INVESTOR MONITORING AND AUDITOR CHOICE: EVIDENCE FROM HEDGE FUND ACTIVISM

by

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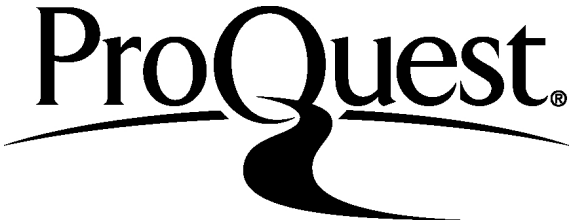

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ABSTRACT

To gain insight into the impact that investors have on the firm's auditor choice decision, this study investigates the association between changes in investor monitoring and auditor turnovers. Hedge fund activism provides a unique setting to observe how highly motivated investors, willing to incur significant expense to effect changes in target firms, are able to influence a firm's decision to dismiss their external auditor. I find that activist hedge fund targets see an increase in auditor turnovers and dismissals during the years following hedge fund activism relative to both the two years' pre-activism and a propensity matched sample of firms. I document that the increase in auditor turnovers is primarily driven by target firms with a Big 4 auditor, and that hedge fund targets primarily seek a lateral change in auditors. Consistent with institutional concerns that excess compensation impairs auditor independence, I find that activist targets are more likely to dismiss their auditors when the auditor is earning high non-audit service fees and high abnormal audit fees. I then examine how the market interprets the lateral change in auditors. I find that financial statement reliability increases for lateral auditor changes associated with independence concerns. Finally, I examine the conditions under which the hedge funds are able to facilitate an auditor change. I find that hedge funds pursuing less aggressive activist campaigns, and hedge funds seeking less public forms of interventions are more likely to seek an auditor dismissal. This relation between non-confrontational campaigns and auditor dismissals is consistent with prior research suggesting that hedge funds seeking to work with management are better able to enact changes in a target firm.

1. Introduction

In 2008, the Advisory Committee on the Auditing Profession (ACAP), established by the U.S. Department of the Treasury, recommended that all public companies have an annual shareholder ratification vote of the external auditor.[1] This recommendation was based on the belief that auditor ratification would increase the audit committee's oversight of the auditor, and allow shareholders to express their views on the auditing function. Investment groups such as Institutional Shareholder Services (ISS) supported this recommendation and indicated that auditor ratification is considered a good corporate governance practice (Dao, Raghunandan, and Rama 2012). However, while an increasing number of firms are holding auditor ratification votes, such votes are advisory in nature and are "generally seen as a kind of formality: non-binding and routine" (Pakaluk 2013). In fact, between January 2011 and December 2013, over 99% of votes were in favor of auditor ratification for firms in the Russell 3000 (Pakaluk 2014b). Also, anecdotal evidence suggests that boards and audit committees have ignored the outcome of these votes (Pakaluk 2014b, 2014a). Therefore, the ability of investors to influence the auditor retention and choice decisions of the firm, remains uncertain. My paper fills this gap in the literature by investigating how changes in shareholder monitoring impacts a firm's auditor choice decision.

Accounting literature has long recognized the role that firm management (including the board of directors and audit committee) has in the demand for auditor

[1] (DoT 2008)

quality.[2] However, this research documenting a firm's decision to dismiss the auditor, and the subsequent choice in the successor auditor, primarily focuses on management's demand for either auditor quality as a whole (e.g., Pittman and Fortin 2004; Guedhami, Pittman, and Saffar 2014) or one part of auditor quality, auditor competence (e.g., Hennes, Leone, and Miller 2014; Swanquist and Whited 2015). This is unsurprising as management would prefer a biased auditor to ensure that their views are represented in the financial statements (e.g., Carcello and Neal 2003; Mayhew and Pike 2004; Chen, Martin, and Wang 2013).

On the other hand, prior research on the value of auditing recognizes that investors value both aspects of auditor quality, auditor competence and auditor independence. In terms of auditor competence, firms with a large (Big-N) auditor have a greater market response to an earnings surprise (Teoh and Wong 1993) and a lower cost of debt (Pittman and Fortin 2004). In terms of auditor independence, perceived independence issues can lead to greater settlements in litigation against the auditor (Schmidt 2012), and a higher cost of equity capital (Khurana and Raman 2006). Since the ultimate decision of auditor retention and choice is in the hands of management, limited research has examined how shareholders can affect a firm's auditor choice decision, despite the diverging interests between management and shareholders in the demand for auditor independence. In this study, I examine how direct shareholder involvement in the firm affects auditor choice using the setting of hedge fund activism.

[2] Consistent with DeAngelo (1981), I define auditor quality as (1) the ability to detect an error or breach in the accounting system, and (2) the incentive to report that breach.

The setting of hedge fund activism provides an opportunity to observe changes in the level of shareholder monitoring. Hedge funds are highly motivated investors, with the ability to demand and effect changes in the firm. Since the start of the 21st century, the influence of hedge fund activists has grown significantly. Assets under management grew from less than $12 billion in 2003 (Carney 2013) to over $115 billion in 2014 (PwC 2015b), and, according to SEC Chair Mary Jo White, hedge fund activists have "undeniably changed the corporate landscape" (White 2015). Further, respondents in a recent survey noted that hedge fund activism directly impacts board room decisions, including operating, financing and investing decisions (McCrostie and Krouskos 2014).

Given a hedge fund activist's ability to affect a firm's operating decisions, it is important to examine whether hedge fund activists are able to affect the firm's financial reporting decisions. In addition to changing a firm's business strategy, hedge fund activists provide an important monitoring role in target firms by seeking to improve oversight of firm management (e.g., Brav, Jiang, Partnoy, and Thomas 2008). One mechanism of improving oversight of management is by improving auditor quality. Given the above definition of audit quality, I expect that auditor dismissals will increase if hedge fund activists perceive that the auditor is of low ability or low independence. However, hedge funds hold their investments for an average of two years, and auditor changes are perceived negatively by the market (e.g., Lu 2006). Due to the potential negative market reaction, hedge funds may not risk changing auditors if it negatively impacts shareholder value. Thus, it is uncertain whether hedge fund activism will affect auditor choice.

I begin my examination of whether hedge fund activism affects a firm's choice in auditors by using a sample of 626 hedge fund activist events from 2003 to 2013. Shareholders who acquire an ownership stake of 5% or more in the target firm are required to file Schedule 13D with the SEC. Using a list of hedge fund activists identified by Brav et al. (2008), I match each hedge fund to their initial 13D filing and identify the target firm for each investment. From the 13D filing, I also hand collect the hedge fund's stated objectives and related exhibits for their investment in the target firm. I then examine the probability of change auditors using the 5-year window surrounding the Schedule 13D filing date. I measure auditor quality using an indicator variable to capture Big 4 auditors. Since hedge funds target firms with specific characteristics, there is a potential concern regarding selection bias. Therefore, to address potential endogeneity issues, I also repeat my analyses using a propensity matched sample of non-targeted control firms with similar characteristics (e.g., Cheng, Huang, Li, and Stanfield 2012).

I first examine whether hedge fund activism is associated with an increase in auditor dismissals. Prior research suggests that investors value a change in auditors, if the change is associated with improving financial statement credibility (Hennes et al. 2014). Since a credible financial reporting system is essential for monitoring managers, hedge funds may seek a change in auditors as a mechanism to increase oversight of management. Therefore, I expect, and find evidence consistent with the presence of hedge fund activists increasing the rate of auditor dismissals. I find that target firms have significantly higher dismissal rates during the two years following activist intervention (7.01%), versus the two years prior to

intervention (3.62%). Interestingly, this turnover is driven by clients of Big 4 auditors. Big 4 audit clients targeted by a hedge fund activists see an increase in the probability of an auditor dismissal after hedge fund activism (7.43% versus 0.41%). I find that relative to the matched sample, targets of hedge fund activism are associated with a 46.7% increase in the probability of auditor dismissals in the post-activism period (7.48% versus 5.10%). Further, for Big 4 audit clients, hedge fund activism is associated with a 66.5% increase in the probability of auditor dismissals (6.66% versus 4.00%). This is surprising because these firms already had a Big 4 auditor and are unlikely to significantly change audit quality as a result of auditor turnover.

Having established the relation between hedge fund activism and auditor turnovers, I next examine the type of auditor hedge funds seek to hire. On one hand, hedge funds seek to increase oversight of management, and improve both firm governance and value. In this scenario, hedge funds would choose a high quality auditor to improve financial reporting quality. On the other hand, significant ownership likely provides hedge funds with access to valuable information that they could use to trade opportunistically. In this latter scenario, hedge funds may retain the same auditor, or choose a lower quality auditor, to maintain an opaque information environment. I fail to find an improvement in auditor quality, as measured by changes from a non-Big 4 to a Big 4 auditor. Surprisingly, I find that Big 4 audit clients targeted by hedge fund activists have a higher rate of changing to another Big 4 auditor.

Next, I examine the drivers of the hedge activism/auditor turnover relation, focusing on Big 4 audit clients with lateral auditor turnovers. Since investors value both auditor ability and independence, I expect that hedge fund activists may seek to change auditors for (1) firms that have low quality earnings, and (2) if the auditor appears to be economically dependent on the client. I fail to find evidence that earnings quality significantly affects the activist/auditor change relation. However, I do find that firms with less independent auditors are more likely to dismiss their auditor post-activism. These results suggest that hedge funds prefer to improve auditor quality by improving auditor independence.

I then examine the consequences of the lateral change in auditors. Prior research typically finds a negative or insignificant reaction to auditor change announcements. However, recent research on auditor changes post-restatement finds a positive market reaction upon the dismissal announcement. This result is consistent with investors perceiving the change as improving financial reporting credibility (Hennes et al. 2014). In my setting, I expect that target firms that dismiss their auditor, where the change is seen as improving auditor quality, will experience a positive market reaction. Consistent with this expectation, I find that a firm's earnings response coefficient (ERC) is greater for targeted firms, where the change was due to potential concerns about auditor independence.

Finally, to better understand the role of hedge funds in auditor choice, I examine the conditions under which hedge funds are able to facilitate a change in auditors. Hedge funds pursue various strategies and seek different objectives in their investments. This variation will likely influence the degree to which they will

engage in actively changing the auditor. Thus, I expect that the hedge fund strategies and objectives will influence the demand for auditor changes. Using classifications consistent with prior research (Brav et al. 2008; Klein and Zur 2009, 2011b), I test whether the type of activist campaign, and the disclosed objectives affects the likelihood of auditor turnover and auditor choice. I find that hedge funds seeking a more private form of intervention, and those seeking to work with management and the board are better able effect a change in auditors.

This study provides new insights on the role of investors in a firm's preference of auditors, in particular, the role that hedge fund activism has in a firm's auditor choice decisions. I make several contributions to the literature. First, I provide new evidence on how hedge funds can affect firm stakeholders. Prior research focuses on how hedge fund activism affects shareholders, executives and bondholders through changes in market returns, dismissals and compensation, and debt yields, respectively (e.g., Brav et al. 2008; Klein and Zur 2011a; Sunder, Sunder, and Wongsunwai 2014). Given the role that the auditor provides in the financial reporting process, it is important to examine how hedge fund activists can influence the firm's choice in auditors.

Second, I provide evidence on how a highly motivated investor can affect auditor choice. Prior research examines how firm changes (e.g., ownership structure, institutional environments, changes in agency costs, etc.) affects the client's demand for audit quality. Relative to other owners, hedge funds are better able to demand changes to the firm. Thus, it is important to clarify whether investors are able to affect auditor choice, or if the change in auditors is a secondary

effect of changes to the ownership structure. I provide evidence suggesting that hedge funds are directly able to influence the firm's choice in auditor, versus firms reacting to hedge fund intervention.

Third, I identify an additional reason why a firm may experience a lateral auditor change. Prior research suggests that lateral auditor changes are not associated with changes in the earnings quality of a firm (Carver, Hollingsworth, and Stanley 2011), thus, it is uncertain why lateral changes may occur. Some evidence suggests that lateral auditor changes occur to restore financial statement credibility to firms that have restated their earnings (Hennes et al. 2014). However, given the rarity of restatements (DeFond and Zhang 2014), it is important to identify other drivers of lateral auditor changes. In my setting, I provide evidence suggesting that lateral changes occur as a mechanism to improve auditor quality by improving auditor independence.

