target firms also exhibit significantly lower average market-to-book ratios and payout ratios and cash than their peers.

Table 4 reports summary statistics of target bonds. The predominant majority of bonds are senior with a median offering amount of $253 million and a median maturity of 10 years. All target

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bonds in our sample except one have at least one or more covenant restrictions; the average target bond has around 7 covenants. Around 36 percent of the bonds have covenants that restrict the issuers' freedom to make payments to shareholders. Only 7.65 percent of our sample bonds have covenants that restrict the issuer to the amount of senior debt it may issue. Moreover, only 27 percent of target bonds have covenants that require the issuer to use net proceeds from the sale of certain assets to redeem bonds. Additionally, 73 percent of the overall sample have restrictions on asset sales, around 78 percent have investment restriction, 53 percent have put provisions, and 86 percent have merger restrictions. The S&P bond ratings are converted to a numeric scale in which NR = 23, D = 22,..., and AAA = 1. The average bond rating is 12.4, which corresponds to a rating between BB+ and BB; the median rating is BB+, which is the highest noninvestment-grade rating. The average number of bonds per target firm is 1.62 bonds.

4 Results

A direct way of gauging the impact of hedge fund activism can be achieved through analyzing stock and bond price reaction together around activism announcements. If successfully scoped, activism can mitigate agency problems between different classes of stakeholders including bondholders, shareholders and managers. Activist hedge funds can help bondholder interests by ameliorating the risk (for bondholders) of opportunistic shareholder and managerial behavior, if they use their clout to press for better governance and value-increasing policies — such as improving board independence, dislodging underperforming managers, addressing excess cash flow problems. Related to this argument, improved monitoring and subsequently lower bondholder-shareholder-manager agency conflicts lowers the likelihood of default and enhances both shareholder and bondholder value so that changes in bond and stock values will be positively related.

Hedge fund activism with greater shareholder power can also unfavorably affect bondholders, as it may increase the probability and expected costs of bankruptcy and cause expropriation of wealth from bondholders through several channels — by increasing leverage, lowering the priority of their claims, etc. (Kim and McConnell (1977), Ghosh and Jain (2000)). Consistent with this premise,

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wealth expropriation predicts that changes in bond and stock values will be negatively related.

As we discussed in Section 3, for the bond sample, we have two different sampling procedures at the firm level ('all-bond' and 'weighted-average') and two different methods to construct benchmark-adjusted abnormal bond returns ('rating-adjusted' and 'rating and maturity-adjusted'). We test the effect of activism on bondholders in several ways. It is useful to start with the univariate short-run results that help provide an initial view (on the reaction of bondholders) for the full sample. To facilitate a comparison of the results across different samples, we then segment our sample along some important dimensions and examine the observed return dynamics around the announcements of activism. These results are then refined by the multivariate framework. We next attempt to examine the long-run return results to understand the relative strength of wealth transfer and monitoring hypotheses over longer time horizons. Finally, we supplement the long-run return results with the changes in debt ratings of the target firms one year after activism.

4.1 Short-run Results

4.1.1 Abnormal Bond Returns for the Full Sample

The top panel of Table 5 presents the all-bond and weighted-average bond returns (benchmark-adjusted) for the overall sample and robust test statistics to determine whether these returns are significantly different from zero for the nine-day event window, where day 0 is the 13-D filing date.[14] We choose a [-7,+1] announcement window surrounding the event date as our announcement period, because consistent with earlier work (Brav et al. (2008)) the return run-ups (or run-downs) accrue before the filing date (cf. Figures 2-4).[15] For the all-bond sample, we find that target bonds on average earn positive excess returns ranging from 1.67 percent to 2.01 percent and a positive abnormal stock return ranging from 4.77 percent to 5.37 percent during the same event window, all significant at the one percent level or higher. For the weighted-average sample, the results paint a picture that is very similar to what is seen in the all-bond sample. Untabulated results also reveal

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[14]Because the TRACE starts in the second half of 2002, the results reported in Tables 5-10 use activism data between July 2002-March 2008. However, in robustness tests we also attempted to use bond prices retrieved from Datastream from January 1996 to March 2008 (cf. Section 5).

[15]The results (not reported for brevity) are robust to other event windows including [-5,+5] and [-10, +1], [-5,+3] and available from the authors upon request.

that the Pearson correlation coefficients between the changes in stock and bond values are positive and significant at the one percent level or above.

While the full sample results point in the direction of no wealth expropriation from bondholders, these results might not be universal. Next, we break up our data into sub-samples based on different characteristics in an effort to differentiate the specific sources of return reaction and to make the analysis more comprehensive. This task is undertaken in the subsequent subsections.

4.1.2   Impact of Default Risk

Target bonds face changes in their financial risk as the likelihood of default and their priority with regard to claims on assets may change after activism. However, shifts in the probability of default for investment-grade bonds are likely to have a different impact on bond value than a similar change in probability of default for noninvestment-grade bonds. To study this possibility we use bond ratings to proxy for default risk, and we break down the sample into two subsets: firms with investment- and firms with noninvestment-grade bonds at the time of the announcement.[16]

Following prior literature, we classify bonds with ratings of BBB- and higher as investment grade, and all other bonds as non-investment grade. Interestingly, Panel A of Table 6 reveals that for the all-bond sample, investment-grade bonds suffer a loss, in the range of -1.32 percent to -1.46 percent, and noninvestment-grade bonds gain with abnormal performance ranging from 2.15 percent to 2.18 percent, all significant at the one percent level.   Similarly, using the weighted-average sample, we find the mean excess returns to be somewhat lower but still significant. The differences in mean excess returns between investment-grade bonds and noninvestment-grade bonds are significant at respective levels. These results are in line with those in the Billett et al. (2004) study using similar bond rating segmentation to examine the effects of mergers and acquisitions on target and acquiring firm bondholders and find that below (above) investment-grade target bonds earn significantly positive (negative) announcement period returns. Gains to noninvestment-grade debtholders is consistent with the notion that companies with greater financial distress stand to

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[16]In our sample, there are no target firms with multiple bond issues that are rated both investment and non-investment grades.

benefit more from value-enhancing policies and better monitoring by hedge funds since they are closer to the default boundary. That is, bondholders with noninvestment-grade debt stand to reap greater benefits if the bond is upgraded and realize less of an downside loss if it is downgraded since the debt already carries a low rating. By contrast, investment-grade bonds recognize little advantage if it is upgraded but substantial risk if the bond is downgraded.

Turning to stock returns, the mean abnormal returns to stockholders in firms with investment-grade and noninvestment-grade debt are positive and significant. For example, the average nine-day market-adjusted return is about 6.19 percent (significant at the five percent level) for firms rated investment-grade and about 5.12 percent (significant at the one percent level) for firms rated noninvestment-grade at the time of the announcement. The pattern is similar for the size-adjusted stock returns, although the means are slightly lower yet economically significant. To better distinguish between the competing hypotheses, we examine the correlation between bond and stock returns and find a significant positive relation for the noninvestment sample and a negative but only marginally significant relation in the investment-grade subsample. The positive excess stock and bond returns are consistent with the managerial monitoring hypothesis for firms with noninvestment-grade debt. However, negative bond returns and positive stock returns for firms with investment-grade debt suggest that the gains obtained by stockholders may be largely at the expense of bondholders. Although overall results are intriguing, the weak correlation between investment-grade bonds and equity returns leaves open the question of whether primary impetus for hedge fund activism is the exploitation of debtholders. We investigate this question in greater detail through rigorous multivariate testing in Subsection 4.2.

4.1.3 General versus Specific Activism

As noted earlier, hedge fund activism can be divided into two broad categories. General action plans cover events where hedge funds target more general issues without making any specific demands from the firm (for instance, they just ask the firm to take action to maximize or enhance shareholder value). In contrast, specific targetings include activism events where the funds have more specific plans or proposals. Because bondholders may have limited upside potential and significant downside

risk in some forms of corporate activity, different issues shaping the activism agenda are likely to have different effects on bond returns. For instance, mergers, share repurchases, dividends and other payout mechanisms that reduce cash and other assets that would otherwise be used by target companies to service debt obligations will more likely be motivated by changes in wealth transfers from bondholders to stockholders (Shleifer and Summers (1988)).

Panel B of Table 6 reports announcement returns by activism category including the three broadly stated objectives classified in Section 3. For the all-bond sample, the first row and second column of Panel B shows that activism without revealing any specific action plans generates an average return of 0.95 percent (significant at the one percent level), while activism with strategic alternatives — such as the sale of the target, mergers, acquisitions or spinoffs — generates a loss of −1.25 percent (significant at the one percent level). The latter finding is consistent with the notion that risk-increasing strategies lower bond values by shifting the probability and expected costs of bankruptcy as well as lowering the priority of bondholders' claims. Similarly, activism targeting capital structure issues leads to small losses in excess bond returns, in the range of −0.87 percent to −0.98 percent at the time of the announcement. Turning to row 3 of the same panel, we observe an excess bond return of about 2.74 for activism targeting governance-oriented issues, which is in line with the managerial monitoring hypothesis since bondholders are seen to gain when hedge funds push for better governance. The average size-adjusted abnormal stockholder returns are 6.14 percent for strategic alternatives, 3.12 percent for capital structure, and 6.89 percent for governance-oriented activism. The bond return patterns are qualitatively similar for the weighted-average sample.

Overall, for general-purpose activism and governance-oriented activism we find no evidence of wealth expropriation. While significant negative bondholder returns and significant positive stockholder returns are consistent with a potential wealth transfer for activism aiming at two stated goals of specific categories — capital structure and strategic alternatives — on average the effect is small. The Pearson coefficient between stockholder gains and bondholder losses shows weak negative significance for the strategic alternatives and capital structure-related activism. Hence, we conclude that the question of whether debtholder losses are a principal source of the large gains

to stockholders for these subgroups requires further investigation in a multivariate setting.

