

Shareholder Activism and Voluntary Disclosure*

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October 2015

Abstract

This paper studies the relation between voluntary disclosure and shareholder activism. We use a unique data set of 1,130 activism events from 2005 to 2011 to construct an empirical model of activism and disclosure. Our findings indicate that when the threat of activism increases, managers respond by increasing disclosure, and these additional disclosures reduce the probability of being targeted by an activist. We interpret these results as evidence that managers strategically influence their firms' information environments through disclosure to deter activist intervention. This evidence stands in contrast to theoretical governance models that assume that a firm's information environment is an exogenous force in activism settings.

Keywords: Corporate Disclosure, Corporate Governance, Shareholder Activism

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“Companies that can articulate their strategy and demonstrate that it is grounded in a well-considered assessment of both their asset portfolios and their capabilities may be more likely to minimize the risk of becoming an activist’s target.”

— Mary Ann Cloyd, PricewaterhouseCoopers LLP, May 2015

1 Introduction

Information is the foundation on which traders form their beliefs about a company and ultimately their investment decisions. In empirical settings, information often arrives in the form of a company disclosure. Since managers have significant discretion over disclosure, researchers have extensively studied the relation between disclosure and trading via the price system. The general consensus in this literature is that company disclosures have significant pricing implications, which is in turn construed as evidence that disclosure affects traders’ beliefs. In this paper, we study the relation between disclosure and a specific class of traders, shareholder activists. Assets under management at activist funds have increased ten-fold over the last decade to \$120 billion (J.P. Morgan, 2015), and many studies therefore focus on the economic consequences of activism. For example, it has been shown that targeted companies subsequently have higher CEO turnover (Brav, Jiang, Partnoy, and Thomas, 2008), lower CEO pay (Ertimur, Ferri, and Muslu, 2011), more independent board members (Fos and Tsoutsoura, 2014), and higher plant-level productivity (Brav, Jiang, and Kim, 2015). But this literature only indirectly explores the link between activism and disclosure. We extend this literature by looking at disclosure explicitly.

Any structural model of the relation between activism and disclosure must account for all the strategic reporting preferences of both managers and activists. Finding reasonable empirical proxies for all of these preferences would prove difficult (e.g., Leuz and Verrecchia, 2000; Joos, 2000). We therefore exploit activism peer firm settings and construct reduced form empirical models for the relation between activism and disclosure. Gantchev, Gredil, and Jotikasthira (2015) empirically show that activism in one firm is a valid instrument for

an increase in the likelihood of activism at a closely matched industry peer firm.¹ In contrast to Chen and Jung (2015), who study disclosure *conditional* on activism, we do not focus the analysis on companies already engaged by an activist because we expect these companies to pursue costlier strategic mechanisms such as activating poison pills or engaging in direct negotiation.²

The peer firm settings are precisely where we expect managers to use the disclosure mechanism in connection with activism. Our intuition unfolds as follows: Managers have significant motivation to avoid activism at their firms because activism is associated with a drop in CEO compensation, an increase in CEO turnover, and an increase in director turnover. Disclosure has several properties that make it suitable for deterring activist intervention: (1) It reduces information asymmetries between shareholders, including management and the board; (2) it signals managerial credibility to the board and existing shareholders; (3) it erodes activists' private information advantage; (4) it corrects mispricings; and (5) it increases stock liquidity. Establishing credibility with the board and existing shareholder base is critical for managers in preparation for activist negotiation settings because low credibility makes it easier for activists to effect their agenda (Levit, 2014). For example, passive shareholders with large voting blocs have a strong preference for high disclosure and can vote against management in a proxy contest if they are dissatisfied with the firm's disclosure regime (Bushee and Noe, 2000; Boone and White, 2015). Balakrishnan, Billings, Kelly, and Ljungqvist (2014, Section 5) find that disclosure significantly increases firm value, which lowers the likelihood that activists will target a company for valuation purposes. It has also been shown that disclosure increases stock liquidity (Welker, 1995; Healy et al., 1999; Balakrishnan et al., 2014), and higher liquidity is associated with a reduced probability of activism (Edmans, Fang, and Zur, 2013).

This intuition leads to the hypothesis that, when faced with the increased possibility of

¹In Section 4.1, we validate and discuss the intuition for these settings and our identification assumptions.

²We test this assertion in Section 5.4 and find that 4% of activist-targeted companies adopt poison pills during the activist campaign.

activism, managers will increase disclosure to strengthen their personal negotiating positions with their boards and deter activist intervention. This expectation is confirmed by practitioner literature. In a May 2015 report, PricewaterhouseCoopers noted: “Companies that can articulate their strategy and demonstrate that it is grounded in a well-considered assessment of both their asset portfolios and their capabilities may be more likely to minimize the risk of becoming an activist’s target.”³

We next turn to the research design. We collect a sample of 1,130 activist-targeted firms from 2005 to 2011 and, following Gantchev et al. (2015), use a propensity score matching specification to identify 1,130 closely matched industry peer firms.⁴ We conduct our main analyses on the 1,130 matched peer firms. Following Shroff et al. (2013), Balakrishnan et al. (2014), Boone and White (2015), and many other studies, we use the frequency of management guidance disclosures of earnings and sales from I/B/E/S to proxy for disclosure (see Section 3). We recognize that disclosure comes in many forms and assume that management guidance reflects a firm’s overall disclosure regime. Attesting to the economic significance of guidance, Beyer, Cohen, Lys, and Walther (2010, Table 1) report that 16% of stock return variance is explained by guidance disclosures, whereas SEC filings, including 8-Ks, 10-Ks, and press releases, account for just 4% combined. We also draw on the findings of Rogers and Stocken (2005), who show that guidance disclosures appear more informative during periods of intense external monitoring.

We exploit each peer firm’s disclosure behavior around the activist campaign announcement date at its matched counterpart. We compare each peer firm’s disclosures for a two-year pre-observation period to a two-year post-observation period, eliminating firm-fixed effects from the analysis. We also compare the peer firm’s pre- and post- disclosure behavior to

³See <http://corp.gov.law.harvard.edu/2015/05/11/shareholder-activism-are-you-prepared-to-respond/>.

⁴In Section 4.1, we show that the closely matched peer firms experience elevated levels of activism, and we classify these firms as “treatment firms.” The assumption is that the activist’s decision to target a firm is unrelated to its closely matched peer firm’s *future disclosures* except through its effect on the threat of activism. Prior studies of the determinants of activist targets suggest that this assumption is appropriate (Brav et al., 2010; Edmans, 2014). Nonetheless, in Sections 4.2 and 4.3, we empirically show that our results cannot be attributed to disclosure motivations for investing in a certain industry. We use the terms *activist-targeted firm* and *activism firm* interchangeably throughout the paper.

contemporaneous changes in disclosures for the average U.S. I/B/E/S firm and for the activism firm. In addition, we control for a set of covariates known to affect disclosure to eliminate disclosure time-varying effects from our analyses. All of the analyses thus eliminate observed and unobserved time-varying determinants of disclosure. Section 4.2 provides the exact specifications and identifying assumptions. In Section 4.3, we conduct sensitivity analyses on the matching procedure.