Finally, I contribute to the literature on hedge fund activism by providing evidence on what conditions are associated with hedge funds influencing auditor choice. Prior research, using non-public data, suggests that private, non-confrontational interventions are among the primary methods used by hedge fund activism (Becht, Franks, Mayer, and Rossi 2009). While prior research on hedge fund activism focuses on either confrontational, or a combination of both confrontational and non-confrontational, I find that more passive and private forms of hedge fund activism are associated with an increase in auditor turnovers. Given the debate on the benefits of hedge fund activism, it is important to take a nuanced view of hedge fund activism and examine how the actions of hedge fund activists

can affect its ability to enact changes in the firm. This is consistent with Sunder et al. (2014) who find that the relation between the cost of debt and hedge fund activism is moderated by the hedge fund's stated goals.

The remainder of the paper is organized as follows. Section 2 provides a literature review and hypothesis development. Section 3 describes the sample selection procedures and the propensity matched procedures. Section 4 presents the results and section 5 concludes the paper.

2. Institutional Background and Hypothesis Development

2.1 Institutional Background

The role of investors in monitoring a firm is well established in accounting, finance and economics research. Theory suggests that diffuse ownership by individual shareholders leads to a lower incentive to monitor management due to the costs of monitoring being greater than the marginal benefit received by small investors (Grossman and Hart 1980). However, larger shareholders have a greater incentive to monitor management, and are able to extract greater benefits associated with the increase in monitoring (Demsetz 1983; Shleifer and Vishny 1986). Empirical evidence supports this theory, with evidence indicating that blockholder ownership (including institutional ownership) is associated with improvements in financial reporting (Ramalingegowda and Yu 2012), and increases in the pay-for-performance sensitivity of executive compensation and decreases in the level of compensation (Hartzell and Starks 2003). These results suggest that blockholder ownership, specifically institutional ownership, and monitoring better aligns management's interest with shareholders and other investors.

However, while institutional ownership may serve as a monitoring function on management, institutional investors are limited in their ability to discipline management. When firms take actions against shareholder interests, institutional investors have five general responses. Less aggressive actions include signaling their disfavor with management through the "Wall Street Walk," where the investor sells their shares, and no votes on advisory issues, such as auditor ratification and "Say on Pay" proposals. More aggressive actions include proxy contests and "Just Vote No" campaigns, where the shareholder attempts to persuade existing shareholders to vote for a specific issue, or against director elections. The most aggressive action that investors may take is through shareholder activism. However, as noted by Brav et al. (2008), institutional investors have diversification requirements and political constraints that may limit their ability to take an activist role in a firm. Further, fund managers are not financially incentivized to take the additional risk associated with shareholder activism.

In terms of effectiveness, prior research finds that activism by institutional investors does not significantly benefit shareholders. Black (1998) surveys corporate governance activism by institutional investors in the United States. The author finds that the overall level of shareholder activism by institutions is low, and that institutional activism doesn't appear to affect target firms in terms of governance or firm performance. Thus, the primary response of most large shareholders is to exit the investment (Admati and Pfleiderer 2009; Bharath, Jayaraman, and Nagar 2013).

Due to the above limitations on institutional investors, recent literature in finance and accounting has focused on an important subset of blockholders, hedge funds activists. Hedge fund activism fills the gap in monitoring by institutional investors. This is due to hedge funds not suffering from the barriers of other institutional investors. For example, hedge fund managers are not only compensated with a flat annual fee, but also have a performance fee based on the fund's annual return (Brav et al. 2008). Hedge funds are also unregulated, and are able to lock-in their investor's capital. This allows hedge funds to take concentrated holdings in illiquid securities, and act as an "informed monitor." Finally, hedge fund activism provides a setting that allows the examination of how the introduction of a new investor can affect a firm's financial reporting decisions.

Literature in finance and accounting supports the monitoring role of hedge funds activists. For example, Brav et al. (2008) examine the role of hedge funds as a mechanism of shareholder monitoring. They provide evidence consistent with greater monitoring by hedge funds, with target firms earning positive abnormal returns, increasing payouts to shareholders, improving operating performance, and an increase in CEO turnover after activism. Similarly, Klein and Zur (2009) examine both hedge fund and entrepreneurial activism, and find that hedge fund activists are able to obtain board representation and decrease CEO salary.

The success of hedge fund activists in improving firm governance has led to a fundamental shift in the way other investors view these actors. Hedge fund activists are now viewed as "legitimate investors… seeking broad increases in shareholder value," (PwC 2015a). This change in perspective, as well as the

empirical evidence on hedge funds improving firm monitoring, leads to the question of what mechanisms hedge funds use to monitor firm management. One mechanism that hedge funds may use is through changing the target firm's financial reporting process. In this study, I investigate how hedge fund activism affects a firm's decision to dismiss the auditor, the drivers of this decision, and the consequences of the change in auditors.

2.2 Hypothesis Development

The main research question is whether changes in investor monitoring affects a firm's auditor choice decisions. Prior literature has documented the role that firm management has on the decision to dismiss the auditor. While post-SOX, the audit committee is responsible for the hiring, compensation and retention decisions of the auditor, research continues to find managerial influence on the auditor selection decisions (e.g., Beck and Mauldin 2014; Dhaliwal, Lamoreaux, Lennox, and Mauler 2015).

Given management's role in a firm's auditor choice decision, management's incentives can significantly impact the decision to dismiss the auditor. Theory suggests that a manager is more likely to dismiss the auditor, if management has superior information, compared to the auditor, and the financial statements only reflects the auditor's information (Dye 1991). However, financial statements are a joint product of the auditor and management, with management seeking to "correct" understated earnings (Antle and Nalebuff 1991). If the auditor is willing to yield to management's "superior" information, there exists no reason for management to replace the auditor. Consequently, management would retain a

biased auditor to ensure that management's views are represented in the financial statements (e.g., Carcello and Neal 2003; Mayhew and Pike 2004; Chen et al. 2013).

While management may have an interest in the retention of a biased auditor, literature in corporate governance provides evidence on how oversight of management can disrupt the auditor-client relationship, leading to a more independent auditor. For example, Carcello and Neal (2003) examines auditor dismissals following the issuance of a going concern opinion. The authors provide evidence suggesting that more independent audit committees reduce the likelihood of auditor turnovers after a going concern opinion. In terms of how investors can directly affect the auditor-client relationship, using and experimental setting, Mayhew and Pike (2004) examine the effect of investor selection of the auditor on auditor independence. The authors find that when investors have the power to select the auditor, independence violations decrease.

Applying these findings to my setting, I posit that changes in investor monitoring will disrupt the auditor-client relationship. Specifically, I expect that hedge fund activism will directly affect the firm's decision to change the auditor. In order to address the governance issues associated with target firms, hedge funds seek to rescind takeover defenses, replace management and obtain board representation (e.g., Brav et al. 2008; Klein and Zur 2009). Further, boards use auditor changes as a signal to the market. In particular, the decision to dismiss the auditor provides information to the market about the quality of the firm's financial statements. Using financial statement restatements, Hennes et al. (2014) provide

evidence that more severe restatements are associated with an increase in auditor dismissals. This result, along with the positive market reaction to the auditor dismissal suggests that the change in auditors provides a signal to the market that the board is attempting to restore financial reporting credibility. Given that hedge funds are short term investors, the need to dispose of their investment suggests that hedge funds need to provide a signal to the market of greater financial reporting creditability. In an effort to ensure financial reporting credibility that may be lost due to inefficient governance mechanisms, hedge funds may pressure the board to dismiss the current auditor. Given this interest in improving managerial oversight, reducing financial statement bias, and the desire to signal to the market greater financials statement credibility, I expect that the introduction of a hedge fund activists will lead to an increase in the rate of auditor dismissals. This expectation is stated formally below as my hypothesis:

H1: Hedge fund activism is associated with a greater likelihood of auditor dismissals.

It is worth noting that hedge funds could instead decrease the likelihood of an auditor dismissal due to the costs associated with changing auditors. Hedge funds hold their investments for a short duration, approximately 2 years on average (Brav et al. 2008). With this short-term investment horizon, boards and hedge funds may view changing auditors as too costly due to the loss of the auditor's firm specific experience. Also, Lu (2006) theorizes that any auditor change is a red flag to the market, signaling poor earnings quality. Finally, hedge funds are able to increase oversight of management through other mechanisms, such as obtaining

board representation and private meetings with management. Thus, hedge funds may not see a benefit to changing auditors.

3. Data and Empirical Methodology

3.1 Sample Selection

Under the 1934 Securities Exchange Act, investors with the intent to influence the control of a firm are required to file Schedule 13D with the SEC within 10 days of obtaining a 5% or greater stake in a target firm. These filings allow me to identify the first year that the activist investor acquires significant ownership of an individual firm. Thus, I begin with a sample of all Schedule 13D filings between January 1, 2002 and December 31, 2013. I selected these dates because I require two years of audit fee data before and after the date of activist intervention, and 2000 was the first year of required audit fee disclosures. For each filing, I hand collect the filing date, filer name, and the name of the target firm. The filers are then matched with a comprehensive list of hedge funds to identify each hedge fund activist filing.[3] I then limit my sample to U.S. based target firms, with the required data in the Compustat, I/B/E/S and Audit Analytics databases. Using this sample, I then eliminate firms without a propensity score matched control firm (described below). The final sample consists of 228 activist hedge funds, 626 activist events, 2,411 propensity matched control firms, and a total of 15,185 firm year observations (including the two-years pre- and two-years post-match). Table 1 summarizes the sample selection procedures.

[3] I thank Alon Brav for sharing the list of 567 hedge fund activists used in Brav et al. (2008) and Brav, Jiang, and Kim (2009).

[REFER TO TABLE 1 HERE]

3.2 Propensity Score Matching

Brav et al. (2008) and Klein and Zur (2009) examine the probability of a firm being targeted by an activist hedge fund, and identify firm characteristics associated with the likelihood of activist targeting. If these firm characteristics also drive the decision to change auditors, my results would suffer from a selection bias. In order to reduce the selection bias associated with hedge fund targeting, I use propensity-score matching (Rosenbaum and Rubin 1983).

The variable of interest in the propensity score match is the probability of targeting by a hedge fund activist. Brav et al. (2008) and Klein and Zur (2009) provide specific characteristics associated with hedge fund targeting. Specifically, I regress the indicator variable of being targeted by a hedge fund on firm size, Tobin's Q, sales growth, return on assets, leverage ratio, annual dividend yield, R&D expense, Herfindahl index, number of analysts following the firm, percentage of institutional ownership, cash and short-term holdings, and Altman (1968) bankruptcy prediction score. Since I also partition my sample by auditor type, I include an indicator variable for Big 4 audit clients (BIG 4). Using these variables, I estimate the following logistic regression: (Variables are defined in Appendix A)[4]

$$Pr(ACTIVISM_{i,t} = 1) = \alpha_0 + \alpha_1 * MV_{i,t-1} + \alpha_2 * TobinQ_{i,t-1} + \alpha_3 *$$
$$GROWTH_{i,t-1} + \alpha_4 * ROA_{i,t-1} + \alpha_5 * LEV_{i,t-1} + \alpha_6 *$$
$$DIVYLD_{i,t-1} + \alpha_7 * RND_{i,t-1} + \alpha_8 * HHI_{i,t-1} + \alpha_9 *$$

[4] All continuous variables are winsorized at the 1 percent and 99 percent levels. Consistent with Brav et al. (2008), all continuous variables are also standardized, with a mean of zero, and standard deviation of one.

$$ANALYST_{i,t-1} + \alpha_{10} * INST_{i,t-1} + \alpha_{11} * CASH\ STI_{i,t-1} + \alpha_{12} *$$

$$Z\ SCORE_{i,t-1} + \alpha_{13} *\ BIG\ 4_{i,t-1} + \varepsilon_{i,t-1} \qquad (1)$$

where *ACTIVISM* is an indicator variable that is set to 1 if firm *i* is targeted by an activist hedge fund in year *t*. The independent variables in equation (1) are measured in the year prior to hedge fund activism. I estimate this regression by year to better match the growing influence of hedge funds over time. Using the resulting parameter estimates, I then estimate the propensity score for each firm, and identify up to 4 non-target firms with the closest propensity score to the target firm.[5],[6]

Table 2, Panel A, reports the aggregated estimates of the annual logistic propensity-score regression of hedge fund activism. The first column is the average coefficient estimate from the annual logistic propensity-score regression of hedge fund activism from 2002 through 2013. The second column reports an aggregate z-statistic. Following Armstrong, Jagolinzer, and Larcker (2010), the aggregated z-statistic is calculated as the sum of the individual annual z-statistics divided by the square root of the number of years for which the propensity score model is estimated. The final two columns report the number of years for which the year-specific coefficient is negative and positive, respectively. The average *Adjusted Pseudo R-squared* is equal to 0.15. To approximate the predictive accuracy of the propensity model, I estimate the area under the receiver operating characteristic (ROC) curve per year. The average estimated area under the ROC curve is 0.78

[5] Ming and Rosenbaum (2000) document that a variable ratio match, where the number of matches per treatment is allowed to vary, minimizes the bias associated with both observed and unobserved covariates.