4.1.4 Outcome of the Activism

Panel C of Table 6 breaks down the abnormal bond and stock returns by the outcome of the activism. The 'successful' sample includes all events where the funds get the changes demanded, whereas the 'unsuccessful' sample includes all events where the funds achieve partial changes or no success at all. The results indicate that for the full sample bondholders of successful targeting experience an abnormal return of 1.64 percent (significant at the five percent level), and bondholders of unsuccessful targeting experience an abnormal return of 0.87 percent (statistically insignificant) during the nine-day period surrounding the announcement of targeting. Similarly, stockholders of successful targeting experience an abnormal return (market-adjusted) of 5.26 percent (significant at the one percent level) in the nine-day event window surrounding the announcement date of targeting, while stockholders of unsuccessful targeting experience an abnormal return of 4.39 percent (significant at the ten percent level). However, the differences in returns are not statistically distinguishable from each other. This result suggests that the success of the activism is hard to predict based on the information available at the time of the event, and hence we do not see any significant difference in ex-ante abnormal returns based on ex-post success or failure.

4.1.5 Role of Covenants and Seniority

To address agency risk from shareholders, bondholders use covenants that restrict investment policy, subsequent financing policy, payout policy, and the firm's behavior during takeover bids and financial distress. However, including an ever-greater variety of restrictions is not always in bondholder interest (Smith and Warner (1979)). This is because covenants constrain management's ability to implement policies that improve the firm's operational position and reduce default risk. Thus, in the efficient contracting outcome, covenants will reduce but not generally eliminate the agency cost of debt.

By constraining management's proclivity for (inefficient) "empire building" ex post and ameliorating the agency risk faced by bondholders, protective covenants help align the interests of

bondholders with equityholders and reduce the cost of debt ex ante. For example, it is common for bondholders to receive payment at par when the firm undergoes change of ownership. It is also common for bonds to carry covenants that restrict sales of assets, issuance of new debt of higher priority or payment of dividends. However, even the most complex covenants cannot protect bondholders against every contingency, and the information required to determine whether a violation has occurred usually cannot be easily gleaned from the company's financial statements.

To measure the extent to which a particular bond issue is protected by the actions of other stakeholders of the target firm, we build a 'covenant protection index' in the spirit of the governance index constructed by Gompers et al. (2003).[17] We compile covenants in the bond indenture, and our index assigns one point for each covenant. To capture the strength of bond protection we classify a bond as having 'strong' ('weak') protection if the bond's indenture contains more (fewer) restrictions than the median number of covenants carried by all corporate bonds available in the FISD.

Using the Smith and Warner (1979) framework, we also classify the covenants into five major categories and code the bond as having a particular covenant if the bond contains one or more of the restrictions falling under that category. Restrictions on the subsidiary and parent company are both considered. A bond is coded as having an *investment restriction* if the bond's indenture includes at least one of the following covenants: restrictions on consolidation or mergers, indirect investment restrictions, bond is secured, there are stock sale restrictions or, direct investment restrictions.[18] *Subsequent financing restrictions* include restrictions on subordinate debt issuance, restrictions on sale and lease obligations, restrictions on debt priority, and stock issuance restrictions.[19] A bond

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[17]A similar approach is used by Bradley and Roberts (2003) to measure the covenant intensity bank loans.

[18]Merger restrictions are covenants that restrict a consolidation or merger by the issuing firm. A bond is coded as having an indirect investment restriction covenant if the bond's indenture includes at least one of the following covenants: restrictions on transactions with affiliates, fixed charge coverage, maintenance of minimum net worth, restrictions on redesignating subsidiaries, subsidiary fixed charge coverage ratio and after acquired property clause (that mandates that the property acquired after the current debt issue is sold would be included in the current issuer's mortgage).

[19]Debt priority restrictions include restrictions on funded debt, indebtedness, liens, and senior debt issuance of parent and subsidiary firms. The stock issuance restriction category includes restrictions on the issuance of stock and preference stock of parent and subsidiary firms. A bond is coded as having a subordinate debt covenant if the bond indenture includes one or more of the following restrictions: subordinate debt issuance, net earnings test, leverage test, subsidiary borrowings, subsidiary guarantees, subsidiary leverage test and negative pledge covenant (the issuer cannot issue secured debt unless it secures the current issue on a pari-passu basis).

is coded as having *dividend and payment restrictions* if the bond's indenture contains at least one covenant falling under dividend payment restrictions, restrictions on other payments. *Event restrictions* are coded as the change in control poison put and default-related events.[20]

It is important to note that type of covenant restrictions are not mutually exclusive since a bond can carry multiple protective restrictions. In untabulated results we observe that high default risk bonds (noninvestment-grade) use merger and asset disposition restrictions much more frequently than investment-grade bonds do. Turning to Table 6 (Panel D), we find that bonds with strong covenant protection gain value — consistent with Asquith et al. (1990) and Billett et al. (2004) — whereas evidence on those with weak protection is rather mixed. Specifically, the average nine-day abnormal return to weakly protected bonds is negative and only marginally significant in all sampling groups with the exception of the all-bond maturity-adjusted sample (Column (1)). Examining more closely, the correlation between changes in the value of stock and bonds reveals a significant positive relation for the strong protection subgroup (suggesting that managerial monitoring dominates the wealth transfer for this subsample) and a negative yet statistically insignificant relation for the weak protection sample. The mixed results on weak covenant protection may be partly spurious and require multivariate analysis to disentangle the contribution of different dynamics simultaneously.

We also observe that the bonds with investment restrictions notably have the most positive excess event-returns compared to other subgroups of covenants. Not surprisingly, the mean excess return to bonds with subsequent financing restrictions is also more positive, since such bonds are more likely to restrict issuers' ability to change debt priority. The average effect of event restrictions is relatively smaller yet significant. For dividend restrictions the results are inconclusive — that is, we observe negative excess bond returns for the all-bond sample and statistically insignificant returns for the weighted-average sample.

Seniority structure of debt also has been an important issue in the corporate debt literature. The prediction from the literature is that financing new projects with senior debts can curb the

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[20]Default-related event covenants include: cross default, cross acceleration, rating decline trigger put, and declining net worth covenant.

transfer of wealth from equityholders to the existing bondholders (Stulz and Johnson (1985)). We classify the target bonds as senior or subordinated where senior debtholders have priority with regard to claims on assets in the case of default. Consistent with the said prediction, in Panel E of Table 5 we find that on average senior bondholders react more positively to the announcement of activism than subordinated bondholders. For example, the nine-day mean excess returns to the senior bondholders range from 1.46 percent to 1.50 percent for the all-bond sample, whereas returns to subordinated bondholders are bounded by approximately 1.16 percent, significant at the one percent level. Using the weighed-average metric, we find excess bond and stock returns of similar magnitudes for the senior and subordinated bond samples.

4.2 Cross-Sectional Results

4.2.1 Multivariate Tests

While the univariate results are intriguing, investigating the simultaneous impact of several covariates on abnormal returns is equally important. In an attempt to test whether observed short-run excess stock returns are a manifestation of wealth expropriation from bondholders or a reduction in agency costs, we regress event-window abnormal returns on a set of explanatory variables. If the wealth expropriation hypothesis holds, abnormal stock and bond returns should move in opposite directions. This suggests that we should observe coefficient estimates in reverse signs for each common covarite used in our cross-sectional regressions of bond and stock returns (Maxwell and Rao (2003)).

We include a variety of control variables that enable us to control for a wide-range of cross-sectional differences that are likely to affect excess bond returns. Specifically, we identify non-speculative debt through a dummy variable equal to one if the debt is above investment-grade. To ensure that we could viably associate observed abnormal returns with various aspects of activism, we also use dummies to flag each of stated objectives of the activism (cf. Section 3), covenant restrictions (cf. subsection 4.1), seniority of bonds, and outcome of the activism. We follow the literature and use the market-to-book ratio as a proxy for growth options. Our conjecture is that the impact of wealth expropriation will be more rigorous for target firms with higher growth.

Firm size (log of market capitalization) and tangible assets will also influence the abnormal bond returns. Since smaller targets and firms with a low proportion of tangible assets are associated with higher costs of bankruptcy, we hypothesize that, all else remaining equal small firms will be more vulnerable to activism-related wealth expropriation. To preclude the possibility that our findings are driven by possible industry effects, we use the 48 Fama and French industry controls. Finally, we control for various characteristics of bond issues, including maturity, loan size, and the credit spread at the offer.

In Table 7, we present four different specifications with sequential entry of various measures to clarify their impact on abnormal bond returns. For brevity of exposition, we report multivariate results only for the weighted-average method and benchmark-adjusted bond returns where the matching portfolio is based on credit ratings and for the size-adjusted stock returns. The significance of the coefficient estimates are based on autocorrelation- and heteroskedasticity-consistent standard errors. Following Brav et al. (2008), we express all non-dummy controls as the deviation from the mean and suppress the intercept of the regressions since we use the full set of dummies for the stated-objectives and covenants. In Columns (1)-(4) the dependent variable is the nine-day excess bond returns and, analogously, in the last four columns the dependent variable is the excess stock return for the same event-window. We find that market-to-book ratio is inversely related, and our proxies for the economies of scale in bankruptcy costs (firm size, tangibles) are positively related to bond returns.

Consistent with the univariate analysis above (cf. Table 6), abnormal bond returns for target firms with investment-grade debt are negative. The coefficient on the investment-grade dummy is positive yet marginally significant for stockholders only in Model 3 and Model 4. Our results weakly supports the argument that firms with higher investment-grade debtholder losses experience higher equityholder gains.

Turning to covenants, bonds with weak covenant protection have an average loss of -1.13 percent, whereas evidence on stock returns shows that firms with weakly protected covenants are associated with positive gains to stockholders. The positive stock returns and negative bond returns suggest that some of the stockholder gains are associated with an expropriation of wealth from

bondholders. Examining the cross-sectional differences in covenant protection more in detail, we find that event restrictions generate positive average returns of 0.93 percent (t=1.99) and subsequent financing restrictions of 1.89 percent (t=2.19) to bondholders. Most of the gains in returns are experienced by target bonds with investment restrictions, 2.13 percent (t=2.76), consistent with our univariate results. Though dividend restrictions generate small losses to bondholders, their statistical significance do not reach conventional levels.