Our findings indicate that peer firms respond to activism at their paired counterparts by disclosing 3.03 more earnings and sales estimates in the two years following the announcement of the activist campaign (post period) than in the two years before (pre period), relative to contemporaneous changes in the same guidance disclosures for the average U.S. I/B/E/S firm and for the activism firm. This change of 3.03 represents a 28% increase from the pre period and occurs quickly. Figure 1 shows that peer firms elevate their disclosure levels within one quarter after the activism campaign announcement date of their matched counterpart. We also find that 9.2% of peer firms disclose guidance for the first time in the post period. The economic magnitudes of these results are meaningful: Kothari, Shu, and Wysocki (2009) and Rogers, Skinner, and Van Buskirk (2009) find that just one guidance disclosure increases price informativeness; Chen, Matsumoto, and Rajgopal (2011) and Balakrishnan et al. (2014) find that guidance initiation increases price informativeness significantly more than a single guidance increase.

We extend our analysis and conduct three cross-sectional tests. Angrist and Krueger (2001, p. 78) argue that most exogenous shock settings will have a heterogeneous effect across affected subjects. In the first test, we identify firms that are more likely to be targeted by activists—specifically, firms that do not pay cash dividends—and are thus more sensitive to the threat of activism (e.g., La Porta, Lopez-de Silanes, Shleifer, and Vishny, 2000; Klein and Zur, 2009). We find that non-dividend-paying firms provide more disclosure than dividend-paying firms in our setting. In the second test, we identify firms that we expect to be less sensitive to the threat of activism—firms with strong takeover defenses and

those whose boards of directors and management teams would be relatively difficult for an activist to unseat (Bebchuk and Cohen, 2005; Bebchuk, Cohen, and Ferrell, 2009). We find that strong takeover defense firms provide less disclosure than weak takeover defense firms.⁵ In the third test, we identify activist campaigns that appear more threatening—specifically, those in which the activist releases a public letter to management and/or shareholders with her campaign announcement (see Appendix A for Carl Icahn’s letter to eBay in February 2014). Open letters are salient mechanisms in our setting because by making their strategic preferences public, activists reduce due diligence costs for similar firms, increase media scrutiny of the target firm, and garner more attention from the analyst community. We find that when the activist makes such a letter public, peer firms respond by providing more disclosure relative to when no such letter is made public.

Next, we test whether the increase in disclosure affects the probability that a firm will be targeted by an activist. We need to test this hypothesis directly because disclosure can theoretically encourage or discourage activism. On one hand, disclosure can encourage activism by further advantaging investors with private information (Harris and Raviv, 1993; Kim and Verrecchia, 1994). In turn, managers may not increase disclosure, or disclosure may not have the intended effect of deterring activism. On the other hand, and consistent with our economic intuition, disclosure can discourage activism by signaling managerial credibility, reducing information asymmetries between shareholders (including management and the board), eroding activists’ private information advantage, and correcting mispricings. We split the peer firm sample into two groups, high disclosers and low disclosers. High-discloser firms include guidance-initiating peer firms and peer firms disclosing more than the sample median percent change in guidance from the pre to the post period. We find that high-disclosing peer firms are 16% less likely than low-disclosing peer firms to be targeted by an activist in the two-year period following the activist campaign announcement date. Disclosure appears to comport with the second set of properties previously mentioned and

⁵In Section 4.5, we explicitly test the alternative hypothesis that activists target insulated managers.

thus lowers the likelihood of being targeted by an activist in our setting.

Our findings contribute to the shareholder activism and disclosure literatures in several ways. First, this study speaks to the question of how managers' disclosure choices relate to influential investors. Ertimur, Sletten, and Sunder (2014) find that managers strategically disclose to benefit venture capitalists, Bushee and Noe (2000) argue that managers may adopt certain disclosure practices to attract institutional investors, and Chen and Jung (2015) find a weak or negative association between activism and disclosure *conditional* on being an activist target. We show that managers appear cognizant of the threat of activism and that the relation between activism and disclosure is strongest in preemptive activism settings.⁶ Second, our results connect to activism studies that focus on mandatory disclosure. Brav et al. (2008, Table 4) show that activists target companies with high ROA, low dividend payout, and strong cash flow, and Ertimur, Ferri, and Muslu (2011) show that activists target companies with excessive executive pay. The added value of our analysis is that we show that voluntary disclosures like guidance factor into activists' targeting decisions. Third, we relate our study to influential governance theories that assume that a firm's information environment is an exogenous force in activism settings that only affects intervention decisions through its effect on liquidity (Coffee, 1991; Maug, 1998; Edmans, 2009; Edmans and Manso, 2011). Our perspective is that managers have significant influence over their firms' information environments because they can strategically disclose.

We also introduce a relatively new activism data set. These data do not rely exclusively on 13D filings, which pertain to shareholders that accumulate 5%+ of a company's outstanding stock, to identify shareholder activism. The analysis of activism at all levels of ownership complements Brav et al. (2008) and Klein and Zur (2009), who use 13D filings to identify activism. Section 3 provides examples of activism at relatively low ownership levels and more detail on the data.

⁶In Section 5.4, we confirm the findings of Chen and Jung (2015) and show that targeted managers turn to shareholder relations mechanisms other than disclosure, supporting our maintained assumption that disclosure is a salient mechanism when activism is imminent.

In Section 2, we motivate the hypotheses. In Section 3 we describe the data and in Section 4 we report the empirical results. In Section 5, we conduct sensitivity analyses and provide additional descriptive statistics. In Section 6, we conclude and suggest avenues for future research.

2 Hypothesis Development

To situate this study in the literature, we adopt the activism life-cycle framework of Brav, Jiang, and Kim (2010). They find that most activism studies relate to one or more of the stages of activism: (1) the characteristics of activist target firms, (2) activist engagement tactics, and (3) the activism outcome. We relate this study to category (1). In particular, we concentrate the analysis on voluntary disclosure decisions in preemptive activism settings. We do not attempt to summarize the findings of the activism literature and instead refer the reader to the review papers of Brav et al. (2010) and Edmans (2014).

We study the relation between activism and disclosure in settings where the threat of activism plausibly increases (we validate these settings in Section 4.1). These settings are precisely where we expect managers to use the disclosure mechanism in connection with activism. We elect not to focus the analysis on firms already engaged by an activist because we expect these firms to pursue costlier protection mechanisms, such as activating poison pills and engaging in direct negotiation (we test this assertion in Section 5.4). Drawing on prior research, we conceptualize the threat of activism as the chance that managers will lose control of their firms, either in part or in whole; lose their jobs; and/or have their pay reduced.