[6] To identify the matched sample, I use the optimal caliper width for propensity score matching of 0.2 of the standard deviation of the logit propensity scores (Austin 2011). Results using a 1-to-1 match are consistent with those presented.

suggesting that the propensity model does a fair to good job of predicting hedge fund targeting (Metz 1978). Consistent with Brav et al. (2008) and Klein and Zur (2009) firms with lower Tobin's q, greater institutional ownership, higher bankruptcy risk and with greater amounts of cash on hand are more likely to be targeted by hedge fund activism.[7]

[REFER TO TABLE 2 HERE]

Table 2, Panel B, provides descriptive statistics for targeted and control firms, post-propensity-score match. To assess covariate balances between the treatment and control groups, I report both a parametric t-test of the difference in means and the Wilcoxon signed rank sum test to test the difference in medians. The propensity-score model appears to be effective in controlling for several client characteristics associated with hedge fund targeting. It should be noted that the significance difference in medians for DIVYLD is due to the distribution of non-dividend paying target firms, relative to the matched sample. The Wilcoxon test of differences is a rank sum test, and while the medians for both samples are equal to zero, the differences in ranks creates a significant difference between the two samples.

3.3 Variable Construction

From the final list of 626 activist events, I identify the tactics and objects associated with each filing. To do this, I hand collect the hedge fund's stated objectives and related exhibits for their investment as provided in the Schedule 13D

[7] The differences between my model and Brav et al. (2008) are due to differences in the sample period, and the addition of the Klein and Zur (2009) variables, CASH_STI and Z SCORE. For the sample period of 2001-2006, I replicated the Brav et al. (2008) results in Table IV, "Probit Analysis of Targeting," without significant differences in the results (untabulated).

filing.[8] Following Brav et al. (2008), I classify each Schedule 13D filing as "Confrontational" if the 13D filing includes a threatened or actual proxy contest, takeover, lawsuit, or openly confrontational public campaign. Schedule 13D filings are classified as "Aggressive" if they are not "Confrontational" (defined above), and state an activist agenda, including, but not limited to gaining a seat on the board, firing the CEO, and/or preventing a merger (Klein and Zur 2009, 2011a). "Non-Confrontational" campaigns are those remaining 13D filings that state an intent to invest in a firm and/or hold discussions with management to maximize shareholder value. Examples of each campaign type are provided in Appendix C.

Following Brav et al. (2008), I also classify the objectives disclosed in the Schedule 13D filing. Table 3 summarizes the hedge fund objectives and tactics used. Hedge funds primarily follow a non-confrontational campaign type (72.8%). Of the remaining Schedule 13D filings, 7.2% pursue an openly confrontational activist campaign, while the remaining 20.0% pursue aggressive campaigns. The primary objective listed by the hedge fund is for investment purposes (59.6%). Of the remaining objectives, Governance (12.3%) and targeting business strategies (10.7%) are the next most common objectives, with capital structure changes (8.5%) and selling the target (6.4%) being less common.

[REFER TO TABLE 3 HERE]

[8] Item 4 of Schedule 13D requires filers to disclose the purpose of the investment. A description of the required disclosures is attached in Appendix B.

3.4 Empirical Methodology

To examine the relation between hedge fun activism and auditor dismissals, I estimate the following logistic regression model: (Variables are defined in Appendix A) [9]

$$Prob(AUD\ TO_{i,t} = 1) = \alpha_0 + \alpha_1 * POST_{i,t-1} + \alpha_2 * TENURE_{i,t-1} + \alpha_3 * LEVERAGE_{i,t-1} + \alpha_4 * ROA_{i,t-1} + \alpha_5 * GROWTH_{i,t-1} + \alpha_6 * LOG\ SIZE_{i,t-1} + \alpha_7 * GOING\ CONCERN_{i,t-1} + \alpha_8 * INST_{i,t-1} + YEAR\ FE + \varepsilon_{i,t-1} \quad (2)$$

where *AUD TO* is an indicator variable that is set to 1 if firm *i* changes auditors in year *t*. *POST* takes the value of 1 if the year of auditor turnover is equal to the year of, and two years after the year of activism. Prior research suggests that auditor turnovers are more likely for firms in financial distress or experiencing significant operational changes (e.g., Schwartz and Menon 1985; Johnson and Lys 1990). Therefore, I control for firm *LEVERAGE*, *ROA*, *SALES GROWTH*, and *GOING CONCERN* opinions. To ensure that firm characteristics, the influence of other outside stakeholders and the auditor-client relationship do not influence auditor turnovers, I also control for firm size (*LOG_SIZE*), institutional ownership (*INST*), and audit firm tenure (*LOG_TENURE*). Finally, I control for unobservable time variant characteristics by including year fixed effects. The variables are defined in detail in Appendix A. Equation (2) is used exclusively for firms targeted by hedge

[9] Non-linear (logit and probit) models may lead to potential biases or inconsistencies on the coefficients and standard errors (Greene 2004). To address this issue, I also repeat all logistic regressions using a linear probability model with both firm and year fixed effects. Results (untabulated) of the linear probability model are consistent with those presented.

fund activists to compare how the probability of an auditor turnover changes after hedge fund activism.

I then modify Equation (2) to factor in the matched control sample and use a difference-in-difference regression, as follows:

$$Prob(AUD\ TO_{i,t} = 1) = \alpha_0 + \alpha_1 * ACTIVISM_{i,t-1} + \alpha_2 * POST_{i,t-1} + \alpha_3 * POST_{i,t-1} * ACTIVISM_{i,t-1} + \sum_{n=4}^{10} \alpha_n * CONTROLS_{n,i,t-1} + \varepsilon_{i,t-1} \quad (3)$$

where *ACTIVISM* is an indicator variable equal to 1 if the firm is targeted by a hedge fund activist, and the interaction term *POST * ACTIVISM*. In the difference-in-difference design, the coefficient of interest is α_3, with α_1 capturing the differences in auditor turnover for firms targeted by activist investors, and α_2 capturing the differences in auditor turnover associated with time.

4. Empirical Results

4.1 Univariate Analysis: Hedge Fund Activism and Auditor Turnover

I begin my empirical analyses by examining the relation between hedge fund activism and auditor turnovers. Table 4 presents the results of the univariate analysis. The activist target sample examines the effect of activism on auditor turnovers and dismissals using only firms targeted by hedge fund activists. The propensity matched sample presents auditor turnovers and dismissals for both the activist and matched sample, during the post-activism period.

Panel A presents the results using the full sample. The auditor turnover (dismissal) rate for sample firms targeted by hedge fund activists is 7.72% (6.34%) in the post-activism period. This is significantly larger than the 5.75% (4.62%) in

the pre-activism period. Firms in the propensity matched control sample have a 6.29% (5.03%) rate of auditor turnovers (dismissals), significantly less than the hedge fund targeted firms.

Since prior research suggests that the switching costs associated with an auditor change increases with the auditor size (e.g., Hennes et al. 2014), I partition the sample into Big 4 and non-Big 4 audit clients. Panel B and C present the results of this partition. With Big 4 (non-Big 4) audit clients, I find that hedge fund activism is associated with a significantly higher (lower) rate of dismissals. These univariate results are consistent with the hypothesis that hedge fund activism is associated with a higher rate of auditor turnovers and dismissals, specifically for Big 4 audit clients.

[REFER TO TABLE 4 HERE]

4.2 Multivariate Analysis: Hedge Fund Activism and Auditor Turnover

The results from Table 4 suggest that hedge fund activism is associated with an increased rate of auditor dismissals. I next examine whether the results hold after controlling for other factors associated with auditor turnovers. Table 5 reports the regression results for Equations (2) and (3). Columns (1) & (2) report the results for Equation (2), where column (1) examines all auditor turnovers and column (2) eliminates 42 firms (210 firm year observations) that experienced an auditor resignation. Columns (3) and (4) repeat the analysis of columns (1) and (2), using Equation (3) with both the hedge fund targeted firms, and the propensity matched sample.

Both models show a positive and statistically significant relation between hedge fund activism and auditor turnovers and dismissals. Specifically, the coefficients on *POST* are 0.419 (t-statistic = 2.51) and 0.461 (t-statistic = 2.43) in columns (1) and (2), respectively. These results indicate a 2.59% (2.38%) greater probability of an auditor turnover (dismissals), and suggest that auditor turnovers and dismissals are more likely to occur after hedge fund activism. Given that approximately 5.75% (4.62%) of target firms have an auditor turnover (dismissal) during the pre-activism period, this finding translates in to 44.96% (51.45%) increase in the probability of having an auditor turnover (dismissal).

The results using the matched control sample are consistent with those above. The coefficients on *ACTIVISM * POST* are 0.459 (t-statistic = 2.70) and 0.490 (t-statistic = 2.53), in columns (3) and (4), respectively. These results translate to a marginal increase in the probably of an auditor turnover (dismissal) of 2.73% (2.41%), and suggests that post hedge fund intervention, target firms experience a significant increase in the probability of both auditor turnovers and dismissals.

Columns (5) – (8) repeat the previous analyses using only the dismissed subsample, partitioning the sample into Big 4 and non-Big 4 audit clients. The results of partitioning the sample on Big 4 versus non-Big 4 audit clients are similar to those presented above, for the Big 4 audit clients. For Big 4 audit clients, I find significantly positive coefficients on POST and the ACTIVISM * POST. However, for non-Big 4 audit clients targeted by hedge fund activists, there is a significantly negative coefficient on POST of -0.776 (t-statistic = -2.37). However, when

examining the effect of hedge fund activists using the matched control sample, the coefficient on ACTIVISM * POST is insignificantly positive. Overall, these results are consistent with hedge fund activism increasing the likelihood of auditor turnovers and dismissals, however, it appears that hedge funds target Big 4 auditors for dismissal.

[REFER TO TABLE 5 HERE]

4.3 Multivariate Analysis: Hedge Fund Activism on Auditor Choice

To further evaluate the effect that hedge fund activism has on the auditing function, I next examine whether hedge fund activism affects the successor auditor type. Theory suggests that larger auditors are better able to discover accounting irregularities, and report those irregularities (DeAngelo 1981). This is due to the reputational concerns by the large auditors, and the potential loss in quasi-rents earned by the auditor due to the loss of other clients. Prior accounting research supports this theory and suggests that Big 4 auditors supply better monitoring over client firms relative to non-Big 4 auditors. For example, Behn, Choi, and Kang (2008) examine the role of audit quality on analysts' forecasts. The authors find that both Big N auditors and non-Big N industry specialists are associated with higher forecast accuracy and lower forecast dispersion, suggesting that higher quality auditors are associated with more reliable accounting earnings. In addition to increased monitoring, audit quality is associated with a decrease in the cost of debt (Mansi, Maxwell, and Miller 2004; Pittman and Fortin 2004), and acts as a signal of financial statement transparency for politically connected firms (Guedhami et al. 2014). In order to protect their investment, and to signal other

investors as to the quality of the firm's financial statement, hedge funds may seek to improve auditor quality by hiring a higher quality auditor. Thus, I expect that hedge fund activism is associated with a greater likelihood of hiring a Big 4 auditor.