Finally, results on the stated motives of the hedge funds are qualitatively similar to those displayed in Table 6. Evidence supports the managerial monitoring hypothesis for governance-oriented activism — that is, we see positive bondholder and stockholder returns for governance-oriented activism. On the other hand, two stated goals of hedge fund activism — capital structure-related and strategic alternatives — generate negative and statistically significant excess returns to bondholders and positive excess returns to stockholders. This result is consistent with the wealth-expropriation effect documented in our univariate tests for the activism demanding strategic and capital structure-related changes.

4.2.2 Relation between Stockholder Gains and Bondholder Losses

In this subsection, we adopt a more direct approach to examine whether a significant fraction of the common shareholder's wealth increase is an expropriation of wealth from bondholders. Specifically, we cross-sectionally regress abnormal stock returns on abnormal bond returns over our nine-day event window:

$$ASR = \alpha + \beta ABR + \varepsilon \qquad (1)$$

where ASR is the abnormal return to stockholders (size-adjusted) and ABR is the abnormal return to bondholders (benchmark-adjusted based on credit ratings). If activism-led gains to shareholders arrive at the expense of bondholders, then we should observe a significantly negative coefficient estimate for both α and β.[21] We focus on weighted-average sample and we correct t-statistics

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[21] The null for the pure wealth expropriation hypothesis is that $\alpha = 0$ and $\beta = -1$ jointly. The null for the partial wealth expropriation hypothesis is that the abnormal losses to bondholders do not explain fully the abnormal gains to shareholders. Hence, a significantly negative coefficient estimate for both α and β is consistent with this hypothesis.

for heteroscedasticity and serial dependence. Results from the full sample are displayed in the first row of Table 8. We observe a positive and statistically significant slope coefficient (t=2.26) on the variable of interest *(ABR),* and we reject the null for the full sample that expropriation of bondholder wealth is a major source of stockholder gains.

Similarly, when we stratify the sample to examine a cross-section of wealth expropriation, with the exception of investment-grade, weakly-protected, strategic alternatives and capital structure-related subsamples, all slope coefficient estimates load either insignificantly negative or significantly positive. Interestingly, for the capital structure-related and investment-grade bonds, the magnitude of the slope estimate is relatively small (11 and 4 percent, respectively) and the intercept coefficient is negative — yet marginally significant (statistically). By contrast, we observe highly significant — both economically and statistically — slope coefficients on the strategic alternatives and weakly protected bond samples. Specifically, debtholder losses account for 18 percent of the equity gain in the weakly protected bond series, and this ratio increases to 29 percent for the strategic alternatives series.

4.3   Long-run Results

4.3.1   Long-run Returns

The effects of shareholder activism may take several quarters or even years to surface. Consequently, an essential question that needs to be answered is whether the short-run positive reaction of bondholders will survive over longer horizons. In this section, we examine the long-term post-announcement performance of target bonds following the initial activist filing. Table 9 presents the overall long-run impact of activism on excess bond returns up to two years after the event date. The returns are benchmark-adjusted *annual* returns calculated as the difference between the target bond return and the return on the matching bond portfolio based on credit ratings at the time of the announcement.

What is new in Table 9 is the negative pattern in future bond returns for our target firms. Panel A shows that for the full sample, during the first six months after the event, target bonds continue to outperform their benchmarks, but the mean excess return is marginally significant.

However, we observe a reversal pattern in mean abnormal returns after six months, and target bonds underperform their benchmarks significantly in each of one-, one and half- and two-year periods following the announcement by roughly 3.15 percent, 4.22 percent and 5.55 percent *per year*, respectively. Excess stock returns, on the other hand, continue to be positive at the six-month to two-year investment horizons. When we split the sample into investment- and noninvestment-grade bonds, we observe that long-run bond price performance for firms with noninvestment-grade debt is significantly negative in the long-run. Evidently, this outcome lies in direct contrast to our short-run results. We also notice that bondholders of both senior and subordinated debt suffer significant losses in the long-run, and the wealth loss is potentially greater for subordinated debt. Unlike short-run results, we observe negative excess returns to both specific-purpose activism and strongly-protected bonds in longer horizons, but the latter is statistically significant only after the first event-year. The observed long-run losses to bondholders along with gains to stockholders suggest a potential wealth transfer from one stakeholder to another.

To summarize, our results imply that there is statistically significant long-run underperformance over the next two years subsequent to the activist filing. This could be because hedge funds seek to gain a short-term edge at the expense of other stakeholders, and relatively short-investment horizons make them inappropriate monitors of management. It is of interest to note that our sample funds do not hold their stakes in the target firms for a long period of time. In 21 percent of the cases in our sample, the activist hedge funds' holdings go to zero percent within ten months following the activism. Moreover, for 48 percent of the cases, the hedge funds divest their holdings to an average of 2.16 percent within one year. The differences in short- and long-run results also point that the market's initial reaction is not necessarily complete at the time of announcement. Our long-run results are in line with the Klein and Zur study (2009) reporting no evidence that operating performance of hedge funds targets has improved one year after activism.

4.3.2 Changes in Credit Ratings

The negative bond returns imply that investors' perceptions of the underlying default risk are increasing with the anticipation that activism will have an adverse influence on the value of the

firm. The opposite is true for positive bondholder returns. In that case, we should observe more downgrades than upgrades in bond ratings when we compare the ratings at the time of the activism with those one-year after the announcement. We eliminate target firms from the sample if a rating is unavailable one year after the announcement or if the firm is categorized as not rated before or after the announcement.

Panel A of Table 10 reports the results of rating changes for all outstanding bonds in our sample, while Panel B reports the results of one bond per firm (chosen randomly). We use the sign test to test the statistical significance of the differences in the downgrades versus upgrades. We find that one year after the announcement, 48.20 percent of the bonds are likely to be downgraded, and only 5.41 percent of the bonds are likely to be upgraded for the full sample. Segmenting the data by financial risk, we find that investment-grade bonds are more likely to be downgraded than upgraded (32.91 percent vs. 0.00 percent). These results are consistent with the long-run negative abnormal returns for the investment-grade bonds (cf. Table 9).

We also find a greater prevalence of downgrades than upgrades for noninvestment-grade (56.64 percent vs. 8.38 percent) and senior bonds (53.32 percent). Overall, these findings show that unconditionally there are more upgrades than downgrades both for the full sample and for the univariate subsamples. However, this result could be simply due to the fact that bonds do not participate in the upside potential of the issuers. Therefore, any judgment about the direction and significance of rating changes should be properly benchmarked. Subsequently, our control group is comprised of bonds issued by non-target firms within the same industry as our target firms and that have the same credit rating at the time of activism. The last column reports the p-values for the chi-square test for the hypothesis that the rating changes are different in these two groups. In comparing target ratings to their benchmarks, we observe that target firms experience significantly different (negative) rating changes than their non-target peers, and this finding seems to be consistent with the bondholder long-run price reactions.

5 Robustness Checks

We carry out several robustness checks. Some of the results are not tabulated for brevity. First, we check the sensitivity of our results to the inclusion of convertible bonds. Our sample excludes all convertible bonds since they have an equity component. Including convertibles in our sample, we find that bonds experience a nine-day abnormal bond return of 3.83 percent, significant at the ten percent level. We also observe larger gains to bondholders in our cross-sectional subsamples, but these results should be interpreted with much caution because a part of gains to bondholders is associated with the gains to stockholders of the target firm.

One problem in dealing with daily bond data is the lack of trading activity. Recall that, following Cai et al. (2007) and Bessembinder et al. (2008), in our earlier tests we have overcome illiquidity by requiring that bonds trade on at least 10 of the 20 days prior to the event date to be included in our sample. To ensure that this sampling feature does not introduce any unintended effects in our tests, we also checked both univariate and multivariate results by including bonds in our sample that trade at least 7 of the 20 trading days prior to the event date to account for illiquidity in the corporate bond market. We report the results in Panel A of Table 11. Additionally, we checked our findings based on closing-bond prices. All observed results indicate the same directional effect and are similar in size to those reported in Tables 6-10.

TRACE reports real time transaction prices and hence will be a more reliable source of data in event studies than matrix-based prices like Datastream.[22] Matrix prices are not based on actual transactions; they are set according to some algorithm based on the prices of bonds with similar characteristics. They are regarded as less reliable than actual dealer quotes (like TRACE) even though they may still contain relevant information. However, Datastream covers a longer time span and allows us to use our activism sample from 1996 to 2008. For that reason, we also run a battery of robustness tests using bond data from Datastream. Panel B of Table 11 shows that our results are qualitatively similar to those reported for the TRACE data.

Finally, in our tests we utilized sample of all trades (i.e., both institutional and retail trades)

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[22]Datastream uses Merrill Lynch as the data source for the price, which, in turn, is matrix-based (Warga and Welch (1993), Chen et al. (2007), Nielson et al. (2009), Hsu et al (2004)).

and trade-weighted price to calculate daily bond returns (cf. Section 3). To alleviate concerns about possible measurement errors, we repeated our tests by carrying out two additional sampling methods. In the first method, we eliminated trades below $100,000, which is identified as the retail trades.[23] In the second method, we used daily closing prices in our bond return calculations. We used several permutations of these samples —such as 'institutional trades and closing price' sample, 'all trades and closing price' sample and 'institutional trades and trade-weighted price' sample. These sampling procedures produced the same directional and quantitative results.

6   Conclusion

In studying the effects of shareholder activism, the literature almost exclusively focuses on manager-shareholder conflicts and there is little, if any, empirical discussion of the effects of shareholder activism on the wealth of bondholders. The effect of shareholder activism on the agency cost of debt is ambiguous theoretically. An important prediction of our framework is that activism can both exacerbate and ameliorate bondholder agency risk. On one hand, greater shareholder power can lead to better monitoring of managers, better corporate governance and greater collateral value of underlying assets that bondholders can lay claim to. On the other hand, if motivated by wealth transfers from bondholders to stockholders, shareholder activism can be detrimental to the value of corporate debt.