Our main argument is that managers trade off the benefits of withholding disclosure with the risk of being targeted by an activist. The benefits of withholding disclosure include stock price manipulation for personal gain, avoiding the litigation and reputational concerns associated with a commitment to high disclosure, avoiding the costs of collecting and compiling

information to disclose, and avoiding proprietary costs (Verrecchia, 1983; Dye, 1985; Nagar, 1999). By contrast, managers can increase disclosure to erode activists’ private information advantage, increase price efficiency, and establish greater credibility with the board and existing shareholders.⁷ The benefits of added disclosure are especially salient in our setting for three reasons: (1) Price efficiency and correcting mispricings discourage activism (Edmans et al., 2013); (2) proxy votes are often determined by just a few percentage points, and many passive shareholders with large voting blocs have a strong preference for high disclosure (Bushee and Noe, 2000; Boone and White, 2015; Brochet, Ferri, and Miller, 2015); and (3) the backing and support of the board and other shareholders are crucial to management in activist negotiation settings (Levit, 2014).⁸

We follow much of the strategic disclosure literature and assume that competitive forces drive firms’ disclosure levels to a second-best equilibrium that trades off managers’ and investors’ disclosure preferences. We then locate an exogenous shock that causes the threat of investor activism to increase.⁹ We conjecture that as the threat of activism increases, the net benefit of an additional unit of disclosure increases.¹⁰ Disclosure then moves to a new second-best level, and we can compare the difference in the disclosure levels. We set as baselines the contemporaneous changes in disclosure for the average firm in the U.S. I/B/E/S universe and the activism firm because differences in the disclosure level could vary across pairs due to common shifts in disclosure practices. The advantage of an exogenous shock setting is that it confers a reduced form empirical structure on the relation between activism and disclosure.

⁷These topics are the focus of much of the empirical and theoretical strategic disclosure literature (Healy and Palepu, 2001; Kothari, 2001; Verrecchia, 2001; Beyer et al., 2010; Leuz and Wysocki, 2015).

⁸For example, managers may (1) increase disclosure of all types of news to erode informed investors’ private information advantage, (2) increase disclosure of all types of news to increase price efficiency and to establish greater credibility with the board and large shareholders, and/or (3) increase disclosure of good news to make their stock more expensive for an activist to acquire. Managers could privately disclose information to the board, but we conjecture that doing so would be a less effective way to elicit credibility and increase price efficiency because private disclosures are outside the price system and not held to the same litigation and regulatory forces as public disclosures.

⁹In Sections 4.1 and 4.2, we verify that the threat of investor activism moves to elevated levels. We also ensure that this relation is not circular (i.e., that our peer firms are not included as activism firms later).

¹⁰Although we cannot measure these marginal costs and benefits directly, we argue that our empirical setting plays an important role in determining such marginal returns.

To the extent that other drivers of disclosure, such as macroeconomic conditions, change in the same manner across the peer firm and the average U.S. I/B/E/S firm or the activism firm (i.e., time-varying effects), or are constant (i.e., firm-fixed effects), the research design eliminates these factors from the analysis (Bertrand, Duflo, and Mullainathan, 2004).

The previous arguments lead to the first hypothesis:

H1: When one company is engaged by an activist investor, its propensity score matched peer firm discloses more guidance, relative to economy-wide changes in guidance and the activism firm.

H1 relies on the assumption that prior to the increase in the threat of activism, managers of the peer firm preferred less disclosure. That is, after the increase in the threat of activism, managers trade off the private benefits of withholding disclosure with the benefits of deterring activism and increase disclosure. To test this assumption further, we conduct three comparative statics tests. First, we test whether a given increase in the threat of investor activism disproportionately affects managers of non-dividend-paying firms. This test draws on prior studies that find that activists are more likely to target non-dividend-paying firms (Klein and Zur, 2009; Gantchev et al., 2015). Accordingly, we predict:

H2: The results for H1 are stronger when the peer firm does not pay a dividend.

Next, we test whether firms with strong takeover defenses (i.e., firms whose managers and boards would be difficult for an activist to unseat) are less sensitive to a given increase in the threat of activism. While activists might occasionally target a company purely because its managers are insulated, prior research suggests that this phenomenon is unlikely to occur on average: Firms insulated from external shareholders systematically maintain low market valuations relative to less insulated firms (Bebchuk and Cohen, 2005). Furthermore, prior research suggests that activist investors impose changes in firms' operations and payout policies by replacing managers, replacing board members, and reducing managerial compensation. All of these actions would be costlier at a firm with significant managerial protection mechanisms (Bushman and Smith, 2001; Klein and Zur, 2009; Bebchuk et al., 2015). We

therefore expect firms with stronger takeover defenses to be less sensitive to a given increase in the threat of activism. Accordingly, we predict:

H3: The results for H1 are weaker when the peer firm has strong takeover defenses.

H2 and H3 exploit heterogeneity in managerial sensitivity to activism to strengthen our main result. In the last comparative static, we exploit heterogeneity in the activist campaigns, based on the assumption that not all activist campaigns convey the same magnitude of threat to the peer firms. Specifically, we conjecture that:

H4: The results for H1 are stronger when the activist releases a public letter to the target firm's management and/or shareholders.

H4 relies on the assumption that activist campaigns accompanied by a public letter to the target firm's management and/or shareholders are perceived as more threatening by managers of the peer firms. Activists often disseminate open letters—letters in which activists state their intentions toward and concerns about the target firm—to the media (see Appendices A and B). These letters are salient mechanisms in our setting because they plausibly reduce activism due diligence costs for similar firms and increase visibility of the target firm. We expect these letters to increase the perceived threat of activism by managers of the peer firm.

The previous hypotheses taken together lead to the final prediction:

H5: When one company is engaged by an activist investor, its propensity score matched peer firm discloses more guidance, relative to economy-wide changes in guidance and the activism firm, and these guidance disclosures are negatively associated with the probability of being targeted by an activist.

3 Data

We identify activist campaigns using data from SharkWatch, a corporate governance database of FactSet Research Systems operated by Thomson Reuters. FactSet documents

all activist investor campaigns at publicly traded U.S. companies and provides accompanying campaign characteristics, such as the announcement date of the activist campaign, whether the activist campaign was associated with a 13D filing, and the activists' engagement tactics. As reported in Table 1, Panels A and B, our FactSet sample begins in 2005 and covers all industry groups and years through 2011.¹¹ A key feature of this data source is that it does not rely on 13D filings or ownership level to identify activist campaigns. 13D filings, which apply only to investors that accumulate 5% or more of a company's outstanding common stock, are not always indicative of activism and do not identify activist owners at lower levels of ownership.¹² Instead, the data source identifies activism campaigns based on Rule 14a-1 to 14a-13 disclosures, which a shareholder must file if they intend to wage a proxy fight; 13D filings in which Item 4, the Purpose of Transaction, is activism-related; Rule 14a-2(b)(1) disclosures, otherwise called exempt solicitations; and activist public disclosures or press releases that indicate imminent activism and share ownership.¹³ 13D filings are the initiating mechanism for 15% of the activism campaigns in our sample; exempt solicitations, 7%; proxy fights, 23%; and public disclosures and press releases by the activist, 55% (note that 13D filings may come later in the activism process).