To test this prediction, I first separate my sample into firms with a Big 4 auditor in the year of hedge fund activism (or year of match), and those with a non-Big 4 auditor. Using equation 2, for firms with a Big 4 auditor, I change the dependent variable to the probability of having a lateral auditor change (*LATERAL* = 1) or switching to a non-Big 4 auditor (*DOWNGRADE* = 1), versus not changing auditors (*LATERAL* = 0 and *DOWNGRADE* = 0). Similarly, for firms with a non-Big 4 auditor, I change the dependent variable to the probability of having a lateral auditor change (*LATERAL* = 1) or switching to a Big 4 auditor (*UPGRADE* = 1).

Table 6 reports the regression results for the modified Equations (2) & (3). Consistent with the results in Table 5, I find that hedge fund activism only increases the likelihood of auditor turnovers and dismissals for Big 4 audit clients, as evidenced by the significantly positive coefficients on *POST* in column (1) and *ACTIVISM * POST* interaction term in Column (5). Non-Big 4 audit clients are not associated with any changes in the rate of auditor dismissals in the post-activism period, columns (3) & (4). When comparing hedge fund activism to the matched control sample, I find that hedge fund activism is only associated with a higher rate of lateral auditor changes for Big 4 audit clients, as evidenced by the positive coefficient on the *ACTIVISM * POST* interaction term in Column (5).

[REFER TO TABLE 6 HERE]

4.4 Supplemental Analysis

The finding of a positive relation between hedge fund activism and the likelihood of a Big 4 lateral auditor turnover suggests that hedge funds are not seeking to diminish financial statement transparency. Given this finding, I next examine the drivers of the lateral change in auditors by Big 4 audit clients. Specifically, I examine whether hedge funds seek to replace auditors to: 1) improve independence, or 2) to improve financial statement quality.[10]

4.4.1 Perceptions of Auditor Independence and Quality

To examine how investor perceptions of auditor independence affect the relation between hedge fund activism and auditor dismissals, I first partition my sample based on the ratio of non-audit service fees (NAS) to total fees (measured in the year prior to hedge fund activism). Schmidt (2012) uses this measure to evaluate how perceived impaired auditor independence affected the likelihood of auditor litigation, post-restatement. The author finds that the ratio of NAS to total fees is positively associated with the likelihood of auditor litigation, an increase in the likelihood of an auditor settlement, and a larger amount of settlement. I partition the sample based on whether the target (and control) firms have an NAS ratio above the annual median.

Table 7, Panel A reports the results of this partition. I find that firms targeted by hedge fund activists, with a high NAS ratio are associated with lateral auditor changes, column (4). This result hold when comparing the activist target sample to

[10] Given that hedge fund activism is associated with Big 4 auditor dismissals, the remaining tests will focus on a subsample of Big 4 audit clients.

the matched control group. I find that firms with a high NAS ratio are associated with a higher rate of lateral auditor changes, Column (8).

In addition to the NAS ratio, I also examine how abnormal audit fees (measured in the year prior to hedge fund activism) affects the likelihood of an auditor turnover and dismissal. Khurana and Raman (2006) argue, and provide evidence indicating, that both non-audit and audit fees can contribute to the economic bonding between the auditor and the client. Using the level of abnormal audit fees,[11] I partition the sample based on whether the target (and control) firms abnormal audit fees are above the annual median.

[REFER TO TABLE 7 HERE]

Table 7, Panel B reports the results of the abnormal audit fee partition. I find that firms targeted by hedge activisms with a high level of abnormal audit fees have a higher rate of auditor dismissals and lateral auditor changes, columns (2) & (4). The association between hedge fund activism and auditor dismissals and lateral auditor changes holds when comparing the activism firms to the control sample, columns (6) & (8). These results are consistent with the hypothesis that hedge funds seek to change auditors when there exists the potential of economic bonding between the auditor and the client.

Given that a lack of perceived auditor independence is associated with an increase in auditor turnovers, I next examine how earnings quality affects auditor turnovers. I calculate abnormal discretionary accruals using the modified Jones

[11] Abnormal audit fees is defined as the residual of the audit fee regression model, with the dependent variable equal to the natural log of audit fees. The independent variables include those variables listed in Appendix A, under the heading "Audit & Non-Audit Fee Model."

model, controlling for a firms ROA (Kothari, Leone, and Wasley 2005). Table 7, Panel C reports the results of the abnormal accruals partition. I find that both low and high discretionary accruals are associated with a higher rate of Big 4 auditor dismissals, columns (1) & (2). However, this increase does not correspond to a significant increase in lateral auditor changes. When comparing target firms to the matched sample, I find that both high and low abnormal discretionary accruals are associated with a higher rate of lateral auditor changes, columns (7) & (8).

4.4.2 Consequences of Auditor Turnover

The analysis above indicates that hedge fund activism is associated with an increase in the rate of lateral auditor changes among Big 4 audit clients, especially for target firms with high levels of non-audit and audit fees. This evidence naturally raises the question of what are the economic consequences of changing auditors (i.e., do firms benefit from these changes). Extant research (Hennes et al. 2014) suggests that the market looks favorable on auditor changes associated with increasing financial statement reliability. However, auditor changes are generally considered a signal of poorer earnings quality (Lu 2006). Therefore, I examine how lateral auditor changes effects financial statement reliability using the earnings response coefficient (ERC) of targeted firms.

Table 8, Panel A reports the results of this analysis. Using a differences-in-difference-in-differences design, I compare the quarterly ERCs for firms with HIGH FEES, POST-turnover, and interact these variables with quarterly unexpected earnings (UNEX). The pre-turnover period is measured from the activist date to the date of auditor turnover, and POST-turnover is measured from

the date of auditor turnover to 8 quarters following that date. Column 1 (2) reports the results of firms with high NAF ratios (Abnormal Audit Fees) prior to hedge fund activism. I find that ERCs are significantly higher for firms that experience a lateral auditor change with high NAF ratios and abnormal audit fees. This suggests that the market deems the auditor change as improving financial statement credibility.

Table 8, Panel B and C reports the results of the analysis on audit fee and non-audit fee changes. If hedge fund activism increases auditor turnover as a mechanism to decrease expenses, I expect that regardless of these partition, both audit fees and non-audit fees should decline. However, if independence is a concern of the hedge fund, audit fees should decline for firms with high abnormal audit fees, while non-audit fees should decline only for firms with high non-audit fee ratios. Consistent with the hypothesis that hedge funds seek to improve auditor independence, I find that post auditor change, firms with high abnormal audit fees see a decline in audit fees, while firms with a high non-audit fee ratio, see a decline in non-audit fees. The significant coefficients in Table 8, Panel B and C, translates to a decrease in audit fees of 19.1% for firms with high abnormal audit fees prior to hedge fund intervention, while non-audit fees decrease by 86.2% for firms with a high non-audit fee ratio prior to hedge fund activism. This suggests that hedge funds improve auditor independence by decreasing the auditor's economic dependence on the client.

[REFER TO TABLE 8 HERE]

4.4.3 Auditor Turnover, Campaign Type and Activist Intent

To assess the effect that hedge fund objectives have on auditor turnover, I first partition the hedge fund targeted sample into the five objective types (INVESTMENT, CAPITAL STRUCTURE, BUSINESS STRATEGY, SALE OF TARGET COMPANY, and GOVERNANCE). Table 9, Panel A reports the results of this partition using equation 2.[12] I find that only firms targeted with the objective of investment are associated with an increase in the rate of auditor dismissals, Big 4 - column (1).

Table 9, Panel B reports the results of equation 3. Column (1) reports both Big 4 and non-Big 4 client dismissals. Column (2) reports only Big 4 client dismissals, and column (3) reports Big 4 lateral changes. Consistent with the results in Panel A, hedge funds disclosing an investment objective are more likely to dismissal a Big 4 auditor, and seek a lateral auditor change, columns (2) & (3).

[REFER TO TABLE 9 HERE]

To assess the effect that the type of activist campaign has on auditor dismissals, I repeat the above procedures and partition the hedge fund targeted sample into the three activist campaign types (CONFRONTATIONAL, AGGRESSIVE, and NON-CONFRONTATIONAL). Table 10, Panel A reports the results of this partition using equation 2. I find that the NON-CONFRONTATIONAL campaign type is associated with an increase in the rate of

[12] For brevity, I do not tabulate the control variables for the regressions presented in Table IX. However, the significance of the control variables is consistent with those reported in previous tables.

auditor dismissals for the full sample, Big 4 audit clients, and Big 4 lateral changes, Column (3).

Table 10, Panel B reports the results of equation 3. Column (1) reports both Big 4 and non-Big 4 client dismissals. Column (2) reports only Big 4 client dismissals, and column (3) reports Big 4 lateral changes. I find evidence consistent with my expectation that non-confrontational activism is associated with greater auditor turnovers, I find that NON-CONFRONTATIONAL campaigns have a higher rate of auditor dismissals for the full sample, and Big 4 audit clients, Columns (1) & (2), and that AGGRESSIVE campaigns are associated with an increase in Big 4 dismissals, column (2). Further, NON-CONFRONTATIONAL campaigns are associated with lateral auditor changes column (3).

[REFER TO TABLE 10 HERE]

5. Conclusion

This study examines how changes in investors monitoring affect a firm's auditor choice decision, using the setting of hedge fund activism. Behavioral research in accounting suggests that auditor independence increases when shareholders are responsible for selecting the auditor (Mayhew and Pike 2004). However, shareholder ratification votes are advisory in nature, and shareholders currently do not have the ability to directly influence the firm's choice in auditors. Hedge fund activism provides a setting that allows me to examine how highly motivated investors, with the ability to demand and effect changes in the firm, affect a firm's decision to change auditors. I find that hedge fund activism is associated with a significant increase in the rate of auditor dismissal and improved auditor

independence, consistent with behavioral research on investor selection of the auditor (Mayhew and Pike 2004).

This study also examines how hedge fund activism can affect other stakeholders in the firm. While existing literature primarily examines the effect of hedge fund activism on firm operations and shareholder wealth, there is growing interest in how they affect other stakeholders in a firm. I focus on how hedge fund activism affects auditor turnover and auditor choice because it is uncertain whether hedge funds are willing to directly affect financial reporting quality. On one hand, hedge funds may seek to improve auditor quality as a monitoring mechanism over management. On the other hand, hedge funds may deem that a change in auditors can provide a negative signal to the market, leading to lower market values. My evidence suggests that hedge funds are motivated by improving the monitoring of management, with the market perceiving these changes as a positive signal of earnings quality.

Further, this study examines how individual investors can affect management's decision to change auditors. Prior literature uses varying measures of investor monitoring to identify how these investors can affect auditor choice. However, using such measures may be inherently noisy since institutions have differing incentives to monitor the target firm, and due to an institutional preference for well governed firms. Hedge fund activism provides a setting to test how an institution with a highly motivated fund manager can affect auditor choice. My evidence suggests that hedge funds have a preference for improving auditor quality through improving auditor independence. This improvement is evidenced by fact

that the increase in auditor turnovers occurs primarily for the Big 4 subsample, with new auditors seeing a sharp decline in both abnormal audit fees and non-audit service fees.

Finally, this study examines how the type of hedge fund activist affects auditor turnover and auditor choice. Prior literature notes heterogeneity within hedge fund activism, suggesting the need to take a more nuanced view of hedge fund activism. Consistent with prior research, I find that when hedge funds pursue non-confrontational forms of activism, they are better able to direct changes in the company. These results suggest a need for additional research on the effects on non-confrontational hedge fund activism on a firm, to determine whether these types of hedge fund activism are adequately disclosing their intent. As noted by Mary Jo White, Chair of the Securities and Exchange Commission, the SEC "staff reviews materials related to these campaigns to facilitate compliance with the applicable disclosure requirements so that shareholders receive the information necessary to make an informed investment or voting decision" (White 2015). If non-confrontational hedge funds are more effective at making changes to a firm, it may suggest a greater need for disclosure by these hedge funds.