We examine the effects of shareholder activism on bondholders, taking into account the three-way interaction among bondholders, shareholders and managers. Using an extensive hand-collected data set of hedge fund activism, we document that target bond wealth effects are highly dependent on the risk of the bond. In particular, while investment-grade target bonds experience a mean excess return of -1.46 percent, noninvestment-grade bonds experience a mean abnormal return of 2.18 percent. The results of the univariate tests show that the gains are greater for activism with a specific agenda than interventions without specific goals. We find a lack of statistically significant excess return differences between the successful and unsuccessful outcomes. Bonds

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[23]It is of interest to note that corporate bond markets are dominated by institutional traders, and we lose roughly two percent of our sample size due to the elimination of retail trades.

with strong covenant protection gain value, while those with weak protection lose value; similarly bonds with higher senior bondholders react more positively to the announcement of activism than subordinated bondholders. Further, our direct tests show no evidence of wealth expropriation in the short-run with the exception of 'investment-grade', 'capital-structure', 'weakly-protected', 'strategic-alternatives' subsamples. In the subgroups of 'investment-grade', 'capital-structure', the debtholder losses are economically insignificant and can at best account for a small percentage of the wealth gains experienced by equityholders, whereas 'weakly-protected', 'strategic-alternatives' debtholder losses account for 18 percent and 29 percent of the equity gain, respectively.

We track return performance of bonds over longer horizons, for up to two years subsequent to the announcement. In the cross-section, target bonds tend to underperform their benchmark portfolios by 5 percent on an annualized basis for the full sample series. This is in direct contrast to continued weak but positive stock-return reaction during the same event window. Consistent with long-term underperformance, firms have a higher likelihood of being downgraded than being upgraded one-year after the activism. Collectively, our results indicate that activism is viewed negatively by bondholders in the long-run and that part of the overall gain to stockholders is the result of a wealth transfer from bondholders.

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Appendix A – Samples of 'Item 4' from Schedule 13D.

Example 1: General Category of Activism

Schedule 13D filed on 5 July 2005.

Filed By: STEEL PARTNERS II LP

Subject Company: CHEROKEE INTERNATIONAL CORP

Item 4. Purpose of Transaction.

The Reporting Persons purchased the Shares based on the Reporting Persons' belief that the Shares, when purchased, were undervalued and represented an attractive investment opportunity. Depending upon overall market conditions, other investment opportunities available to the Reporting Persons, and the availability of Shares at prices that would make the purchase of additional Shares desirable, the Reporting Persons may endeavor to increase their position in the Issuer through, among other things, the purchase of Shares on the open market or in private transactions or otherwise, on such terms and at such times as the Reporting Persons may deem advisable.

No Reporting Person has any present plan or proposal which would relate to or result in any of the matters set forth in subparagraphs (a) – (j) of Item 4 of Schedule 13D except as set forth herein or such as would occur upon completion of any of the actions discussed above. Steel Partners II intends to review its investment in the Issuer on a continuing basis and engage in discussions with management and the Board of Directors of the Issuer concerning the business, operations and future plans of the Issuer. Depending on various factors including, without limitation, the Issuer's financial position and investment strategy, the price levels of the Shares, conditions in the securities markets and general economic and industry conditions, Steel Partners II may in the future take such actions with respect to its investment in the Issuer as it deems appropriate including, without limitation, seeking Board representation, making proposals to the Issuer concerning changes to the capitalization, ownership structure or operations of the Issuer, purchasing additional Shares, selling some or all of its Shares, engaging in short selling of or any hedging or similar transaction with respect to the Shares or changing its intention with respect to any and all matters referred to in Item 4."

Example 2: Specific Category of Activism

Schedule 13D filed on 17 April 2006.

Filed By: THIRD POINT LLC (Daniel Loeb)

Subject Company: NABI BIOPHARMACEUTICALS

Item 4. Purpose of Transaction

The purpose of the acquisition of the Shares by the Funds is for investment. The Reporting Persons may cause the Funds to make further acquisitions of Common Stock from time to time or to dispose of any or all of the shares of Common Stock held by the Funds at any time.

The Reporting Persons believe that the market price of the Common Stock materially understates the intrinsic value of the Company's marketed products, product pipeline, intellectual property and property, plant and equipment and that, despite recent positive developments, this intrinsic value may not be achieved under the multi-year strategic plan outlined by the Company in its public filings and in conversations with the Reporting Persons. Based on these beliefs, and on what the Reporting Persons believe to be the Company's poor execution in converting assets into shareholder value under current management and inability or unwillingness to forecast a timeframe for the Company to achieve positive operating cash flow and earnings, a representative of the Management Company has advised the Company, in a series of telephone conversations and meetings since February 2006, of the Reporting Persons' view that the Company should immediately retain a new investment banking firm to implement a strategic process aimed at maximizing stockholder value. The Reporting Persons believe that this process should be conducted as publicly as possible and should explore a sale of the Company in its entirety or otherwise, as the Reporting Persons believe that there is significant interest in the Company's assets under either scenario. A representative of the Management Company has also advised the Company of the Reporting Persons' view that, during the pendency of this process, the Company should refrain from selling or partnering with respect to any of the Company's currently marketed or pipeline products or other assets, unless any such sale or relationship would result in extraordinary values that could be achieved in a strategic process.

The Reporting Persons are engaged in the investment business. In pursuing this business, the

Reporting Persons analyze the operations, capital structure and markets of companies, including the Company, on a continuous basis through analysis of documentation and discussions with knowledgeable industry and market observers and with representatives of such companies (often at the invitation of management). From time to time, one or more of the Reporting Persons may hold discussions with third parties or with management of such companies in which the Reporting Person may suggest or take a position with respect to potential changes in the operations, management or capital structure of such companies as a means of enhancing shareholder value. Such suggestions or positions may relate to one or more of the transactions specified in clauses (a) through (j) of Item 4 of Schedule 13D of the Exchange Act, including, without limitation, such matters as disposing of or selling all or a portion of the company or acquiring another company or business, changing operating or marketing strategies, adopting or not adopting certain types of anti-takeover measures and restructuring the company's capitalization or dividend policy.

Except as set forth above, the Reporting Persons do not have any present plans or proposals that relate to or would result in any of the actions required to be described in Item 4 of Schedule 13D. Each of the Reporting Persons may, at any time, review or reconsider its position with respect to the Company and formulate plans or proposals with respect to any of such matters.

Table 1: Statistics on the Holdings of the Activist Hedge Funds

This table presents the mean and median percentage of shares owned by all hedge funds and by the top five activist hedge funds in the target firms at the announcement of activism for our sample from January 1996 to March 2008. The % ownership is gathered either from 13D filings or from 13D/A filings. This table also presents the number of activist events targeted by all hedge funds and by the top five activist ones. The top five activists are the ones with the largest number of activism events during our sample.

	No. of Obs.	% Ownership	
		Mean	Median
Gabelli Asset Management	83	6.35	5.86
Steel Partners II LP	69	8.92	6.50
Icahn Carl C et al	53	17.92	8.86
Gamco Investors	43	6.21	5.58
Third Point	21	7.09	5.93
All Hedge Funds	**1610**	**10.5%**	**6.74%**

Table 2: Hedge Fund Activism by Stated Objectives

This table presents the numbers of activism targeting issues by target year and issues sought by the activist hedge funds over the period from January 1996 to March 2008. All filings under *'General'* category reveal no specific agenda (include only general statements of maximizing shareholder value). *'Corporate Governance'* includes proposals to rescind the poison pill, to replace the CEO or the chairman, or to cut the salary of the CEO, all proposals where the hedge fund asks for a board seat and nominates someone to the board of directors. It also includes proposals to change the board of directors' composition, to add an independent member or to declassify the board. *'Strategic Alternatives'* includes proposals to put itself up for sale, to sell some or part of its assets, to spin-off, or to merge with another company, proposals where the hedge fund makes a purchase offer, etc. *'Capital Structure'* includes all proposals to pay special dividend to shareholders, equity issuances, share repurchases, etc. Also, it includes proposals where the hedge fund opposes the reorganization plan of the firm or opposes the share offering.

Year	General	Corporate Governance	Strategic Alternatives	Capital Structure	Total
1996	9	12	9	9	**45**
1997	10	9	11	10	**77**
1998	14	10	8	14	**57**
1999	13	17	7	13	**65**
2000	17	22	5	17	**81**
2001	14	19	15	14	**97**
2002	15	26	11	15	**115**
2003	26	19	19	26	**141**
2004	31	53	13	31	**226**
2005	50	70	21	50	**294**
2006	42	46	27	42	**279**
2007	24	42	33	24	**216**
2008	16	13	19	16	**69**
Total	**925**	**281**	**358**	**198**	**1762**

Table 3: Descriptive Statistics for Target Firms

This table presents salient characteristics of target companies and their benchmark peers. Benchmark portfolios are based on industry/size/book-to-market matched firms. Average difference between the target firms and their matched peers and t-statistics for difference in means are reported in the last two columns. Data is retrieved from Compustat and CRSP. *EBITDA* is the ratio of earnings before interest, taxes, depreciation and amortizations scaled by total assets, *MV of Equity* is market capitalization in millions of dollars, *M/B ratio* is the ratio of market to book value of equity, *Growth* is the growth rate in sales, *Leverage* is the book leverage of equity, *Payout* is the ratio of total dividends divided to net income before extraordinary items, *Cash* is the sum of cash and cash equivalents scaled by total assets.

	Mean	Median	St. Dev	Benchmark	Difference	t-stat
MV of Equity	681.53	163.55	2684.0	704.10	-22.57	-3.28
Payout	0.255	0.000	0.023	0.311	-0.056	-2.94
Growth	0.046	0.050	0.443	0.082	-0.036	-5.76
Leverage	0.251	0.173	0.309	0.286	-0.035	-4.06
Cash	0.152	0.091	0.319	0.163	-0.011	-3.20
M/B ratio	1.320	1.231	1.595	1.540	-0.220	-2.56
EBITDA	0.078	0.083	0.159	0.033	0.045	1.98

Table 4: Descriptive Statistics for Target Bonds

The following table displays the various characteristics of target bonds. Panel A presents the summary statistics for spread, amount, ratings and maturity. Panel B tabulates the seniority and covenant features of the bonds in the sample. Offering yield is the actual yield-to-maturity on bond issued. The spread of the bond is the difference between its yield and the yield of a treasury bond of similar maturity stated as bps. Offering amount is the total face value of the issue in millions of US dollars. Maturity is the difference of the issue date and the maturity date and is measured in years. Seniority refers to the seniority of the bond. Bond Rating is the Standard and Poor's debt ratings which are converted to a numeric scale where NR = 23, D = 22... AAA = 1. *Restrictions on Other Payments* are covenants that restrict the issuer's freedom to make payments (other than dividends) to shareholders and other stakeholders. *Restrictions on Asset Sales* are covenants that restrict the ability of the issuer to sell assets or put restrictions on the issuer's ability to use the proceeds from the sale of assets. *Restrictions on Asset Sale Clause* are covenants that require the issuer to use net proceeds from the sale of certain assets to redeem the bonds at par or at premium. *Change of Control Put Provisions* are covenants that upon change of control in the issuer, bondholders have the option of selling the issue back to the issuer. *Restrictions on Risky Investment* are covenants that restrict an issuer's investment policy to prevent risky investment. *Restrictions on Senior Debt* are covenants that restrict the issuer to the amount of senior debt it may issue in the future. *Merger Restrictions* are covenants that restrict a consolidation or merger of the issuer with another entity.