We obtain financial data for the activism firms by matching the SharkWatch sample to Compustat and CRSP data. To identify the effect of investor activism threats, we follow Gantchev et al. (2015) and pair each activism firm with a closely matched industry peer using propensity scores. Gantchev et al. (2015) show that investor activism in one firm is a strong instrument for an increase in the likelihood of activism at a closely matched industry peer firm (we validate the setting in Section 4.1). We empirically model the activist's decision

¹¹When data collection started in early 2014, we included a small number of firms from 2011 whose 2013 Compustat and CRSP data had already become available. For this reason, our number of observations for 2011 is limited.

¹²An example of the latter point is Carl Icahn's recent effort at eBay to replace board members and sell off PayPal with only 3% ownership (see "Ending Vitriol, Icahn and eBay Reach a Deal" by Michael J. de la Merced, *The New York Times*, April 10, 2014). Similarly, ValueAct succeeded in obtaining board representation at Microsoft with less than 1% ownership in the firm (see "New Alliances in Battle for Corporate Control" by David Gelles and Michael J. de la Merced, *The New York Times*, March 18, 2014).

¹³This data source is also used in related studies such as Cohen and Wang (2013), Gow, Shin, and Srinivasan (2014a,b), Popadak (2014), and Appel et al. (2015).

to engage with a firm based on the same type of model in Brav et al. (2008) and use this model as the propensity score specification. After obtaining propensity scores, we sort by industry and year and use nearest-neighbor matching to select the peer firm. Appendix D reports the results from the propensity score regression.¹⁴ The results show that size is the main determining factor for the matching procedure (1% level). It is reassuring to note that a firm’s disclosure level is negatively associated with the probability of being targeted by an activist (5% level). This result is consistent with Table 2, which reports that activism firms disclose less than peer firms in the pre period.¹⁵ We conduct detailed matching sensitivity analyses in Section 4.3.

To minimize the possibility that the matching procedure systematically selects on some unobserved factor, we (1) eliminate firm-fixed effects, which removes any unobserved time-invariant disclosure effect, and (2) follow Rosenbaum and Rubin (1985) and use differences in the activism firm-peer firm propensity scores to conduct sensitivity analyses on the matching procedure. Sections 4.2 and 4.3 detail these analyses. Included in the main tests is a set of firm-specific, time-varying control variables to account for known and observed determinants of disclosure. Also included are industry-specific and economy-wide disclosure trend variables to control for common, time-varying changes in disclosure; these variables are allowed to vary for each pairing.

The research design requires that for each activist-peer firm match, we obtain financial data for both the activist and peer firm at two years before and after the activist campaign announcement date. This procedure limits our sample to 2005–2011. We choose a two-year post window because it gives managers of the peer firms time to adjust their disclosures. After we eliminate activist-peer firm matches without two years of pre- and post-announcement-

¹⁴To maximize the pool of potential matches, we do not include a firm-level governance proxy as a regressor in the propensity score specification. These data are generally available only for large companies, and we can only obtain the FactSet governance proxy for the matched peer firm in the year of the activism campaign. However, Bebchuk et al. (2009, Table 2) report that governance structures are highly stable over time. Firm-fixed effect differencing therefore eliminates any pre-existing relation between governance and disclosure (see Section 4.2).

¹⁵This difference is not statistically significant when measured in half-year windows (see Figure 1).

date Compustat and CRSP data, the final sample comprises 1,130 activist campaigns, which relates well to the number of campaigns analyzed in related studies.¹⁶ The relatively few observations (135) that we eliminate due to mergers, bankruptcy, or missing Compustat and CRSP data significantly limit the influence of a look-ahead or survivorship bias.

The disclosure proxy in this setting is management disclosures of quarterly and annual EPS and sales estimates. We recognize that disclosure comes in many forms and assume that management guidance reflects a firm’s overall disclosure regime. We base this assumption on prior research that has established that: (1) Management guidance disclosures contribute to the price-formation process (Healy and Palepu, 2001; Beyer et al., 2010), and (2) management guidance disclosures plausibly entail significant litigation risk and are more informative when shareholder monitoring intensity is higher (Skinner, 1994; Rogers and Stocken, 2005). Specifically for (1), Beyer et al. (2010, Table 1) find that 16% of stock return variation is explained by management guidance disclosures, whereas SEC filings, including 8-Ks, 10-Ks, and press releases, account for just 4% in sum. We obtain management guidance from the Thomson Reuters I/B/E/S Guidance file. We define the pre-period as $[-2 \text{ years}, 0)$ and post period as $[0, +2 \text{ years}]$, where $T = 0$ is the activist campaign announcement date. For the matched and activism firms’ pre- and post-period observation windows, we aggregate the total number of management EPS and sales estimates in each period based on the guidance announcement date.

Turning to descriptive statistics, Table 2 reports that activism firms are generally large in size, with an average market capitalization of \$7.3 billion (median of \$294 million). On average, the activism firms disclose 9.7 EPS and sales estimates in each of the two-year pre- and post-campaign-announcement-date windows. The propensity matched control firms are

¹⁶Gantchev et al. (2015) use 13D filings to identify activist engagement and have a sample of 1,034 firms from 2000-2011; similarly, Brav et al. (2015) use 13D filings to identify activism and have a sample of 1,575 firms from 1994 to 2007. The 10 most frequently occurring activist campaign initiators in our sample are GAMCO Asset Management Inc. (72 campaigns), The California Public Employees’ Retirement System (29), ValueAct Capital Management LP (29), Millennium Management LLC (25), Starboard Value LP (19), Third Point LLC (18), Discovery Group Inc. (17), Icahn Associates Corp. (17), PL Capital, LLC (16), and Loeb Capital Management LLC (15).

also large, with an average market capitalization of \$4.5 billion (median of \$540 million). On average, the matched peer firms disclose 10.71 EPS and sales estimates in the pre period and 12.73 estimates in the post period (difference is statistically significant at the 1% level). The two sets of firms are similar on the dimensions of median ROA, cash, debt, capital expenditures, and institutional ownership. We recognize that these companies are on average larger than the companies in Brav et al. (2008). Activists during our sample period (which is more recent) engaged both smaller and larger companies relative to the Brav et al. (2008) sample, but with the largest companies being significantly larger. Our sample also includes activist events at lower levels of ownership, not just 5%+.¹⁷

We design the matching specification to align the activism firms and peer firms along the designated dimensions in Appendix D. However, we recognize that there are differences between the two sets of firms and address this concern empirically in two ways. First, to the extent that disclosure relates to firm-fixed factors such as size and proprietary costs, the research design eliminates these effects. Second, we include a set of time-varying control regressors known to affect disclosure. These variables and their sources are described in Appendix C and include profitability, stock performance, R&D, capital expenditures, analyst following, and institutional ownership. Third, we check for and find parallel disclosure trends across the peer firms, the target firms, and the average U.S. firm (see Figure 1). As Angrist and Krueger (1999) and Lemmon and Roberts (2010, p. 568) elucidate, the parallel trend is the key identifying assumption that eliminates factors that might drive across-firm differences in disclosure levels. Since this assumption is realized in Figure 1, the change in disclosure is the empirical focus of this study. Nonetheless, the peer firms might be poor matches based on the increased threat of activism dimension. We conjecture that using poor matches in this sense biases against the results and gives a lower bound estimate of the activism and disclosure relation. We confirm this conjecture explicitly in Section 4.3, where we re-estimate

¹⁷Also adding to the larger companies we observe is the fact that our data do not require a 13D filing to mark an activism event. These observations would not appear in the Brav et al. (2008) sample. Note that FactSet covers all publicly traded U.S. companies and activist events at all ownership levels, not just large companies and 13D filings.

our main result using a second, less comparable set of matched peer firms.