APPENDIX A – VARIABLE DEFINITIONS

PROPENSITY SCORE MATCHING MODEL
(Brav et al. 2008; Klein and Zur 2009)

Variable of Interest	
TARGET =	An indicator variable equal to 1 if a firm is the target of hedge fund activism in year t, and zero otherwise
Control Variables	
MV =	Market capitalization in millions of dollars in year t-1
TOBINQ =	Tobin's Q ratio calculated as the sum of the book value of debt plus the market value of equity, divided by the sum of the book value of debt and the book value of equity, in year t-1
GROWTH =	Growth rate of sales over the previous year, in year t-1
ROA =	Return on assets ratio, calculated as earnings before interest, taxes, depreciation and amortization, divided by lagged total assets, in year t-1
LEV =	Leverage ratio, calculated as short-term debt plus long term debt, divided by the sum of total debt and the book value of equity, in year t-1
DIVYLD =	Dividend yield, calculated as the sum of total common dividends and preferred dividends, divided by the sum of the market value of common stocks and the book value of preferred stocks, in year t-1
RND =	Research and development expense scaled by lagged total assets, in year t-1
HHI =	The Herfindahl-Hirschman index of sales in different business segments reported in COMPUSTAT, in year t-1
ANALYST =	The number of analysts covering the company from I/B/E/S, in year t-1
INST =	The proportion of shares held by institutional investors, in year t-1
CASH_STI =	The sum of total cash and short-term investments, scaled by total assets, in year t-1
Z-SCORE =	Altman (1968) bankruptcy prediction score. 1.2 * working capital / total assets + 1.4 * (retained earnings / total assets) + 3.3 * (EBIT / total assets) + 0.6 * (market value equity / total liabilities) + 0.999 * (sales / total assets), in year t-1
BIG_4 =	Indicator variable equal to 1 if the firm has a Big 4 auditor, zero otherwise, in year t-1

AUDITOR TURNOVER MODEL

Variables of Interest	
AUD TO =	An indicator variable equal to 1 if a firm changes auditor in year t, and zero otherwise, in year t
ACTIVISM =	Indicator variable equal to 1 if a firm is targeted by hedge fund activism, zero otherwise
POST =	Indicator variable equal to 1 for the year of and two years after hedge fund activism (or the year of and two years after

	the year the firm was matched to an activist target), 0 otherwise
CONFRONTATIONAL =	Indicator variable equal to 1 if the hedge fund pursues a confrontational/hostile campaign, zero otherwise
AGGRESSIVE =	Indicator variable equal to 1 if the hedge fund seeks changes in the firm and does not pursue a confrontational campaign, zero otherwise
NON_CONFRONTATIONAL =	Indicator variable equal to 1 if the hedge fund does not pursue an aggressive or confrontational campaign, zero otherwise
INVESTMENT =	Indicator variable equal to 1 if the only objective disclosed by the hedge fund is investment or to maximize shareholder value, zero otherwise
CAPITAL STRUCTURE =	Indicator variable equal to 1 if the hedge fund seeks to change the capital structure of the firm, zero otherwise
BUSINESS STRATEGY =	Indicator variable equal to 1 if the hedge fund seeks to change the business strategy of the firm, zero otherwise
SALE_OF_TARGET =	Indicator variable equal to 1 if the hedge fund seeks to sell the target firm, or take the target firm private, zero otherwise
GOVERNANCE =	Indicator variable equal to 1 if the hedge fund seeks to make governance related changes to the target firm, zero otherwise
Control Variables	
LOG_TENURE =	Natural log of the auditor's tenure, in years, calculated in year t-1
LEVERAGE =	Leverage ratio, calculated as short-term debt plus long term debt, divided by total assets, in year t-1
ROA =	Return on assets ratio, calculated as earnings before interest, taxes, depreciation and amortization, divided by lagged total assets, in year t-1
GROWTH =	Growth rate of sales over the previous year, in year t-1
LOG_SIZE =	Natural log of total assets, in year t-1
GOING CONCERN =	Indicator variable equal to 1 if the firm received a going concern opinion in year t-1, 0 otherwise
INST =	The ratio of the number of shares held by institutional investors divided by the total number of shares outstanding, in year t-1

EARNINGS RESPONSE COEFFICIENT MODEL

Variables of Interest	
CAR =	The cumulative abnormal stock return during the three-day window surrounding the earnings announcement date. Calculated as the return over the three day window, less the value weighted market return, in year t
HIGH FEES =	An indicator variable equal to 1, if the identified fee ratio is greater than the median value during the year the firm was targeted by the hedge fund activist
POST TURNOVER =	An indicator variable equal to 1 for the year of and two years after auditor dismissal, 0 otherwise
UNEX =	The total unexpected earnings in the earnings announcement, calculated as the actual earnings per share, less the I/B/E/S mean estimate, scaled by the price per share, during the quarter

Control Variables	
PRE_ANN_RET =	The stock return leading up to the earnings announcement date, calculated between the date of the analyst forecast, and 2 days prior to the earnings announcement
LOSS =	An indicator variable equal to 1 if the target firm's actual earnings per share is less than zero, 0 otherwise
MTB =	The market to book ratio, calculated as the market value of equity, divided by total equity, in quarter t
SIZE =	The natural log of the total market value of equity of the target firm, in quarter t
Q4 =	An indicator variable equal to 1, if the target firm's earnings announcement is in the fourth quarter of the fiscal year, 0 otherwise

AUDIT & NON-AUDIT FEE MODEL

Variables of Interest	
FEES =	The fees (audit or non-audit) charged by the auditor to the client, in year t
HIGH FEES =	An indicator variable equal to 1, if the identified fee ratio is greater than the median value during the year the firm was targeted by the hedge fund activist
POST TURNOVER =	An indicator variable equal to 1 for the year of and two years after auditor dismissal, 0 otherwise
Control Variables	
SIZE =	The natural log of total assets, in year t
GROWTH =	The growth rate of sales over the previous year, in year t
LEVERAGE =	The leverage ratio, calculated as short-term debt plus long term debt, divided by total assets, in year t
CURRENT =	The current ratio, calculated as total current assets, scaled by total assets, in year t
QUICK =	The quick ratio, calculated as total current assets, less inventory, scaled by total current liabilities, in year t
YE =	An indicator variable equal to 1, if the target firm's year end is during the month of December, 0 otherwise
SEGMENT =	The number of business or operating segments reported by the firm in year t
FOREIGN =	The total amount of foreign sales by the target firm, scaled by total sales, in year t
ROA =	Return on assets ratio, calculated as earnings before interest, taxes, depreciation and amortization, divided by lagged total assets, in year t
ICWEAK =	An indicator variable equal to 1 if the target firm reported ineffective internal controls in year t
SPECIALIST =	An indicator variable equal to 1 if the target firm was audited by a national industry specialist in year t
LOG_TENURE =	Natural log of the auditor's tenure, in years, calculated in year t-1
DAYS_TO_SIGN =	The number of days between the signature date of the auditor's opinion, and the fiscal year end
RESTATEMENT =	An indicator variable equal to 1 if the target firm restated their earnings in year t-1

APPENDIX B – HEDGE FUND DISCLOSURES

The following is an excerpt from the Schedule 13D instructions, and lists the specific items that must be disclosed by the filer.

> **Item 4. Purpose of Transaction.** State the purpose or purposes of the acquisition of securities of the issuer. Describe any plans or proposals which the reporting persons may have which relate to or would result in:
> **(a)** The acquisition by any person of additional securities of the issuer, or the disposition of securities of the issuer;
> **(b)** An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the issuer or any of its subsidiaries;
> **(c)** A sale or transfer of a material amount of assets of the issuer or any of its subsidiaries;
> **(d)** Any change in the present board of directors or management of the issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
> **(e)** Any material change in the present capitalization or dividend policy of the issuer;
> **(f)** Any other material change in the issuer's business or corporate structure, including but not limited to, if the issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by section 13 of the Investment Company Act of 1940;
> **(g)** Changes in the issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the issuer by any person;
> **(h)** Causing a class of securities of the issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
> **(i)** A class of equity securities of the issuer becoming eligible for termination of registration pursuant to section 12(g)(4) of the Act; or
> **(j)** Any action similar to any of those enumerated above.

APPENDIX C – CAMPAIGN TYPE EXAMPLES

The following excerpts are examples of the three campaign types associated with hedge fund activism.

CONFRONTATIONAL CAMPAIGN – FILING DATE – 2008-10-02
Target Firm – ValueVision Media, Inc – CIK 870826
Activist Investor – J. Carlo Cannell, Cannell Capital LLC – CIK 1287649
Letter Dated – September 24, 2008

We will be watching carefully to make sure the committee's actions are congruent with the interests of shareholders. We are concerned that the hiring of Piper Jaffray & Co. may be a ploy to continue to justify its pattern of wheel spinning and protection of jobs over what is best for the owners of the business. For example, on Monday, September 15, 2008 we were shocked to learn that your agent (Piper Jaffray & Co.) called to "permission" when and to whom we might talk at our Company.

This is characteristic of Stalinist Russia, not America. This does not have a good taint to it. You may try to muzzle other investors, but not Cannell. It bites.

You further have called for representatives to the Board of Directors. We have several candidates in mind. Two will be contacting you shortly to present their credentials directly.

It is amazing to us how much value has been destroyed under your stewardship. That you would have to hire an agent at all to advise you on what should have been done long ago is shameful.

AGGRESSIVE CAMPAIGN – FILING DATE – 2004-04-19
Target Firm – CNF INC– CIK 23675
Activist Investor – Relational Investors LLC – CIK 1047644
Item 4 Disclosure

The Reporting Persons believe the Company’s organizational structure is inefficient and lacks synergies between the logistics and the transportation business segments. The Reporting Persons have met the Company’s management and are confident they understand these challenges and are working to resolve them in a timely manner.

NON-CONFRONTATIONAL CAMPAIGN – FILING DATE – 2008-08-11
Target Firm – BIOGEN IDEC INC. – CIK 875045
Activist Investor – ICAHN CARL C– CIK 921669
Item 4 Disclosure

The Reporting Persons recently acquired Shares and further increased their position in the belief that the Shares were undervalued. Representatives of the Reporting Persons have had, and from time to time may seek to continue to have, discussions with representatives of the Issuer to discuss general business issues relating to the Issuer as well as their concerns relating to shareholder value.

Table 1 - Sample Selection Procedures

Total number of Schedule 13D filings on the SEC Edgar Database	33,404
Drop subsequent 13D filings for each firm, by the same activist	(3,616)
	29,788
Match to the Hedge Fund CIK list	3,637
Drop firms missing Compustat and I/B/E/S data, and are not U.S. based	(2,313)
	1,324
Drop firms without required Audit Analytics data	(144)
	1,180
Drop firms with overlapping activist events	(529)
Remaining firms	651
Drop firms without a propensity score match	(25)
	626
Propensity score matched sample	2,411
Total number of firms	3,037
Add two years pre- and two years post- activism	12,148
Final Sample	15,185

The sample selection procedures are discussed in detail in Section III. The final sample consists of all initial Schedule 13D filings by activist hedge funds, for each firm. Hedge fund activists were identified using a comprehensive list provided by Alon Brav. I exclude companies with insufficient Compustat, I/B/E/S and Audit Analytics data. I retain only the first filing for each firm, to eliminate duplicate observations where multiple hedge funds targeted the sample company. I exclude observations where the incumbent auditor is Arthur Andersen. Finally, I drop firms that I am unable to create a match for using propensity score matching.