Panel A: Bond Characteristics					
	Mean	Median	St. Dev	Min	Max
# of Bonds/firm	1.62	1.50	2.53	1.00	9.00
Bond Maturity	12.1	10.00	8.72	3.99	39.25
Bond Rating	12.4	11.0	5.92	2.00	23.00
Offering amount	432.75	253.76	39.31	89.53	755.04
Treasury spread	154.19	132.00	1.69	2.00	198.62

Panel B: Security Features and Covenants			
Restrictions on Other Payments	36%	Subordinated Bonds	4.40%
Restrictions on Asset Sale	73%	Senior Bonds	68.51%
Restrictions on Asset Sale Clause	27%	Senior Subordinate	14.61%
Change of Control Put Provision	53%	Senior Secured	5.55%
Restrictions on Risky Investment	78%	Junior Subordinate	7.19%
Restrictions on Senior Debt	7.65%		
Merger Restrictions	86%		

Table 5: Target Excess Abnormal Bond and Stock Returns for the Full Sample

The table presents the mean excess stock and bond returns for the full sample. Observations with missing rating values and multiple bond issues by same target firm that are rated both investment and non-investment grades are eliminated from the sample. Abnormal bond returns are benchmark-adjusted and based on the all-bond and weighted-average methods: (1) *All-bond method*: We treat each bond as a separate observation. (2) *Weighted-average method:* We treat each firm as a separate observation and each firm's bondholder returns are measured as a weighted average (based upon market value) of the abnormal returns to the different bond issues. Our first bond benchmark is based on matching portfolios based on ratings and second benchmark is based on portfolios based on ratings and maturity. We measure shareholder excess returns as (i) the market-adjusted return (the difference between the target companies' daily return and the return on the NYSE/AMEX/NASDAQ value-weighted market index) (ii) the size-adjusted return which represents the difference between the target firm's return and the mean return for all firms in the same CRSP size decile within the event window of [-7,+1]. *N* is the number of bonds for the 'all-bond' sample and number of firms for the 'weighted-average' sample. *t*-statistics are provided in parentheses. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

	Panel A: Abnormal Bond Returns				
	Sampling method	Benchmark-adjusted Bond Returns based on credit ratings matching portfolio			Benchmark-adjusted Bond Returns based on credit ratings and maturity matching portfolio	
		N	**Mean**	*t*-stat	**Mean**	*t*-stat
Bonds						
	All-Bond	732	2.01%***	2.24	1.67%***	2.77
	Weighted-average	558	1.38%***	3.19	1.23%***	2.93
		Market-adjusted Stock Returns			**Size-adjusted Stock returns**	
		N	**Mean**	*t*-stat	**Mean**	*t*-stat
Stocks		558	5.37%***	4.44	4.77%***	2.82

Table 6: Target Excess Bond and Stock Returns Segmented by Groups

The table presents the benchmark-adjusted mean excess stock and bond returns for different groups segmented by the risk of the firm's debt (Investment vs. Noninvestment grade bond), by the mutually non-exclusive hedge fund activity (General vs. Specific), by the level of protection (Strong vs. Weak); by seniority (Senior vs. Subordinated) and by outcome of the activity (Successful vs. Unsuccessful). Observations with missing rating values and multiple bond issues by same target firm that are rated both investment and non-investment grades are eliminated from the sample. Abnormal bond returns are benchmark-adjusted and based on the all-bond and weighted-average methods: (1) *All-bond method*: We treat each bond as a separate observation. (2) *Weighted-average method:* We treat each firm as a separate observation. Firm's bondholder returns are measured as a weighted average (based upon market value) of the abnormal returns to the different bond issues. Our first bond benchmark is based on matching portfolios based on ratings and second benchmark is based on portfolios based on ratings and maturity. We measure shareholder excess returns as (i) the market-adjusted return (the difference between the target companies' daily return and the return on the NYSE/AMEX/NASDAQ value-weighted market index) (ii) the size-adjusted return which represents the difference between the target firm's return and the mean return for all firms in the same CRSP size decile within the event window of [-7,+1]. We further segment the specific type of targeting based on the purpose of the activism. '*Corporate Governance'* includes proposals to rescind the poison pill, to replace the CEO or the chairman, or to cut the salary of the CEO, all proposals where the hedge fund asks for a board seat and nominates someone to the board of directors. It also includes proposals to change the board of directors' composition, to add an independent member or to declassify the board. '*Strategic Alternatives'* includes proposals to put itself up for sale, to sell some or part of its assets, to spin-off, or to merge with another company, proposals where the hedge fund makes a purchase offer, etc. '*Capital Structure'* includes all proposals to pay special dividend to shareholders, equity issuances, share repurchases, etc. A bond is coded as having an investment restriction (*Investment Restrictions)* if the bond's indenture includes at least one of the following covenants: indirect investment restrictions, merger restrictions, secured, stock sale restrictions, direct investment restrictions. Subsequent financing restrictions (*Subsequent Financing)* include restrictions on subordinate debt issuance, restrictions on sale and lease obligations, restrictions on debt priority, stock issuance restriction. A bond is coded as having dividend and payment restrictions (*Dividend)* if the bond's indenture contains at least one covenant falling under dividend payment restrictions, restrictions on other payments. Event restrictions *(Event)* are coded as the change in control poison put and finally other is coded as the incidence of covenants controlling the defeasance. *N* is the number of firms with bond data in the sample. Level of significance is calculated using the adjusted standard errors and provided in parentheses. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

Table 6 (Continued): Bond and Stock Returns Segmented by Groups

	All-Bond Bond Returns		Weighted-average Bond Returns		Stock Returns	
	Rating-adjusted	Credit and Maturity-adjusted	Rating-adjusted	Credit and Maturity-adjusted	Market-adjusted	Size-adjusted
Panel A: Segmented by Risk	(1)	(2)	(3)	(4)	(5)	(6)
Investment (N=132)	-1.46%***	-1.32%***	-1.04%***	-1.11%***	6.19%**	5.68%**
Noninvestment (N=426)	2.18%***	2.15%***	2.14%***	1.95%***	5.12%***	4.49%***
Investment-Noninvestment	-3.64%***	-3.47%***	-3.18%***	-3.06%***	1.07%	1.19%
	(-9.33)	(-8.98)	(-6.77)	(-7.83)	(0.40)	(0.49)
Panel B: Segmented by HF activity						
General (N=256)	0.96%**	0.95%***	0.93%***	0.86%*	4.59***	3.82%***
Specific (N=319)	1.76%***	1.66%***	1.72%***	1.53%***	6.01***	5.54%***
Subsamples by Specific Goals:						
Corporate Governance	2.82%***	2.74%**	2.77%***	2.69%**	7.02***	6.89%***
Strategic Alternatives	-1.25%***	-1.19%***	-1.14%***	-1.03%**	6.18***	6.14%**
Capital Structure	-0.98%***	-0.87%**	-0.68%**	-0.70%***	3.72***	3.12%**
General-Specific	-0.80%**	-0.71%***	-0.79%**	-0.67%*	-1.42**	-1.72%**
	(-2.00)	(-2.55)	(-2.35)	(-1.83)	(-2.26)	(-2.22)
Panel C: Segmented by Outcome						
Successful (N=296)	1.64%**	1.87%	1.56%**	1.43%*	5.26%***	4.75%**
Unsuccessful (N=198)	0.87%	0.92%*	1.23%	0.89%	4.39%*	3.80%*
Successful-Unsuccessful	0.77%	0.95%	0.33%	0.54%	0.87%	0.95%
	(0.32)	(1.15)	(1.27)	(1.78)	(1.17)	(0.93)

Table 6 (Continued): Bond and Stock Returns Segmented by Groups

	All-Bond Bond Returns		Weighted-average Bond Returns		Stock Returns	
	Rating-adjusted	Credit and Maturity-adjusted	Rating-adjusted	Credit and Maturity-adjusted	Market-adjusted	Size-adjusted
Panel D: Segmented by Protection	(1)	(2)	(3)	(4)	(5)	(6)
Strong (N=446)	2.23%***	2.27%**	2.13%**	1.98%**	4.78%***	4.20***
Weak (N=112)	-1.65%**	-1.69%*	-1.37%*	-1.56%*	7.72%***	7.06%***
Subsamples by Protection Types:						
Investment Restrictions	2.15%**	1.89%*	2.18%*	1.80%***	5.86%**	5.19%***
Subsequent Financing	1.76%***	1.38%**	1.24%***	1.12%***	5.32%***	5.04%***
Dividend Restrictions	-0.82%*	-0.71%**	-0.73%	-0.70%	4.95%***	4.11%***
Event Restrictions	0.98%**	0.86%**	0.87%**	0.69%**	4.40%***	3.10%***
Strong-Weak	3.88%***	3.69%***	3.50%***	3.54%***	-2.94%***	-2.86%***
	(7.73)	(7.15)	(6.09)	(6.15)	(-3.50)	(-3.79)
Panel E: Segmented by Seniority						
Senior (N=386)	1.50%***	1.46%***	1.52%***	1.31%***	4.99%***	4.23%***
Subordinated (N=172)	1.16%***	1.13%***	1.07%***	1.04%***	6.22%***	6.01%***
Senior-Subordinated	0.34%*	0.33%	0.45%**	0.27%*	-1.23%*	-1.78%**
	(1.77)	(1.52)	(2.06)	(1.75)	(-1.76)	(-2.39)