The cross-sectional analyses identify dividend payers using data from Compustat and takeover defense strength using a firm-level proxy from FactSet. FactSet provides a takeover defense strength variable for most U.S. public companies. This measure is similar to the Bebchuk et al. (2009) Entrenchment Index and is compiled from a company’s articles of incorporation and bylaws, including whether the company has staggered board voting and a shareholder rights plan such as a poison pill, factors known to insulate management from outside shareholders (Bebchuk and Cohen, 2005; Bebchuk et al., 2009). Studies such as Cohen and Wang (2013) and Popadak (2014) also use this measure as a proxy for takeover defense strength. We identify whether the activist publicly disclosed an open letter using data from FactSet.

4 Empirical Results

4.1 Validation of the Peer Firm Settings

In this section, we follow prior studies such as Brav et al. (2008) and Gantchev et al. (2015) and validate the peer firm identification strategy with abnormal stock returns. These tests ensure that the activist campaign is not an idiosyncratic event that bears no relation to the threat of activism at the peer firm. The motivation for checking returns is based on prior studies that use stock returns to test the effect of other anticipated events; for example, Schwert (1981) and Binder (1985) use stock returns to test the effect of anticipated regulation.

We perform two exercises to validate the peer firm settings. First, we check for a measurable increase in the threat of activism at the peer firms. Gantchev et al. (2015) find that when an activist targets a firm in a given industry, the probability of another activist campaign in that industry increases from 2.5% to 5%–12.5% in the three years that follow. By comparison, we find an 11.06% unconditional probability that an activist targets one

of our peer firms in the two-year post period. This elevated level is consistent with prior work and the maintained assumption that activism in one firm leads to an increase in the threat of activism at a closely matched peer firm. Our understanding of this finding is that activism directs investor attention to that industry (e.g., through media, analysts, etc.) and observing the activist’s strategy reduces due diligence costs and raises questions for similar firms.¹⁸

In the second exercise, we measure the information content of the activist campaign at the activist and peer firms. Table 3 reports the results. In Column (1), we find that activist-targeted firms experience, on average, cumulative absolute abnormal returns of 8.8% (1% level) during the $[-10 \text{ days}, +10 \text{ days}]$ window around the activist campaign announcement date ($T = 0$). The magnitude of the activism firm effect is comparable to Brav et al. (2008). In Column (2), we check returns at the closely matched industry peer firms and find cumulative absolute abnormal returns of 6.2% (1% level) during the same $[-10 \text{ days}, +10 \text{ days}]$ window.¹⁹ The magnitude of the peer firm effect is comparable to Gantchev et al. (2015). We take the elevated abnormal returns as supporting evidence for the validity of our peer firm setting.²⁰

4.2 Research Design and Regression Specifications

The difference-in-differences research design controls for firm-fixed effects, contemporaneous economy-wide disclosure trends, and changes in disclosure at the activist-targeted firm. In contrast to studies that use propensity scores to identify control firms, in our setting the

¹⁸Peer firm settings have also been used to evaluate responses to other threats, such as the risk of hostile takeovers (Servaes and Tamayo, 2014) and the risk of securities lawsuits (Gande and Lewis, 2009; Arena and Julio, 2014).

¹⁹Signed abnormal returns for the peer firms are not statistically different from zero, consistent with the view that activism, in addition to the threat of activism, is not an unconditionally “good” or “bad” force. Nonetheless, we control for the direction of the signed abnormal return for both the activist and peer firm in our main tests. The difference in the $[-10 \text{ days}, +10 \text{ days}]$ return effect for the activism firms and peer firms is statistically significant at the 1% level. These short-window return results are not sensitive to other return benchmarks, such as a one-year market-model beta.

²⁰Note that we do not attempt to formally model the threat of activism in the pre period. We instead assume that, on average, the threat of activism increases at the peer firms. This assumption is supported by prior literature and the elevated abnormal return and comparative static results.

matched peer firms are the treatment firms—i.e., they receive a shock to the threat of activism. The average economy-wide firm and activist-targeted firms are the control disclosure baselines. The main equations for the peer firms, in levels, are as follows:

$$DISC_{M;T=0} = \sum_{i=1}^n Control_{i_{M;T=0}} + \tilde{\gamma}_{M;T=0} + \tilde{\theta}_{M,A;T=0} + \tilde{\eta}_{M,E;T=0} + \tilde{\varepsilon}_{M;T=0} \quad (1)$$

$$DISC_{M;T=1} = \sum_{i=1}^n Control_{i_{M;T=1}} + \tilde{\gamma}_{M;T=1} + \tilde{\theta}_{M,A;T=1} + \tilde{\eta}_{M,E;T=1} + \tilde{\varepsilon}_{M;T=1} \quad (2)$$

The dependent variable *DISC* stands for the main disclosure proxy, management guidance of EPS and sales. $T = 0$ represents the two-year period before the activist campaign announcement date (pre period), and $T = 1$ represents the two-year period after the announcement date (post period). $\tilde{\gamma}_{M;T=0,1}$ represents firm-fixed effects, such as proprietary costs, and $\tilde{\theta}_{M,A;T=0,1}$ represents unobservable time-varying effects common to each peer firm-activism firm pairing, such as macroeconomic shocks. However, recall that because the activist could have selected her target based on an unobservable factor, it could be that some time-varying effect differs for the activist and peer firm. For example, the activist may not want more disclosure at the target firm in order to maintain an information advantage. We therefore include an economy-wide disclosure variable to control for any time-varying effect common to all firms except the activism firm, based on the U.S. I/B/E/S universe, and represented by $\tilde{\eta}_{M,E;T=0,1}$.²¹

Following Bertrand, Duflo, and Mullainathan (2004), we compute the differences in our observed disclosure and control variable measurements from the pre to the post period for each peer firm by subtracting equation (1) from (2). We then estimate the following regres-

²¹Note that the activist events occur at different times from 2005 to 2011, further reducing the possibility that any one time-varying factor would drive the results. In Section 4.3, we conduct detailed within-industry sensitivity analyses to rule out the possibility that an industry effect unrelated to the threat of activism or shifting activism risk at the targeted firm drive the results.

sion:

$$\Delta DISC_M = \alpha_M + \sum_{i=1}^n \beta_i \Delta Control_{i_M} + \tilde{\varepsilon}_M \quad (3)$$