Table 2 - Propensity Score Matching

Panel A: Propensity Score Estimation

Dependent Variable = Activism	Pred.	Avg. Coeff.	Aggr. Z-Statistic	Yrs. with Neg. Coeff.	Yrs. with Pos. Coeff.
MV	-	-2.398	-0.773	8	3
q	-	-4.011	-5.606	11	0
GROWTH	-	-0.639	-1.110	7	4
ROA	+	-0.310	-0.665	7	4
LEV	+/-	0.893	1.945	3	8
DIVYLD	-	-0.695	-0.811	7	4
RND	+/-	-0.260	0.078	4	7
HHI	-	-1.679	-0.902	5	6
ANALYST	+	-2.806	-3.400	8	3
INST	+	1.418	2.770	3	8
Z_SCORE	-	-1.779	-2.945	8	3
CASH_STI	+	1.147	2.142	4	7
BIG 4	+/-	-0.838	-0.944	7	4
Intercept	-	-41.711	-31.376	11	0
Firm-Year Obs.		21,979			
Adj. Pseudo-R2		0.152			
ROC Curve		0.782			

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.
The Adj. Pseudo R-Squared is the average adjusted pseudo r-squared from the annual logistic regression. The ROC Curve is the average ROC Curve value from the annual logistic regression.

Table 2 - Propensity Score Matching (continued)

Panel B: Propensity Matched Sample – Descriptive Statistics

	Activist Sample Mean	Control Sample Mean	Activist Sample Median	Control Sample Median	t-Test Difference p-value	Wilcoxon Difference p-value
MV	1,356.20	1,633.90	245.88	335.80	0.216	0.001
q	1.885	1.888	1.486	1.518	0.960	0.597
GROWTH	0.084	0.090	0.045	0.062	0.649	0.050
ROA	0.072	0.081	0.096	0.109	0.254	0.016
LEV	0.197	0.212	0.134	0.152	0.104	0.108
DIVYLD	0.008	0.009	0.000	0.000	0.121	0.073
RND	0.052	0.044	0.004	0.000	0.041	0.003
HHI	0.315	0.326	0.333	0.333	0.273	0.356
ANALYST	5.725	5.765	4.000	4.000	0.885	0.899
INST	0.473	0.473	0.485	0.505	0.988	0.597
CASH_STI	0.205	0.188	0.124	0.106	0.064	0.015
Z-SCORE	3.089	3.282	2.835	3.000	0.346	0.213
BIG_4	0.746	0.748	1.000	1.000	0.909	0.909
Number of Observations	626	2,411				
% of Total	20.61%	79.39%				

This table present the descriptive statistics for the propensity-score matched hedge fund target samples. Propensity scores were calculated using Equation (1). To identify the matched sample, I use the optimal caliper width for propensity score matching of 0.2 of the standard deviation of the logit propensity scores (Austin 2011).
All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles

Table 3 - Summary of Events by Hedge Funds' Stated Goals

Panel A: Summary of Hedge Funds' Stated Objectives

	All Events							
Objective Categories	Number of Events (1)	% of Sample (2)	Num. of Confrontational Campaigns (3)	% of Sample (4)	Num. of Aggressive Campaigns (5)	% of Sample (6)	Number of Non-Confrontational Campaigns (7)	% of Sample (8)
1. General Undervaluation/Investment/Maximize Shareholder Value	373	59.58%	2	0.32%	14	2.24%	354	56.55%
2. Capital Structure	53	8.47%	15	2.40%	38	6.07%		
3. Business Strategy	67	10.70%	18	2.88%	49	7.83%		
4. Sale of Target Company	40	6.39%	8	1.28%	32	5.11%		
5. Governance	77	12.30%	29	4.63%	48	7.67%		
Sum of Categories (2) through (5)	237	37.86%	70	11.18%	167	26.68%		

Panel B: Summary of Hedge Fund Tactics

1. The hedge fund intends to monitor the firm, and act depending on prevailing circumstances	243	38.82%	10	1.60%	36	5.75%	197	31.47%
2. The hedge fund intends to communicate with the board/management on a regular basis with the goal of enhancing shareholder value	254	40.58%	31	4.95%	97	15.50%	126	20.13%
3. The hedge fund seeks board representation, without proxy contest or confrontation with the existing management/board	40	6.39%	4	0.64%	36	5.75%		
4. The hedge fund makes formal shareholder proposals, or publicly criticizes the company and demands change	48	7.67%	30	4.79%	18	2.88%		
5. The hedge fund threatens to wage a proxy fight in order to gain board representation, or to sue the company for breach of fiduciary duty, etc.	17	2.72%	17	2.72%				
6. The hedge fund launches a proxy contest in order to replace the board	5	0.80%	5	0.80%				
7. The hedge fund sues the company	2	0.32%	2	0.32%				
8. The hedge fund intends to take control of the company, for example, with a takeover bid	1	0.16%	1	0.16%				

This table presents the summary of initial Schedule 13D filing classifications. The objectives and tactics were identified using the disclosures listed in Item 4 of Schedule 13D, and any relevant exhibits attached to the filing. Panel A reports the breakout of activist objectives, and Panel B reports the tactics used. Columns 1 & 2 report the number of events with the disclosed objectives and tactics, and the percentage of those events. Columns 3 to 8 breakout the events into confrontational, aggressive and non-confrontational activist campaigns.

Table 4 - Univariate Comparison of Activism on Auditor Turnover

PANEL A: FULL SAMPLE

	n	All Turnover		n	Dismissals	
ACTIVIST TARGET SAMPLE	3,130	6.93%		2,920	5.65%	
POST-ACTIVISM	1,878	7.72%		1,752	6.34%	
PRE-ACTIVISM	1,252	5.75%		1,168	4.62%	
POST-ACTIVISM vs PRE-ACTIVISM		1.97%	**		1.71%	**
PROPENSITY MATCHED SAMPLE	9,111	6.59%		8,532	5.30%	
ACTIVIST TARGET	1,878	7.72%		1,752	6.34%	
CONTROL SAMPLE	7,233	6.29%		6,780	5.03%	
ACTIVIST TARGET vs MATCHED SAMPLE		1.43%	**		1.31%	**

PANEL B: BIG 4 AUDITOR SAMPLE

	n	All Turnover		n	Dismissals	
ACTIVIST TARGET SAMPLE	2,335	5.14%		2,270	4.63%	
POST-ACTIVISM	1,401	7.00%		908	6.24%	
PRE-ACTIVISM	934	2.36%		1,362	2.20%	
POST-ACTIVISM vs PRE-ACTIVISM		4.64%			4.04%	***
PROPENSITY MATCHED SAMPLE	6,813	6.06%		6,567	5.04%	
ACTIVIST TARGET	1,401	7.00%		1,362	6.24%	
CONTROL SAMPLE	5,412	5.82%		5,205	4.73%	
ACTIVIST TARGET vs MATCHED SAMPLE		1.17%			1.51%	**

PANEL C: NON-BIG 4 AUDITOR SAMPLE

	n	All Turnover		n	Dismissals	
ACTIVIST TARGET SAMPLE	795	12.20%		650	9.23%	
POST-ACTIVISM	477	9.85%		390	6.67%	
PRE-ACTIVISM	318	15.72%		260	13.08%	
POST-ACTIVISM vs PRE-ACTIVISM		-5.87%	**		-6.41%	***
PROPENSITY MATCHED SAMPLE	2,298	8.14%		1,965	6.16%	
ACTIVIST TARGET	477	9.85%		390	6.67%	
CONTROL SAMPLE	1,821	7.69%		1,575	6.03%	
ACTIVIST TARGET vs MATCHED SAMPLE		2.17%			0.64%	

*** p<0.01, ** p<0.05, * p<0.1

This table reports univariate statistics for auditor turnovers and dismissals for the activist sample, pre- versus post-activism, and the propensity score matched sample, post activism. All panels provide mean values for both the activist target sample, and the propensity matched sample. Panel A presents the full sample of firms. Panel B presents Big 4 audit clients. Panel C present non-Big 4 audit clients.

Table 5 - Logistic Regression - Auditor Turnover

	(1) All Turnovers	(2) Dismissed	(3) All Turnovers	(4) Dismissed	(5) Big 4 Dismiss	(6) Non-B4 Dismiss	(7) Big 4 Dismiss	(8) Non-B4 Dismiss
ACTIVISM			-0.198	-0.198			-0.464*	0.031
			(-1.45)	(-1.27)			(-1.89)	(0.15)
POST	0.419**	0.461**	-0.046	-0.064	1.254***	-0.776**	0.333***	-0.757***
	(2.51)	(2.43)	(-0.56)	(-0.68)	(4.60)	(-2.37)	(2.72)	(-4.77)
ACTIVISM*POST			0.459***	0.490**			0.776***	0.107
			(2.70)	(2.53)			(2.79)	(0.34)
LOG_TENURE	-0.449***	-0.454***	-0.616***	-0.613***	-0.164	-0.889***	-0.504***	-0.866***
	(-5.80)	(-4.94)	(-17.07)	(-14.70)	(-1.26)	(-4.80)	(-9.08)	(-10.31)
LEVERAGE	0.125	0.125	0.092***	0.086**	0.033	0.353**	0.063	0.137**
	(1.59)	(1.42)	(2.73)	(2.24)	(0.29)	(2.24)	(1.30)	(2.11)
ROA	0.012	0.002	0.014	0.029	0.109	-0.147	0.053	-0.012
	(0.15)	(0.02)	(0.43)	(0.74)	(0.89)	(-0.93)	(1.00)	(-0.19)
GROWTH	-0.055	-0.041	-0.049	-0.079*	-0.027	-0.066	-0.103*	-0.027
	(-0.70)	(-0.46)	(-1.42)	(-1.89)	(-0.23)	(-0.42)	(-1.79)	(-0.43)
LOG_SIZE	-0.258**	-0.191	-0.224***	-0.176***	-0.216	-0.114	-0.222***	-0.009
	(-2.39)	(-1.59)	(-4.69)	(-3.29)	(-1.46)	(-0.38)	(-3.29)	(-0.07)
GOING_CONCERN	0.029	-0.102	0.372**	0.190	0.140	-0.467	0.352	0.018
	(0.06)	(-0.20)	(2.00)	(0.81)	(0.20)	(-0.56)	(1.08)	(0.05)
INST_OWNERSHIP	-0.131	-0.112	-0.066	-0.081*	-0.138	0.131	-0.105**	-0.042
	(-1.46)	(-1.11)	(-1.57)	(-1.73)	(-1.23)	(0.50)	(-2.01)	(-0.39)
Intercept	-3.381***	-3.701***	-3.285***	-3.301***	-4.913***	-2.257**	-3.327***	-3.209***
	(-3.24)	(-4.94)	(-8.35)	(-7.81)	(-4.67)	(-2.01)	(-6.48)	(-4.19)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0732	0.0619	0.0847	0.0724	0.0701	0.127	0.0582	0.108
Log-Likelihood Ratio	115.1	78.12	632	432.2	59.31	49.25	227.2	213
n	3,130	2,920	15,185	14,220	2,270	650	10,945	3,255

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for Equations (2) and (3), with Z-statistics reported in parentheses below each coefficient. Columns 1-2 and 5-6 show the logistic regression for the activist target subsample. Columns 3-4 and 7-8 show the logistic regression results for the full sample.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 6 - Auditor Turnover - Direction of Change - Dismissal Subsample