Table 7: Cross-Sectional Regression Analysis

The table presents the short-run relation between abnormal returns and a set of explanatory variables within the event window of [-7,+1]. Abnormal bond returns are benchmark-adjusted (rating-adjusted) returns based on the 'weighted-average' method. We measure shareholder excess returns as the size-adjusted return which represents the difference between the target firm's return and the mean return for all firms in the same CRSP size decile over the event period. *Mktval* is the logarithm of market capitalization a month before the activism, *Leverage* is the ratio of debt to market value of capital, *Tangibles* is the ratio of tangibles to total assets, *InvGrade* is a dummy variable equal to one if the debt is above investment grade. *Successful* is a dummy if the outcome of the activism is successful. We also use dummies to flag each of stated objectives of the activism: All filings under *General* category reveal no specific agenda (include only general statements of maximizing shareholder value). *CorpGov* includes proposals to rescind the poison pill, to replace the CEO or the chairman, or to cut the salary of the CEO, all proposals where the hedge fund asks for a board seat and nominates someone to the board of directors. It also includes proposals to change the board of directors' composition, to add an independent member or to declassify the board. '*Strategic*'' includes proposals to put itself up for sale, to sell some or part of its assets, to spin-off, or to merge with another company, proposals where the hedge fund makes a purchase offer, etc. '*CapStructure*' includes all proposals to pay special dividend to shareholders, equity issuances, share repurchases, etc. A bond is coded as having a particular covenant if the bond contains one or more of the covenants falling under that category. *Weak* is a dummy variable equal to one for bonds with weak covenant protection and 0 for those with strong covenant protection. A bond is coded as having an investment restriction (*InvestmentRes)* if the bond's indenture includes at least one of the following covenants: indirect investment restrictions, merger restrictions, secured, stock sale restrictions, direct investment restrictions. Subsequent financing restrictions (*SubsequentFin)* include restrictions on subordinate debt issuance, restrictions on sale and lease obligations, restrictions on debt priority, stock issuance restriction. A bond is coded as having dividend and payment restrictions (*Dividend)* if the bond's indenture contains at least one covenant falling under dividend payment restrictions, restrictions on other payments. Event restrictions *(Event)* are coded as the change in control poison put and finally other is coded as the incidence of covenants controlling the defeasance. Subordinated is a dummy variable equal to one for bonds classified as subordinated and 0 for senior bonds. We control for possible industry effects through the 48 Fama and French industry dummies and control for various characteristics of bond issues, including maturity, loan size, the credit spread at the offer (not reported). *t*-statistics are calculated using the adjusted standard errors and provided in parentheses. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

Table 7 (continued): Cross-Sectional Regression Analysis

	Dependent Variable: Abnormal Bond Returns				Dependent Variable: Abnormal Stock Returns			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Mktval	0.62%**	0.84%**	1.16%*	0.96%*	1.49%	1.32%	1.12%*	1.39%
	(2.02)	(2.18)	(1.67)	(1.98)	(1.56)	(1.11)	(1.65)	(1.17)
Market-to-book	-0.55%**	-0.62%**	-0.80%***	-0.82%**	1.53%	1.44%	1.26%	0.95%
	(-2.23)	(-2.26)	(-2.79)	(-1.72)	(1.43)	(1.35)	(0.55)	(1.56)
Tangibles	0.42%***	0.67%*	0.48%	0.33%	-0.88%**	-0.75%	-0.62%*	-0.72%**
	(2.75)	(1.69)	(1.13)	(1.49)	(-2.18)	(-1.62)	(-1.69)	(-2.15)
Leverage	-0.30%*	-0.65%*	-0.46%**	-0.12%*	-3.19%	-2.18%	-2.10%	-1.42%
	(-1.69)	(-1.76)	(-2.12)	(-1.83)	(-0.83)	(-0.59)	(-1.48)	(-0.73)
InvGrade	-1.17%*	-1.18%***	-0.82%***	-0.62%**	7.79%	7.23%	6.95%**	6.92%**
	(-1.81)	(-2.82)	(-2.86)	(-2.01)	(1.46)	(1.02)	(2.10)	(2.26)
Successful		1.18%	1.89%	1.04%		2.89%	1.71%*	1.63%**
		(0.43)	(0.77)	(0.72)		(1.55)	(1.69)	(2.45)
General			0.87%***	0.79%**			5.22%**	4.48%**
			(2.92)	(2.15)			(2.16)	(2.10)
CorpGov			2.03%**	2.84%***			7.55%*	7.11%
			(2.11)	(3.26)			(1.83)	(0.64)
Strategic			-1.69%***	-1.57%***			6.67%***	6.15%***
			(-2.51)	(-2.55)			(3.75)	(3.79)
CapStructure			-1.07%**	-0.80%***			4.68%*	4.25%**
			(-2.15)	(-2.13)			(1.76)	(2.16)
Subordinated				0.95%**				4.68%
				(2.32)				(1.05)
Weak				-1.13%**				6.23%**
				(-2.00)				(2.25)
InvestmentRes				2.13%***				4.82%*
				(2.76)				(1.79)
SubsequentFin				1.89%**				4.40%*
				(2.19)				(1.93)
Dividend				-0.60%				3.62%
				(-1.25)				(0.84)
Event				0.93%*				3.47%*
				(1.99)				(1.88)
Model p-value	0.043	0.002	0.001	<0.001	0.046	0.032	0.018	0.013
Adjusted R^2	0.088	0.124	0.162	0.186	0.115	0.129	0.160	0.176

Table 8: Relation between Short-run Abnormal Bond and Stock Returns

This table reports the results of short-run cross-sectional relation between the abnormal bond and stock returns for the full sample and groups segmented by the risk of the firm's debt (Investment vs. Noninvestment grade bond), by the hedge fund activity (General vs. Specific), by the level and type of protection (Strong vs. Weak), by seniority (Senior vs. Subordinated) and by outcome of the activity (Successful vs. Unsuccessful):

$$ASR=\alpha+\beta ABR+\varepsilon$$

where ASR is the abnormal stock returns are size adjusted and calculated as the difference between the target firm's return and the mean return for all firms in the same CRSP size decile over the event period which covers the window of [-7, +1]. ABR is the bond returns which are computed based on the weighted-average method and they are benchmark-adjusted as the difference between the bond returns of the target firm and the returns of the ratings-matched benchmark portfolio. *t*-statistics are calculated using the adjusted standard errors and provided in parentheses. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

	Intercept α	(t-stat)	Slope β	(t-stat)
Dependent Variable: Abnormal Stock Returns				
Full Sample	0.10	(1.45)	0.14**	(2.26)
Segmented by Risk				
Investment	-0.05*	(-1.77)	-0.04**	(-2.40)
Noninvestment	0.72	(1.09)	0.22	(0.84)
Segmented by HF activity				
General	0.03***	(3.25)	1.23*	(1.84)
Specific	0.06	(1.42)	1.07	(0.79)
Subsamples by Specific Goals:				
Corporate Governance	0.11***	(2.77)	0.20**	(2.48)
Strategic Alternatives	-0.85**	(-2.02)	-0.29*	(-1.99)
Capital Structure	-0.33***	(-2.85)	-0.11**	(-2.27)
Segmented by Protection				
Strong	1.12**	(2.11)	0.25***	(2.67)
Weak	-0.09*	(-1.66)	-0.18***	(-3.04)
Subsamples by Protection Types:				
Investment restrictions	0.22**	(2.44)	0.21**	(2.19)
Subsequent financing	0.09**	(1.31)	0.43***	(2.73)
Dividend restrictions	0.05	(0.74)	0.09	(0.55)
Event restrictions	0.07	(1.21)	0.31***	(2.89)
Segmented by Seniority				
Senior	0.18***	(3.28)	0.09	(1.18)
Subordinated	-0.05	(-0.76)	-0.04	(-0.41)
Segmented by Outcome				
Successful	0.05*	(1.88)	0.02*	(1.76)
Unsuccessful	0.13	(1.29)	-0.07	(-0.22)

Table 9: Long-run Bond and Stock Returns

This table presents *annualized* compounded returns over the six-months, 1 year, 1½ years and 2 years periods after the 13-D filing date for the full sample and groups segmented by the risk of the firm's debt (Investment vs. Noninvestment grade bond), by the hedge fund activity (General vs. Specific), by the level and type of protection (Strong vs. Weak), by seniority (Senior vs. Subordinated) and by outcome of the activity (Successful vs. Unsuccessful). The bond returns are computed based on the weighted-average method and they are benchmark-adjusted as the difference between the bond returns of the target firm and the returns of the ratings-matched benchmark portfolio. Similarly, annualized compounded returns for stockholders are calculated as the difference between the target firm's return and the mean return for all firms in the same CRSP size decile. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