The differencing procedure eliminates firm-fixed effects ($DISC_{M;T=1} - DISC_{M;T=0}$). We obtain a difference-in-differences design by including average economy-wide changes in disclosure from the pre to post period as a regressor in our main specifications. The impetus for including this regressor is that it eliminates variation in disclosure for each peer firm that is common to the average U.S. firm.²² We compute the average U.S. I/B/E/S firm difference by first measuring the average number of guidance disclosures per firm in the U.S. I/B/E/S universe during each peer firm’s pre period, $\tilde{\eta}_{M,E;T=0}$. We then subtract $\tilde{\eta}_{M,E;T=0}$ from the same measure calculated during the peer firm’s post period, $\tilde{\eta}_{M,E;T=1}$. In contrast to year-fixed effects, which impose that any time effect be constant across pairings in a given year, the economy-wide disclosure trend variable is distinct for each pairing.²³ All tests therefore eliminate contemporaneous economy-wide trends in guidance disclosures. After subtracting equation (1) from (2), we attribute the residual mean effect of the peer firm’s change in management guidance to the increased threat of activism. We estimate this effect by the intercept term, α_M .²⁴ Any remaining idiosyncratic variation in guidance forms the error terms in our regressions.

In addition to designating the economy-wide average and activism firm changes in guidance as baselines, we take measures to reduce the likelihood that other covariates drive

²²Using control firm outcome variables as regressors to achieve a control “baseline” is a difference-in-differences identification method discussed further in Bertrand et al. (2004) and used in such studies as Cheng, Nagar, and Rajan (2004, Tables 12–16). This method sidesteps having to subtract the average U.S. firm’s disclosure difference (and other variables) from the peer firm’s difference.

²³We repeat the same procedure for the activist-targeted firm’s pre to post change in disclosure and also include this variable as a control regressor. Pairing-specific time controls are ideal for this setting because each observation spans four years (two years pre and two years post) and could begin at a different time within a given year (i.e., one activist campaign could start in January of one year and another could start in December of that same year).

²⁴Heckman, Ichimura, Smith, and Todd (1998) describe this methodology as semiparametric because the main effect is non-linear (the intercept term) but control regressors are also included.

the results. We include regressors for changes in ROA, capital expenditures, research and development, debt, intangibles (such as goodwill due to M&A), dividends, institutional holdings, stock performance, and analyst following. In Section 5.2, we decompose institutional holdings into fund type (e.g., indexer, transient). In Section 5.4, we test for changes in industry-level competition measures.

We also control for several activist campaign-specific characteristics. It could be that when the market prices the activist campaign negatively at the activism firm, the peer firm in turn views this as good news and subsequently provides more disclosure. We include regressors for positive returns and the level of absolute abnormal returns around the activist campaign announcement date for both the peer firm and the activism firm.

Despite taking the previous precautions to construct a properly specified model of disclosure and activism, we recognize that any systematic changes in disclosure at the peer firms not eliminated by the average economy-wide contemporaneous changes in disclosure, the activism firms' contemporaneous changes in disclosure, or the specific control covariates in our regressions will lead to misspecified models. This possibility is a limitation of all difference-in-differences research designs. However, if such changes are unsystematic, then they will form the error terms in our regressions.

4.3 Activism and Management Disclosures

Table 4 reports univariate statistics for the disclosure measures and peer firm covariates. As hypothesized, peer firms disclose 2.02 more (1% level) EPS and sales estimates in the post period relative to the pre period. The average U.S. I/B/E/S firm, meanwhile, increases EPS and sales guidance disclosures by 0.17, an economically small and statistically insignificant amount. Activism firms do not notably increase guidance either.²⁵ Figure 1 plots the peer firm, economy-wide trend, and activism firm disclosure frequencies for eight half-year event time periods around the activist campaign announcement date. Peer firms appear

²⁵We discuss the results for the activism firms in Section 5.4.

to increase disclosure in the half-year period immediately following the activist campaign announcement date and maintain this disclosure level for the remainder of the post period. No visual evidence suggests that disclosure for the peer firm or activism firm was trending upward prior to the activist campaign announcement date. This evidence rules out the possibility that existing disclosure trends at the peer firms drive our results.

We next turn to the capital markets effects of activism and find that 46% of peer firms and 62% of activism firms have positive abnormal returns during the $[-10 \text{ days}, +10 \text{ days}]$ window. The 62% level for activism firms and the accompanying 8.8% (1% level) on average magnitude of the return are consistent with Brav et al. (2008). Recall from Section 4.1 that peer firm absolute abnormal returns over the $[-10 \text{ days}, +10 \text{ days}]$ window are, on average, 6.2% (1% level), attesting to the validity of our setting. Table 4 also indicates that, on average, firms reduced total assets, increased ROA, increased capital expenditures, reduced cash holdings, and garnered more analyst following; however, all of these effects are economically small. Nonetheless, we recognize that these results might reflect a multipronged shareholder relations strategy for working with activists. We underscore that the disclosure results are in addition to managers' other behaviors.

Table 6 reports multivariate analyses for H1. The intercept term indicates that peer firms disclose 3.027 more EPS and sales estimates (1% level) in the post period of $[0, +2 \text{ years}]$ relative to the pre period of $[-2 \text{ years}, 0)$, after controlling for contemporaneous changes in disclosure at the average U.S. I/B/E/S firm and activism firm. The 3.027 additional guidance disclosures translate to an on average increase of 28.26% in guidance from the pre to post period, an economically meaningful shift.²⁶ Healy and Palepu (2001), Kothari et al. (2009), and Rogers et al. (2009) find that just one guidance disclosure increases price informativeness. The magnitude of this result is comparable to those of recent studies such as Shroff et al. (2013), which finds that firms issuing new equity increase guidance by 36%. To further eliminate the possibility that time trends in disclosure drive our main effect, we

²⁶This result is robust to the monotonic transformation of $\text{sign}(\text{change}) * \ln(1 + |\text{change}|)$. This transformation attenuates the magnitude while preserving the sign of large changes.

check whether the effect is stronger over the years 2008–2011 relative to 2005–2007. We do not find a statistically significant difference in our main effect over these two time periods (3.040 for years 2005–2007 versus 3.011 for years 2008–2011).

Turning to the control regressors, we see that changes in total assets and capital expenditures are negatively associated with peer firm disclosures (10% level). These negative associations are of nominal economic significance and could be related to disclosures associated with asset sales and cuts in capital expenditures. The main results are in addition to these possible second-order effects. The peer firms’ cumulative abnormal returns from $[-2 \text{ years}, -11 \text{ days}]$ are positively associated with their changes in guidance in the post period, but this effect is also economically small. We find no evidence that the peer firms’ changes in disclosure depend on whether the market prices the activist campaign—at either the activism firm or the peer firm—positively or negatively.