	Big 4		Non-Big 4		Big 4		Non-Big 4	
	(1) Lateral Change	(2) Auditor Downgrade	(3) Lateral Change	(4) Auditor Upgrade	(5) Lateral Change	(6) Auditor Downgrade	(7) Lateral Change	(8) Auditor Upgrade
ACTIVISM					-0.455	-0.171	0.076	-0.449
					(-1.44)	(-0.82)	(0.21)	(-0.71)
POST	0.859**	0.369	0.182	1.097	-0.268	-0.094	0.060	0.368
	(2.29)	(1.42)	(0.38)	(1.37)	(-1.57)	(-0.73)	(0.25)	(1.25)
ACTIVISM*POST					0.924**	0.329	0.125	0.817
					(2.47)	(1.24)	(0.26)	(1.14)
LOG_TENURE	-0.635***	-0.378***	-1.132***	-0.411	-1.017***	-0.607***	-1.094***	-0.766***
	(-3.43)	(-3.00)	(-3.99)	(-0.75)	(-12.90)	(-10.68)	(-8.43)	(-4.70)
LEVERAGE	-0.118	0.186	0.298	0.834**	0.092	0.072	0.198**	0.112
	(-0.71)	(1.45)	(1.28)	(2.06)	(1.40)	(1.30)	(2.06)	(0.93)
ROA	0.284	0.057	0.189	-0.675*	0.133	0.083	0.140*	-0.196
	(1.26)	(0.48)	(0.72)	(-1.69)	(1.45)	(1.59)	(1.68)	(-1.44)
GROWTH	-0.005	-0.108	-0.014	-0.213	-0.134	-0.167***	0.032	0.129
	(-0.03)	(-0.87)	(-0.06)	(-0.81)	(-1.43)	(-2.65)	(0.40)	(1.35)
LOG_SIZE	0.199	-0.690***	-0.896*	0.971**	0.067	-0.638***	-0.837***	0.820***
	(0.99)	(-3.65)	(-1.71)	(2.01)	(0.72)	(-7.57)	(-3.78)	(4.71)
GOING_CONCERN		0.082	-0.472		-0.460	0.388	0.250	
		(0.13)	(-0.38)		(-0.62)	(1.24)	(0.64)	
INST_OWNERSHIP	-0.158	-0.147	-0.416	0.461	-0.066	-0.091	-0.295	0.039
	(-1.02)	(-1.01)	(-0.91)	(1.09)	(-0.90)	(-1.37)	(-1.43)	(0.25)
Intercept	-15.708	-15.861	-16.152	-19.366***	-3.192***	-5.007***	-5.026***	-16.566
	(-0.02)	(-0.04)	(-0.02)	(-16.41)	(-6.10)	(-4.94)	(-4.42)	(-0.02)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0549	0.141	0.164	0.226	0.0943	0.139	0.143	0.129
Log-Likelihood Ratio	24.71	100.3	32.66	27.58	204	478.4	144	91.73
n	1,940	2,165	410	445	9,745	10,535	2,515	2,239

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for modified Equations (2) and (3), where the dependent variable is equal to (1) Lateral Changes, (2) Auditor Downgrades, or (3) Auditor Upgrades. Z-statistics reported in parentheses below each coefficient. Columns 1-2 and 5-6 show the logistic regressions for Big 4 audit clients. Columns 3-4 and 7-8 show the logistic regression results for non-Big 4 audit clients.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 7 - Drivers of Auditor Turnover

Panel A: Auditor Independence – Non-Audit Fee Ratio

	Big 4 Clients		Big 4 Clients - Lateral Change		Big 4 Clients		Big 4 Clients - Lateral Change	
	(1) Low Non-Audit Fees	(2) High Non-Audit Fees	(3) Low Non-Audit Fees	(4) High Non-Audit Fees	(5) Low Non-Audit Fees	(6) High Non-Audit Fees	(7) Low Non-Audit Fees	(8) High Non-Audit Fees
ACTIVISM					-0.649*	-0.275	-0.480	-0.385
					(-1.80)	(-0.81)	(-1.16)	(-0.78)
POST	1.303***	1.252***	0.472	1.278**	0.285*	0.389**	-0.312	-0.196
	(3.17)	(3.38)	(0.90)	(2.31)	(1.72)	(2.15)	(-1.39)	(-0.73)
ACTIVISM*POST					0.923**	0.636*	0.684	1.112**
					(2.26)	(1.66)	(1.34)	(1.98)
LOG_TENURE	-0.282	-0.060	-0.813***	-0.473*	-0.564***	-0.431***	-0.969***	-1.069***
	(-1.46)	(-0.34)	(-3.13)	(-1.80)	(-7.38)	(-5.31)	(-9.51)	(-8.42)
LEVERAGE	0.036	0.045	-0.107	-0.112	0.044	0.086	0.024	0.164*
	(0.21)	(0.30)	(-0.43)	(-0.50)	(0.63)	(1.26)	(0.26)	(1.70)
ROA	0.170	0.113	0.418	0.196	0.105	-0.010	0.273**	-0.052
	(0.94)	(0.65)	(1.38)	(0.56)	(1.45)	(-0.13)	(2.18)	(-0.39)
GROWTH	0.083	-0.168	0.138	-0.222	-0.115	-0.093	-0.115	-0.195
	(0.53)	(-0.85)	(0.59)	(-0.63)	(-1.49)	(-1.07)	(-0.95)	(-1.32)
LOG_SIZE	-0.289	-0.200	0.025	0.311	-0.200**	-0.252**	0.064	0.124
	(-1.35)	(-0.94)	(0.09)	(1.07)	(-2.15)	(-2.53)	(0.52)	(0.84)
GOING_CONCERN	0.185	0.041			0.583	0.064	0.398	
	(0.16)	(0.04)			(1.36)	(0.13)	(0.52)	
INST_OWNERSHIP	-0.101	-0.168	-0.198	-0.153	-0.159**	-0.046	-0.141	0.041
	(-0.58)	(-1.13)	(-0.84)	(-0.73)	(-2.20)	(-0.59)	(-1.47)	(0.36)
Intercept	-16.800	-16.942	-16.310	-15.559	-2.972***	-4.010***	-2.854***	-3.910***
	(-0.02)	(-0.01)	(-0.02)	(-0.01)	(-4.94)	(-3.95)	(-4.64)	(-3.79)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0784	0.0728	0.0869	0.0601	0.0636	0.0526	0.0940	0.110
Log-Likelihood Ratio	30.17	33	17.85	14.42	128.3	98.21	111.8	105.3
n	1,085	1,185	960	1,030	5,450	5,495	4,865	4,880

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for modified Equations (2) and (3). The sample is limited to Big 4 audit clients at the time of hedge fund intervention, and is partitioned into two subgroups. The subgroups are defined as firms with either a low ratio of non-audit fees to total fees, versus firms with a high ratio of non-audit fee to total fees, partitioned at the median.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 7 - Drivers of Auditor Turnover (continued)

Panel B: Auditor Independence – Abnormal Audit Fee Ratio

	Big 4 Clients		Big 4 Clients - Lateral Change		Big 4 Clients		Big 4 Clients - Lateral Change	
	(1) Low Abn Audit Fees	(2) High Abn Audit Fees	(3) Low Abn Audit Fees	(4) High Abn Audit Fees	(5) Low Abn Audit Fees	(6) High Abn Audit Fees	(7) Low Abn Audit Fees	(8) High Abn Audit Fees
ACTIVISM					-0.072	-0.766**	-0.320	-0.587
					(-0.20)	(-2.25)	(-0.64)	(-1.43)
POST	0.540	1.724***	0.431	1.184**	0.318	0.344**	-0.058	-0.391*
	(1.27)	(4.56)	(0.68)	(2.42)	(1.47)	(2.31)	(-0.21)	(-1.79)
ACTIVISM*POST					0.094	1.169***	0.247	1.274***
					(0.21)	(3.14)	(0.38)	(2.70)
LOG_TENURE	-0.156	-0.187	-0.962**	-0.590***	-0.479***	-0.520***	-1.016***	-1.021***
	(-0.63)	(-1.21)	(-2.34)	(-2.75)	(-4.97)	(-7.61)	(-7.79)	(-10.18)
LEVERAGE	0.076	-0.003	0.101	-0.230	0.078	0.060	0.136	0.064
	(0.32)	(-0.02)	(0.30)	(-1.16)	(0.92)	(1.01)	(1.30)	(0.75)
ROA	0.341	0.116	0.472	0.312	0.312**	0.003	0.418**	0.039
	(0.96)	(0.85)	(0.96)	(1.17)	(2.33)	(0.06)	(2.34)	(0.37)
GROWTH	-0.777*	0.052	-0.179	0.035	-0.121	-0.102	0.065	-0.249**
	(-1.72)	(0.44)	(-0.39)	(0.18)	(-0.95)	(-1.57)	(0.49)	(-1.97)
LOG_SIZE	-0.349	-0.133	-0.332	0.361	-0.266**	-0.178**	-0.202	0.197*
	(-1.08)	(-0.79)	(-0.71)	(1.62)	(-1.98)	(-2.26)	(-1.13)	(1.80)
GOING_CONCERN		0.145			0.502	0.212		-0.397
		(0.20)			(0.47)	(0.61)		(-0.53)
INST_OWNERSHIP	0.149	-0.223*	0.083	-0.235	-0.030	-0.134**	0.064	-0.120
	(0.67)	(-1.67)	(0.25)	(-1.28)	(-0.32)	(-2.09)	(0.51)	(-1.31)
Intercept	-15.224	-15.317	-17.041	-16.245	-3.683***	-3.172***	-3.814***	-2.923***
	(-0.02)	(-0.03)	(-0.01)	(-0.02)	(-3.61)	(-5.32)	(-3.69)	(-4.75)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0781	0.0866	0.0926	0.0661	0.0567	0.0661	0.112	0.102
Log-Likelihood Ratio	16.99	53.09	10.55	21.61	69.06	176.9	86.25	142
n	1,105	1,165	975	1,015	5,520	5,425	4,945	4,800

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for modified Equations (2) and (3). The sample is limited to Big 4 audit clients at the time of hedge fund intervention, and is partitioned into two subgroups. The subgroups are defined as firms with either a low ratio of abnormal audit fees to total fees, versus firms with a high ratio of abnormal audit fee to total fees, partitioned at the median.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 7 - Drivers of Auditor Turnover (continued)

Panel C: Auditor Competence – Discretionary Accruals

	Big 4 Clients		Big 4 Clients - Lateral Change		Big 4 Clients		Big 4 Clients - Lateral Change	
	(1) Low Disc Accruals	(2) High Disc Accruals	(3) Low Disc Accruals	(4) High Disc Accruals	(5) Low Disc Accruals	(6) High Disc Accruals	(7) Low Disc Accruals	(8) High Disc Accruals
ACTIVISM					-0.205	-0.814**	-0.485	-0.415
					(-0.66)	(-2.01)	(-1.09)	(-0.92)
POST	0.787**	1.742***	0.879	0.841	0.328*	0.343**	-0.375	-0.155
	(2.16)	(4.05)	(1.59)	(1.61)	(1.91)	(1.97)	(-1.56)	(-0.63)
ACTIVISM*POST					0.402	1.231***	0.951*	0.871*
					(1.09)	(2.79)	(1.79)	(1.65)
LOG_TENURE	-0.081	-0.300	-0.584**	-0.727***	-0.458***	-0.575***	-0.962***	-1.102***
	(-0.46)	(-1.49)	(-2.13)	(-2.65)	(-6.01)	(-7.04)	(-8.74)	(-9.42)
LEVERAGE	0.176	-0.065	0.228	-0.621**	0.063	0.060	0.174*	0.027
	(1.11)	(-0.38)	(1.10)	(-2.00)	(0.87)	(0.91)	(1.77)	(0.29)
ROA	0.133	0.144	0.366	0.230	0.162*	-0.005	0.220	0.073
	(0.63)	(0.93)	(0.99)	(0.79)	(1.87)	(-0.08)	(1.55)	(0.60)
GROWTH	-0.204	0.076	0.043	-0.092	-0.199*	-0.057	-0.166	-0.128
	(-0.97)	(0.50)	(0.20)	(-0.30)	(-1.94)	(-0.82)	(-1.07)	(-1.11)
LOG_SIZE	-0.006	-0.500**	0.369	0.161	-0.200**	-0.254***	0.034	0.097
	(-0.03)	(-2.16)	(1.41)	(0.50)	(-2.07)	(-2.63)	(0.25)	(0.75)
GOING_CONCERN	0.472	-0.037			0.142	0.385	-0.460	-0.315
	(0.38)	(-0.04)			(0.23)	(0.98)	(-0.44)	(-0.30)
INST_OWNERSHIP	-0.069	-0.159	-0.245	-0.043	-0.036	-0.163**	-0.024	-0.094
	(-0.43)	(-0.95)	(-1.10)	(-0.19)	(-0.49)	(-2.19)	(-0.23)	(-0.91)
Intercept	-15.767	-16.987	-16.092	-15.848	-4.010***	-2.972***	-3.849***	-2.849***
	(-0.02)	(-0.01)	(-0.02)	(-0.02)	(-3.96)	(-4.90)	(-3.77)	(-4.60)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0512	0.121	0.0781	0.0923	0.0545	0.0738	0.0935	0.109
Log-Likelihood Ratio	20.22	53.73	16.36	21.30	103.6	147.5	98.32	120.6
n	1,100	1,170	970	1,020	5,495	5,450	4,910	4,835