Table 9 (Continued): Long-run Bond and Stock Returns

	Benchmark-adjusted Bond Returns				Size-adjusted Stock Returns			
	6 months	1 year	1½ years	2 years	6 months	1 year	1½ years	2 years
Panel A: Full Sample	1.39%**	-3.15%*	-4.22%***	-5.55%***	6.72%**	7.49%***	7.16%**	7.58%*
	(2.26)	(-1.74)	(-2.49)	(-2.83)	(2.30)	(3.77)	(2.45)	(1.82)
Panel B: Segmented by Risk								
Investment	-4.27%**	-6.22%***	-10.04%***	-9.12%***	9.57%***	10.41%***	8.78%***	11.54%***
	(-2.35)	(-3.39)	(-2.54)	(-2.79)	(3.12)	(3.59)	(2.85)	(2.79)
Noninvestment	2.75%***	2.18%**	-6.75%**	-10.48%**	8.19%***	8.13%**	6.76%**	6.43%***
	(3.50)	(2.26)	(-2.13)	(-2.09)	(4.21)	(2.39)	(2.25)	(3.52)
Panel C: Segmented by HF activity								
General	-1.19%	-2.55%*	-6.11%**	-5.32%**	6.75%**	7.72%***	8.54%**	10.45%
	(-1.13)	(-1.79)	(-2.18)	(-2.36)	(2.13)	(2.85)	(2.18)	(0.83)
Specific	1.26%**	-1.59%**	-2.86%**	-3.79%***	8.15%***	8.99%***	10.12%***	9.30%***
	(1.99)	(-2.11)	(-2.29)	(-2.55)	(6.39)	(3.22)	(2.54)	(3.86)
Panel D: Segmented by Protection								
Strong	2.38%*	3.11 %*	-1.79%*	-2.16%**	5.63%***	6.18%***	7.62%***	7.90%***
	(1.67)	(1.72)	(-1.86)	(-2.38)	(2.85)	(3.39)	(6.36)	(5.35)
Weak	-2.68%**	-3.79%***	-4.16%***	-6.63%***	9.29%***	9.84%***	11.05%***	10.22%***
	(-2.25)	(-3.58)	(-4.75)	(-2.52)	(4.16)	(6.75)	(10.0)	(5.29)
Panel E: Segmented by Seniority								
Senior	2.18%	-1.31%***	-3.15%**	-3.59%**	4.12%***	3.20%**	3.17%***	4.99%**
	(0.69)	(-2.79)	(-2.16)	(-2.33)	(2.54)	(3.20)	(2.86)	(2.32)
Subordinated	-2.25%*	-3.54%	-3.39%**	-5.12%*	6.39%*	6.63%**	5.18%***	8.10***
	(-1.83)	(-1.54)	(-2.11)	(-1.67)	(1.77)	(2.18)	(4.19)	(3.15)
Panel F: Segmented by Outcome								
Successful	3.15%***	2.09%**	2.12%*	-1.18%***	7.03%***	9.87%***	10.13%***	12.18%**
	(2.55)	(2.16)	(1.82)	(-3.12)	(3.28)	(7.19)	(5.12)	(2.24)
Unsuccessful	-2.89%	-5.62%***	-4.72%***	-4.62%***	3.77%**	-1.84%	-4.10%**	-4.23%***
	(-1.33)	(-3.44)	(-2.75)	(-3.22)	(2.48)	(-1.34)	(-2.12)	(-3.75)

Table 10: Rating Changes Before and After Activism

This table presents the Standard and Poor's debt rating changes of the target firms' bonds one year after the hedge fund activism. To examine rating changes, we compare the rating before the activism to the rating one year after the activism. The rating changes are shown for the full sample and for the sub-samples segmented by their financial risk, hedge fund activity, covenant protection index, seniority and outcome of activism. The 'upgraded' column reports the percentage of bonds from the sample (or sub-samples) that were upgraded. Similarly, the 'no change' column reports the percentage of bond that stayed with the same rating and the 'downgraded' columns report the percentage of bonds that were downgraded. Bonds that were not rated, or had a rating of 'NR' either before or after the activism, are excluded. The last column reports the chi-square p-values for the null that the rating changes are different in the two groups – target to activism and control (benchmark) group. The control group comprises of bonds issued by non-target firms within the same industry as our target firms and that have the same credit rating at the time of activism. Panel A reports the results for all outstanding bonds in our sample while Panel B reports the results of one bond per firm (chosen randomly). We use the Sign Test to test the statistical significance of the difference in the downgrades versus upgrades. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

Panel A: All Bonds				
	Upgraded	No Change	Downgraded	p-value
Full Sample	5.41%	46.40%	48.20%***	<0.001
Segmented by Risk				
Investment	0.00%	67.09%	32.91%***	0.002
Noninvestment	8.38%	34.97%	56.64%***	<0.001
Segmented by HF activity				
General	5.71%	38.10%	56.19%***	<0.001
Specific	5.13%	53.85%	41.03%***	<0.001
Segmented by Protection				
Strong	4.51%	45.86%	49.63%***	<0.001
Weak	6.74%	47.19%	46.07%***	<0.001
Segmented by Seniority				
Senior	6.15%	40.53%	53.32%***	<0.001
Subordinated	7.49%	38.21%	54.30%***	<0.001
Segmented by Outcome				
Successful	4.00%	46.67%	49.33%***	<0.001
Unsuccessful	5.26%	63.16%	31.58%***	0.008

Table 10 (continued): Rating Changes Before and After Activism

Panel B: One Bond Per Firm (Randomly Chosen)				
	Upgraded	No Change	Downgraded	*p*-value
Full Sample	4.51%	48.65%	45.95%***	<0.001
Segmented by Risk				
Investment	0.00%	45.45%	54.55%***	0.002
Noninvestment	7.69%	50.00%	42.31%***	0.004
Segmented by HF activity				
General	7.69%	48.72%	43.59%***	0.029
Specific	2.68%	48.57%	48.57%***	0.007
Segmented by Protection				
Strong	4.21%	51.06%	44.68%***	<0.001
Weak	7.41%	44.44%	48.15%**	0.016
Segmented by Seniority				
Senior	3.79%	45.27%	49.62%**	0.043
Subordinated	8.26%	51.27%	40.47%***	<0.001
Segmented by Outcome				
Successful	0.00%	50.00%	50.00%***	<0.001
Unsuccessful	0.00%	20.00%	80.00%***	<0.001

<div align="center">**Table 11: Robustness Checks**</div>

This table reports the short-run (nine-day surrounding the event date) and long-run (one-year after the event) results of robustness tests for the full sample and groups segmented by the risk of the firm's debt (Investment vs. Noninvestment grade bond), by the hedge fund activity (General vs. Specific), by the level and type of protection (Strong vs. Weak), by seniority (Senior vs. Subordinated) and by outcome of the activity (Successful vs. Unsuccessful). The bond returns are computed based on the weighted-average method and they are benchmark-adjusted as the difference between the bond returns of the target firm and the returns of the ratings-matched benchmark portfolio. The abnormal stock return is size adjusted and computed as the difference between the target firm's return and the mean return for all firms in the same CRSP size decile over the event period. Panel A displays outcomes for bonds that trade at least seven of the twenty trading days prior to the event date to account for illiquidity in corporate bond market. Panel B reports the results based on the Datastream bond data. *t*-statistics are calculated using the adjusted standard errors and provided in parentheses. *** denotes significance at the 1% level, ** denotes significance at the 5% level and * denotes significance at the 10% level.

	Panel A: Illiquidity Check				Panel B: DataStream Check			
	Short-run bond returns		Long-run bond returns		Short-run bond returns		Long-run bond returns	
Full Sample	2.20%**	(2.23)	-5.69%**	(-2.11)	2.11%*	(1.72)	-3.62%***	(-3.18)
Segmented by Risk								
Investment	-3.44%*	(-1.85)	-6.12%***	(-3.73)	-2.18%***	(-2.73)	-5.39%*	(-1.73)
Noninvestment	1.35%**	(2.04)	-5.77%***	(-2.89)	1.34%***	(2.66)	-6.18%*	(-1.86)
Segmented by HF activity								
General	0.52%***	(2.76)	-4.12%*	(-1.84)	0.52%***	(2.77)	-6.03%	(-0.54)
Specific	2.35%**	(2.12)	-2.87%**	(-2.03)	1.89%**	(2.18)	-3.75%**	(-2.32)
Segmented by Seniority								
Senior	2.19%***	(2.65)	-1.01%***	(-2.63)	2.14%	(1.23)	-3.46%*	(-1.99)
Subordinated	1.76%*	(1.68)	-1.12%*	(-1.92)	0.82%***	(4.12)	-3.82%	(-1.03)
Segmented by Protection								
Strong	2.88 %**	(2.19)	-1.88%***	(-2.76)	2.11%*	(1.95)	-1.33 %***	(-2.67)
Weak	-1.33%***	(-3.65)	-6.16 %**	(-2.10)	-1.02%***	(-2.76)	-6.00%	(-0.42)
Segmented by Outcome								
Successful	1.04%*	(1.65)	2.11%*	(1.88)	0.83 %	(0.99)	0.82%	(1.31)
Unsuccessful	1.26%	(1.18)	-5.77%***	(3.33)	-1.87 %**	(2.11)	-5.54%***	(5.50)

Figure 1– Timeline of Trian Fund's Activism in Heinz H.J. Co.

February 2006

-Nelson Peltz seeks co-investors to purchase sizeable shares in Heinz

April 2006

-Buys 5.4% in Heinz
-Intends to conduct a proxy contest (is seeking 5 seats)

May 2006

-Trian calls Heinz to sell assets & cut costs
-Heinz's board rejects demand for board rep.

June 2006

-Trian files a proxy with SEC Heinz urges holders to reject the fund's nominees.
-Trian sends letters to Heinz's shareholders
-S&P downgrades Heinz's bond from A- to BBB+.