The Table 6 results are after controlling for firm-fixed effects and contemporaneous changes in disclosure at the average U.S. I/B/E/S firm and the activism firm. We also control for a set of known determinants of disclosure and activist campaign characteristics, the purpose of which is to establish the relation between disclosure and activism beyond disclosures associated with managers’ other strategic activist-related initiatives. Table 4 indicates that the firm control covariates do not change much from the pre to the post period, which gives confidence that a firm-fixed effects research design is appropriate for this setting. Furthermore, the results from Table 6 and the tables that follow are not sensitive to dropping the average U.S. I/B/E/S firm and the activism firm regressors, consistent with the relatively flat disclosure levels for these firms illustrated in Figure 1.²⁷ Additionally, Figure 1 indicates that it is unlikely that existing firm or industry trends drive the results. The results are also quantitatively similar when limiting the sample to companies with analyst following of 2 or more Chuk et al. (2013).

²⁷Our main analyses with the baseline regressors thus yield conservative results. Following Gormley and Matsa (2014), we also report detailed univariate statistics (see Figure 1 and Table 2) and run the main tests with Fama-French 12 industry fixed effects. The results from these analyses are quantitatively similar.

Added steps ensure that our results are not systematically driven by industry disclosure features or trends. Activists might target an industry based on their expectations of future disclosures. This effect should exist for all firms in a given industry, and we test for it accordingly. We re-estimate the main test from Table 6 and substitute new peer firms into the analysis, specifically firms with propensity scores furthest from those of the target firms but still within the same SIC two-digit industry. In less similar peer firm matches we expect the threat of activism to be lower because, for example, activism will not reduce due diligence costs for these firms as much. By contrast, if the alternative hypothesis holds—i.e., that the main result is due to an industry disclosure effect—then the results for the new peer firms should be close in magnitude to the original peer firms, because both sets of peer firms are in the same industry.²⁸ Appendix E reports that the disclosure effect is economically weaker for the furthest within-industry peer firm matches (intercept term of 0.764 versus 3.027 for the closest match in Table 6). This significant decrease suggests that the main finding cannot be attributed to an industry disclosure phenomenon. Moreover, it appears that the activist peer firm effect is a reality outside just the closest match, albeit with weaker magnitude.

This intuition also applies to the initial set of closely matched peer firms. In particular, we expect the disclosure effect to be stronger for peer firms more like the activism firm. We test this conjecture in Appendix F. We compute the absolute value of the difference in propensity scores for the peer firms and the activist-targeted firms. The median value of this difference is 0.00011 (mean of 0.00066). We then split the sample by the median value; the closest matches fall below the median (Appendix F, Column 1). We find a stronger disclosure effect for more closely matched peer firms (3.789 versus 2.296; difference significant at the 1% level). This confirmatory test shows that the peer effect of activism is greater when firms are more alike and lessons from one activist campaign can potentially be applied to other firms. The sensitivity analyses in general help to strengthen our conclusion that an increase in the threat of investor activism leads to an economically and statistically significant increase in

²⁸Limiting the analysis to propensity scores within certain bounds relates to the distance idea described in Mahalanobis (1936) and subsequently demonstrated with propensity scores in Rosenbaum and Rubin (1985).

managers' provision of disclosure to the capital markets.

4.4 Dividends and Disclosure

We next test H2 by partitioning the sample on whether or not the peer firm pays a dividend at the time of the activist campaign announcement date.²⁹ The expectation is that managers of non-dividend-paying firms are more sensitive to the threat of activism because activists explicitly target non-dividend-paying firms (e.g., Klein and Zur, 2009). This conjecture holds in Table 7. The disclosure effect in the non-dividend-paying sample is 3.793 (1% level) versus 2.349 (5% level) for the dividend-paying sample (difference is significant at the 1% level).³⁰ This result suggests that although companies strategically choose their dividend policies, they weigh their decision against other strategic choices, such as disclosure.

4.5 Takeover Defenses and Disclosure

We test H3 by partitioning the sample on the median peer firm's takeover defense strength. The goal is to test whether management teams and boards that are insulated from outside shareholders are less sensitive to the threat of activism (Bebchuk and Cohen, 2005; Bebchuk et al., 2009). We identify a peer firm's takeover defense strength using a numerical firm-level proxy from FactSet. FactSet provides a takeover defense strength rat-

²⁹Sample partitions are also used in Garvey and Hanka (1999), Ofek and Yermack (2000), Cheng, Nagar, and Rajan (2004), and Ertimur, Sletten, and Sunder (2014).

³⁰In Table 7, 63% (715/1130) of peer firms in our sample do not pay a dividend in both the pre and post activist campaign announcement date periods, 34% (389/1130) of our sample pay dividends in both the pre and post period, and the remaining 26 firms began paying a dividend in the post period relative to the pre period. We classify the 26 firms that change dividend policy as dividend-paying-firms, and our results are not sensitive to removing these firms from the sample. Because the sample split reduces the number of observations in each regression, we do not cluster standard errors by industry as in Table 6; however, standards errors are robust to heteroscedasticity.

ing for most U.S. public companies.³¹ Recent studies, such as Cohen and Wang (2013) and Popadak (2014), also use this measure as a proxy for takeover defense strength. Table 8 reports that the disclosure effect in the weak takeover defense sample is 3.840 (1% level) versus 2.350 (5% level) in the strong takeover defense sample (difference significant at the 1% level). As hypothesized, the disclosure effect is stronger in the weak takeover defense sample. This result suggests that managers are sensitive to their standing with activists and that insulated managers and boards are less responsive to the threat of activism.

4.6 Activist Open Letters and Disclosure

We test H4 by partitioning the sample on whether the activist released an open letter to management and/or shareholders in conjunction with the initiation of her activist campaign. As Appendices A and B show, releasing a letter to the target firm’s existing board members and shareholders is a tactic that activists use to express their strategic preferences to management and garner support from shareholders (55% of activist campaigns in our sample release an open letter). Activists typically release these letters to the public through their fund’s website or the media. These letters are salient mechanisms in our setting because by making their activism strategy publicly known, activists plausibly reduce due diligence costs for similar firms and increase media scrutiny of the target firm. In addition, public letters let peer firm managers learn about the activist campaign in a timely manner. The expectation is that peer firm managers will respond more forcefully to these activist campaigns. This conjecture holds in Table 9. The disclosure effect in the open-letter sample is 3.468 (1% level) versus 2.351 (5% level) in the no-open-letter sample (difference is significant at the 1% level).

³¹As described in Section 2, this measure is similar to the Bebchuk et al. (2009) Entrenchment Index and is compiled from a company’s articles of incorporation and bylaws, including whether the company has staggered board voting and a shareholder rights plan such as a poison pill, factors known to insulate management from outside shareholders (Bushman and Smith, 2001; Bebchuk and Cohen, 2005; Bebchuk et al., 2009). We eschew the Entrenchment Index in this study because it does not cover our entire sample period and is available only for large firms. The FactSet takeover defense rating is available for all of the sample firms. Note that several firms have the median rating, which results in an unbalanced split.