This table reports logistic regression results for Equations (2) and (3). The sample is limited to Big 4 audit clients at the time of hedge fund intervention, and is partitioned into two subgroups. The subgroups are defined as firms with either low discretionary accruals, versus firms with high discretionary accruals, partitioned at the median.
All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 8 - Consequences of Big 4 Lateral Changes

Panel A: Changes in the Information Content of Earnings

	(1) NAF Ratio	(2) Abnormal Audit Fees
UNEX	2.643***	2.659***
	(8.65)	(9.3)
HIGH FEES	0.005	0.018
	(0.18)	(0.75)
POST_TURNOVER	0.006	0.006
	(0.25)	(0.33)
HIGH FEES * UNEX	-2.153***	-2.232***
	(-5.17)	(-5.59)
POST * UNEX	-1.838***	-1.536***
	(-4.75)	(-3.72)
HIGH FEES * POST	-0.021	-0.027
	(-0.77)	(-1.1)
HIGH FEES * UNEX * POST	1.927***	1.563***
	(3.93)	(3.11)
PRE_ANN_RET	0.004**	0.003*
	(2.06)	(1.85)
LOSS	-0.04***	-0.038***
	(-7.95)	(-7.56)
MTB	-0.005	-0.001
	(-0.34)	(-0.05)
SIZE	0.003	0.002
	(0.93)	(0.78)
Q4	0.02***	0.019***
	(3.51)	(3.41)
Intercept	0.013	0.007
	(0.53)	(0.4)
Quarter Fixed Effects	Yes	Yes
Adj-R Squared	0.134	0.145
n	3,090	3,090

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports regression results for the Earnings Response Coefficient model, with the dependent variable equal to the cumulative abnormal return over a three-day window surrounding the quarterly earnings announcement date. The sample is limited to firms targeted by hedge fund activists.
All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 8 - Consequences of Big 4 Lateral Changes (continued)

Panel B: Changes in Audit Fees

	(1) NAF Ratio	(2) Abnormal Audit Fees
HIGH FEES	0.182	1.043
	(0.6)	(9.09)
POST TURNOVER	-0.023	0.109
	(-0.2)	(1.2)
HIGH FEES * POST TURNOVER	-0.016	-0.212*
	(-0.13)	(-1.98)
SIZE	0.688***	0.577***
	(5.71)	(8.52)
GROWTH	0.034	-0.021
	(0.8)	(-0.65)
LEVERAGE	-0.076	-0.045
	(-1.05)	(-0.82)
CURRENT	0.485***	0.349***
	(5.64)	(6.66)
QUICK	-0.327***	-0.134**
	(-4.15)	(-2.22)
YE	-0.166	0.191*
	(-1.09)	(1.8)
SEGMENT	-0.02	0.103**
	(-0.42)	(2.66)
FOREIGN	0.087	0.024
	(1.38)	(0.67)
ROA	-0.058	-0.083**
	(-1.35)	(-2.15)
ICWEAK	0.312*	0.245**
	(2.01)	(2.05)
SPECIALIST	0.041	0.007
	(0.44)	(0.1)
LOG_TENURE	0.105**	0.099***
	(2.7)	(3.16)
DAYS_TO_SIGN	0.063	0.029
	(1.3)	(0.68)
RESTATEMENT	-0.152	-0.139
	(-0.76)	(-0.78)
Intercept	13.248***	13.162***
	(25.15)	(34.28)
Year & Industry Fixed Effects	Yes	Yes
Clustered Standard Errors	Firm	Firm
Adj-R Squared	0.854	0.915
n	262	262

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports regression results for the audit fee model, where the dependent variable is the natural log of audit fees. The sample is limited to firms targeted by hedge fund activists. All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 8 - Consequences of Big 4 Lateral Changes (continued)

Panel C: Changes in Non-Audit Service Fees

	(1) NAF Ratio	(2) Abnormal Audit Fees
HIGH FEES	2.769**	1.549
	(2.26)	(1.27)
POST TURNOVER	0.93	0.168
	(1.25)	(0.29)
HIGH FEES * POST TURNOVER	-1.983**	-0.207
	(-2.27)	(-0.24)
SIZE	1.327***	1.051*
	(3.04)	(1.98)
GROWTH	0.438	0.362
	(1.55)	(1.3)
LEVERAGE	-1.006	-0.642
	(-1.56)	(-0.96)
CURRENT	0.708	0.331
	(1.03)	(0.57)
QUICK	-0.593	-0.258
	(-1.18)	(-0.46)
YE	0.069	0.709
	(0.09)	(0.87)
SEGMENT	-0.351	-0.403
	(-1.1)	(-1.15)
FOREIGN	0.085	-0.151
	(0.25)	(-0.47)
ROA	0.675*	0.463
	(1.81)	(1.08)
ICWEAK	-0.753	-1.552
	(-0.77)	(-1.54)
SPECIALIST	0.124	0.063
	(0.09)	(0.05)
LOG_TENURE	0.406	0.411
	(0.81)	(0.81)
DAYS_TO_SIGN	0.183	0.146
	(0.56)	(0.42)
RESTATEMENT	-0.167	0.453
	(-0.22)	(0.55)
Intercept	11.634***	11.406***
	(5.43)	(5.44)
Year & Industry Fixed Effects	Yes	Yes
Clustered Standard Errors	Firm	Firm
Adj-R Squared	0.461	0.431
n	262	262

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports regression results for the non-audit fee model, where the dependent variable is the total non-audit service fees paid to the auditor, scaled by total fees paid to the auditor. The sample is limited to firms targeted by hedge fund activists.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 9 - Hedge Fund Objectives and Auditor Dismissals

Panel A: Activist Subsample

	All Activist Targets				
	(1) Investment	(2) Capital Structure	(3) Business Strategy	(4) Sale of Target	(5) Governance
POST	0.396*	0.230	0.437	0.451	0.767
	(1.66)	(0.34)	(0.68)	(0.57)	(1.20)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0701	0.124	0.0701	0.206	0.152
Log-Likelihood Ratio	53.15	13.90	8.569	16.80	21.44
n	1,730	255	325	195	360
	Activist Targets - Big 4 Clients				
	(1) Investment	(2) Capital Structure	(3) Business Strategy	(4) Sale of Target	(5) Governance
POST	1.229***	0.864	1.110	1.134	2.312*
	(3.59)	(0.86)	(1.44)	(1.03)	(1.87)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0802	0.0813	0.0753	0.132	0.169
Log-Likelihood Ratio	41.29	5.763	7.834	6.590	12.30
n	1,375	200	300	145	275
	Activist Targets - Big 4 Clients - Lateral Changes				
	(1) Investment	(2) Capital Structure	(3) Business Strategy	(4) Sale of Target	(5) Governance
POST	1.135**	-5.545	0.626	-2.548	2.085
	(2.32)	(-1.48)	(0.60)	(-1.36)	(1.15)
Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.0643	0.366	0.0671	0.271	0.475
Log-Likelihood Ratio	17.21	8.869	3.531	8.766	16.91
n	1,195	165	265	130	250

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for Equation (2). The sample is partitioned into the disclosed objectives identified in the Schedule 13D Filing.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 9 - Hedge Fund Objectives and Auditor Dismissals (continued)

Panel B: Propensity Matched Sample

	(1) All Dismissals	(2) Big 4 Dismissals	(3) Lateral Change
INVESTMENT	-0.094	-0.365	-0.460
	(-0.50)	(-1.23)	(-1.15)
CAPITAL STRUCTURE	0.331	0.062	0.810
	(0.69)	(0.08)	(0.92)
BUSINESS STRATEGY	-0.277	-0.067	-0.451
	(-0.53)	(-0.10)	(-0.50)
SALE OF ASSETS	-0.052	0.122	0.272
	(-0.10)	(0.15)	(0.31)
GOVERNANCE	-0.535	-1.538	-0.995
	(-1.07)	(-1.45)	(-0.92)
POST	-0.029	0.364***	-0.232
	(-0.32)	(3.02)	(-1.37)
INVESTMENT * POST	0.333	0.658*	0.974**
	(1.41)	(1.95)	(2.08)
CAPITAL STRUCTURE * POST	-0.282	0.460	-1.999
	(-0.46)	(0.52)	(-1.43)
BUSINESS STRATEGY * POST	0.565	0.152	1.141
	(0.89)	(0.19)	(1.08)
SALE OF TARGET * POST	-0.224	-0.392	-0.649
	(-0.34)	(-0.40)	(-0.55)
GOVERNANCE * POST	0.789	1.543	1.412
	(1.33)	(1.36)	(1.15)
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Pseudo R-squared	0.0722	0.0584	0.0956
Log-Likelihood Ratio	431.1	228.1	206.7
n	14,220	10,945	9,745

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for a modified Equation (3). The variable of interest *ACTIVISM* was separated into one of the five objective classifications identified in the Schedule 13D Filing.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 10 - Hedge Fund Campaign Type and Auditor Dismissals

Panel A: Activist Subsample

	All Activist Targets		
	(1) Confrontational	(2) Aggressive	(3) Non-Confrontational
POST	1.231	0.412	0.429*
	(1.26)	(0.98)	(1.91)
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Pseudo R-squared	0.168	0.103	0.0576
Log-Likelihood Ratio	10.69	29.80	51.36
n	215	580	2,125
	Activist Targets - Big 4 Clients		
	(1) Confrontational	(2) Aggressive	(3) Non-Confrontational
POST	0.762	1.531**	1.269***
	(0.69)	(2.37)	(3.90)
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Pseudo R-squared	0.175	0.125	0.0736
Log-Likelihood Ratio	8.363	20.74	45.30
n	180	425	1,665
	Activist Targets - Big 4 Clients - Lateral Changes		
	(1) Confrontational	(2) Aggressive	(3) Non-Confrontational
POST	0.317	0.012	1.281***
	(0.18)	(0.01)	(2.68)
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Pseudo R-squared	0.341	0.207	0.0532
Log-Likelihood Ratio	9.711	14.01	17.87
n	165	360	1,465

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for Equation (2). The sample is partitioned into the campaign type identified in the Schedule 13D Filing.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

Table 10 - Hedge Fund Campaign Type and Auditor Dismissals (continued)

Panel B: Propensity Matched Sample

	(1) All Dismissals	(2) Big 4 Dismissals	(3) Lateral Change
CONFRONTATIONAL	-0.825	-0.279	0.196
	(-1.14)	(-0.38)	(0.27)
NON_CONFRONTATIONAL	-0.173	-0.444	-0.637
	(-0.96)	(-1.55)	(-1.59)
AGGRESSIVE	-0.138	-0.608	-0.289
	(-0.48)	(-1.18)	(-0.48)
POST	-0.064	0.333***	-0.266
	(-0.69)	(2.72)	(-1.56)
CONFRONTATIONAL * POST	1.116	0.299	-0.139
	(1.35)	(0.35)	(-0.13)
NON_CONFRONTATION * POST	0.432*	0.767**	1.224***
	(1.93)	(2.37)	(2.69)
AGGRESSIVE * POST	0.530	0.982*	0.392
	(1.48)	(1.70)	(0.51)
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Pseudo R-squared	0.0726	0.0584	0.0954
Log-Likelihood Ratio	433.5	227.9	206.4
n	14,220	10,945	9,745

z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This table reports logistic regression results for Equation (3). The variable of interest ACTIVISM was separated into one of the three campaign types identified in the Schedule 13D Filing.

All variables are defined in Appendix A and continuous variables are winsorized at the 1st and 99th percentiles, and standardized with a mean of zero, and a standard deviation of 1.

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