July 2006

-Trian sends letter to the board of directors

Aug 2006

-ISS recommends fund's nominees

Sep 2006

-Fund wins 2 seats
-S&P downgrades the bonds to BBB.
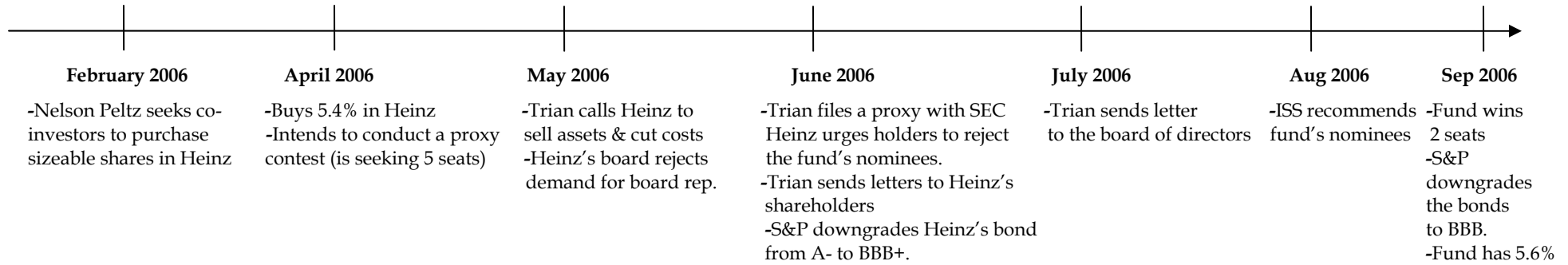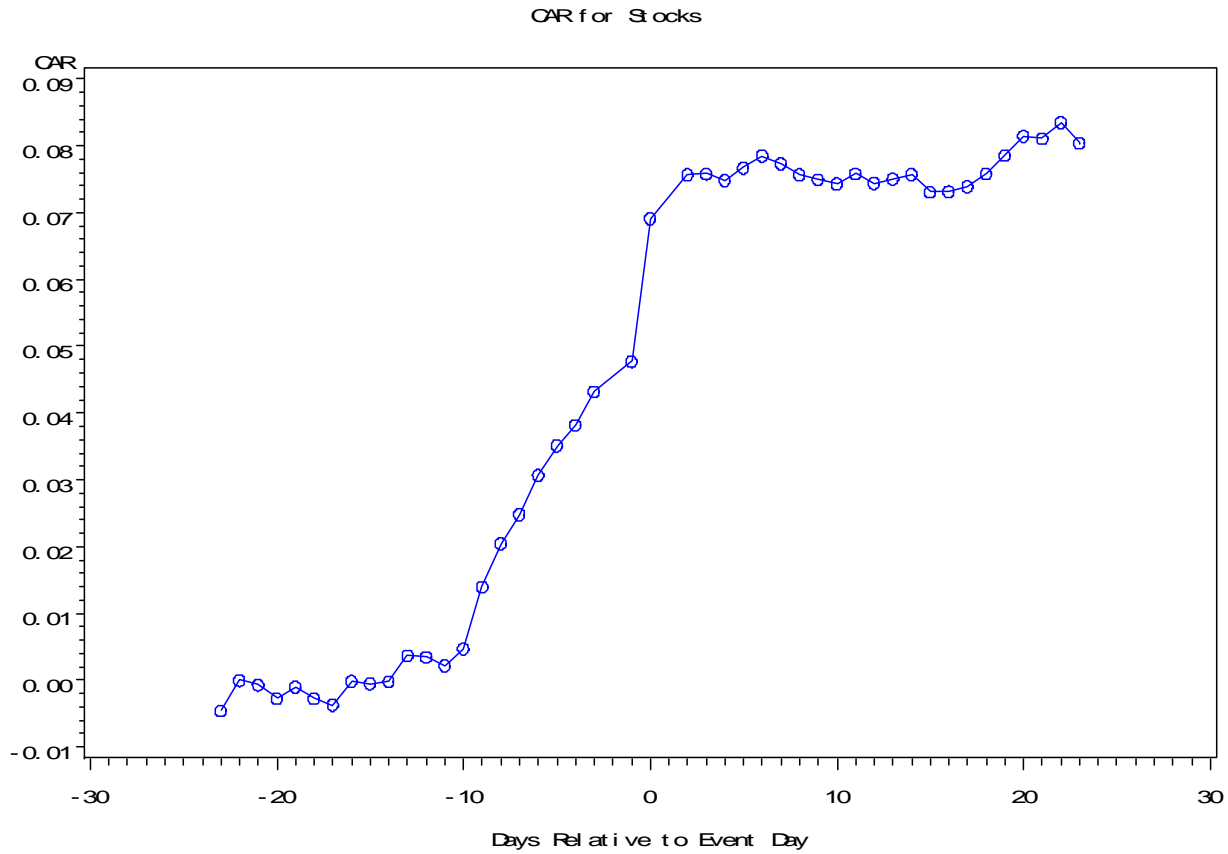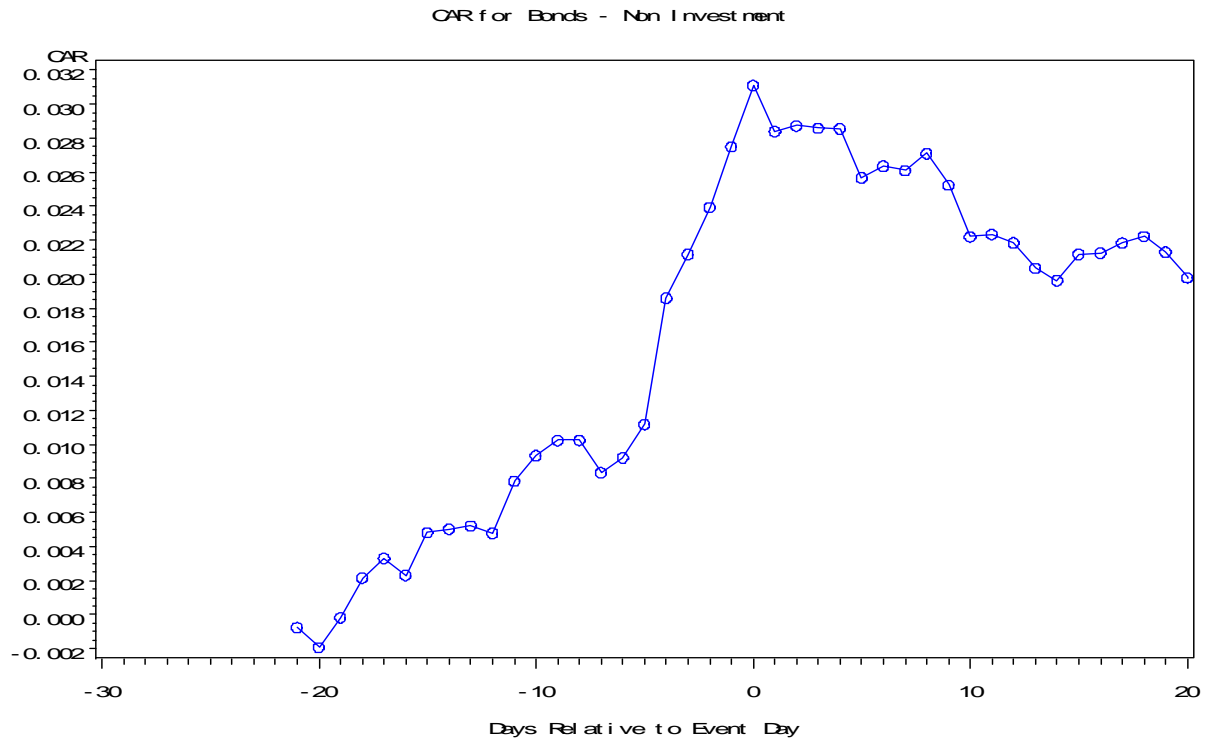-Fund has 5.6%

Figure 2

Cumulative Abnormal Returns of Target Stocks Subject to Hedge Fund Activism

CAR for Stocks

This figure presents the raw cumulative abnormal stock returns (CARs) from trading days -22 to trading day +22 for hedge fund target firms where day 0 is the event day.
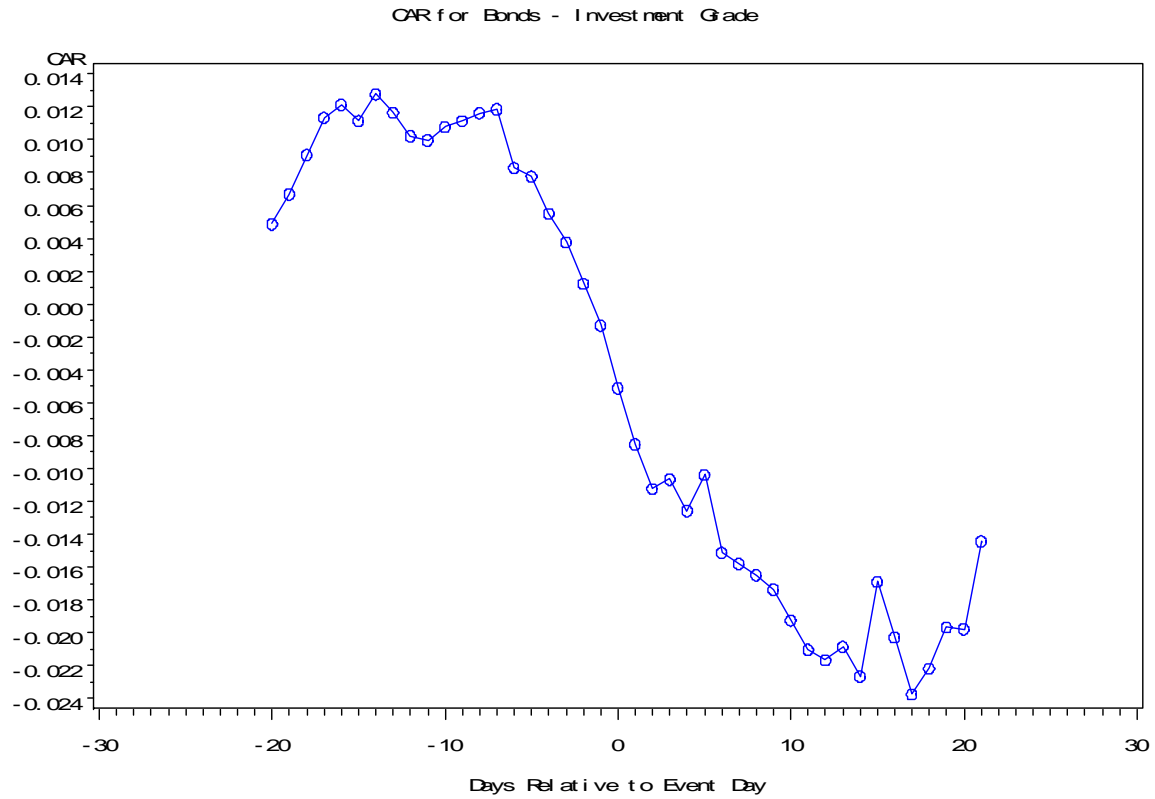
Figure 3

Cumulative Abnormal Returns of Non-investment Grade Target Bonds Subject to Hedge Fund Activism

This figure presents the raw cumulative abnormal returns (CARs), from trading days -22 to trading day +22, for non-investment grade bonds of hedge fund target, where day 0 is the event day.

Figure 4

Cumulative Abnormal Returns of Investment Grade Target Bonds Subject to Hedge Fund Activism

CAR for Bonds - Investment Grade

This figure presents the raw cumulative abnormal returns (CARs), from trading days -22 to trading day +22, for investment grade bonds of hedge fund target firms, where day 0 is the event day.