4.7 Distinctness of Comparative Statics Tests

To ensure that the three comparative statics tests are distinct phenomena, we compute Pearson correlations for the indicator variables for dividends, takeover defenses, and open letters. The largest of the correlations is 0.075 and statistically significant at the 5% level (takeover defense and open letter). However, the correlations for takeover defense and dividends and for open letter and dividends are statistically insignificant at 0.031 and 0.020, respectively. These correlations suggest that the comparative statics tests are distinct tests of the relation between activism and disclosure.

4.8 Activism and Guidance Initiators

Studies such as Chen et al. (2011) and Balakrishnan et al. (2014) report that the effect of guidance on price informativeness is pronounced for guidance initiations. To shed additional light on the relation between activism and disclosure, we test whether the threat of activism leads managers to initiate guidance. Table 10 reports that, after controls, 9.2% of the sample peer firms initiate guidance in the post period (1% level). That is, 9.2% of the peer firms disclosed no guidance estimates in the $[-2 \text{ years}, 0)$ period, and at least one guidance estimate in the $[0, +2 \text{ years}]$ period. This result shows that the threat of activism leads managers not only to increase guidance disclosures, but also to initiate guidance, further attesting to the economic significance of our findings and adding to the discussion in Leuz and Verrecchia (2000) on the determinants of disclosure policy.

4.9 Disclosure's Effect on Being Targeted by an Activist

H5 predicts that added disclosure is negatively associated with the probability of being targeted by an activist. Instead of constructing explicit empirical models for each mechanism disclosure operates on (e.g., credibility, activists' private information), we test disclosure directly under the assumption that doing so captures all of the underlying mechanisms.

In Table 11 we split the sample into high disclosers and low disclosers. High disclosers comprise peer firms whose percent change in guidance issuances from the pre to the post period is above the sample median percent change. Guidance initiators will not have such a change and are included in the high-discloser sample. Table 11 indicates that in the [0, +2 years] post period, the probability of being targeted by an activist investor is 11.5% for the high-discloser sample (Column 1) and 13.7% for the low-discloser sample (Column 2). This 16% decrease, or 2.2% in levels, is an economically meaningful and statistically significant difference (5% level). Furthermore, this effect obtains even after we control for other strategic initiatives managers might take as part of their overall approach to preparing for activism, such as cutting capital expenditures or R&D. This evidence is consistent with the hypothesis that disclosure is negatively associated with the probability of being targeted by an activist investor.

5 Sensitivity Analyses

5.1 Competition

In this section we check whether changing competitive forces in the peer firm's industry induced by the activist campaign drive the results. Aslan and Kumar (2014) find that activist campaigns lead to changes in the competitive environments of activist targets.³² However, Li (2010) finds that competition from existing rivals is negatively associated with the frequency and the quality of disclosure. Therefore, our expectation is that increased competition biases against the main results. Nonetheless, we check for and do not find a statistically significant difference in competition for the sample of peer firms from the pre to the post periods. Unreported results show that the Li, Lundholm, and Minnis (2013) competition measure's pre period mean is 0.299 and post period mean is 0.302. This finding

³²Specifically, they find that activist targets increase their market shares by 3.7% and improve price-cost markups by 6.2% in subsequent years.

is largely consistent with that of Aslan and Kumar (2014), who find that it takes three years or more after an activist campaign to observe measurable changes in the competitive landscape, whereas we expect and find the disclosure effect to obtain immediately. It is therefore reasonable to assume that the relation between competitive forces and disclosure is eliminated as a firm-fixed effect in the differencing procedure from Section 4.2.

5.2 Other Institutional Holdings

In the main analyses we directly control for total institutional ownership. However, if institutional investors of a certain type systematically change their ownership positions in the peer firms, an aggregate ownership measure is an incomplete control for the disclosure preferences of other large shareholders. For example, indexing institutions might prefer more disclosure (Bushee and Noe, 2000; Boone and White, 2015). We therefore decompose the change in institutional holdings into changes in quasi-indexer holdings, transient holdings, and active holdings (Bushee, 1998). Including these three component parts as regressors in the main tests does not affect any of the main results. Moreover, quasi-indexers and transient holdings in the peer firms are not statistically different from zero from the pre to the post period.

5.3 Timing of Disclosures

To ensure that the results are robust to alternative time periods, we first reduce the pre- and post-period windows to one year. The main effect from Table 6 drops by 48%, to 1.451. The reduction in magnitude is nearly proportionate to the 50% reduction in the time period covered, suggesting that the disclosure effect obtains quickly at the peer firms. This result is consistent with Figure 1, which graphically depicts the same result. We also check whether the effect reverses after the initial response. Managers could increase disclosure initially and decrease it later on, potentially when the threat of activism dissipates. By contrast, prior theoretical and empirical work suggests that firms are reluctant to reduce disclosure in any

case (Verrecchia, 1983; Chen, Matsumoto, and Rajgopal, 2011). We construct an additional two-year post period window of (+2 years, +4 years] for a sub-sample of 988 peer firms for which we can obtain I/B/E/S guidance data over the entire (+2 years, +4 years] window.³³ We subtract the peer firm's (+2 years, +4 years] guidance level from the peer firm's [0 years, +2 years] guidance level, and find this difference to be 0.19, economically small and statistically insignificant. This finding is consistent with that of Chen et al. (2011), who find that few firms reduce disclosure levels: From October 2000 to January 2006, only 254 firms stopped providing quarterly earnings guidance. We draw two conclusions from this evidence: (1) managers remain committed to the increased level of disclosure induced by the increased threat of activism, and (2) an existing disclosure trend at the peer firm does not drive the main effect in Table 6 because such a trend implies that the difference noted previously would be significantly positive.

5.4 Disclosure at the Activist-Targeted Firms

We report descriptive evidence on disclosure at the activist-targeted firms. Recall that we do not formally construct a full structural model for activists' strategic disclosure preferences. In Table 4, we report an economically small and statistically insignificant 0.15 increase in guidance disclosures at the activist-targeted firm from the pre to the post activist campaign announcement date periods. One can interpret this evidence several ways. It could be that activist investors want to maintain a private information advantage and do not seek more disclosure at their target firm. It could also be that once an activist targets a firm, the managers of that firm engage in more costly activities to protect themselves, such as activating a poison pill, initiating a dividend, or engaging in direct negotiation (Carleton et al., 1998; Klein and Zur, 2009). We test this expectation and find that 4% of activist targeted companies adopt poison pills during the activist campaign (1% level). This finding helps explain the results of Chen and Jung (2015), who find that *conditional* on activism,

³³For peer firms in the latter sample years, guidance data for +4 years is not yet available.

companies do not elevate disclosure and some reduce disclosure. This argument is consistent with the intuition from Section 1 that disclosure is a salient mechanism when activism is imminent, but not a reality.

6 Conclusion

This paper studies the relation between shareholder activism and disclosure. We use peer firm settings from a unique data set of 1,130 activism events from 2005 to 2011 to construct an empirical model of activism and disclosure. The results indicate that managers respond to an increase in the threat of activism by increasing disclosure, and that these additional disclosures reduce the probability of being targeted by an activist. Managers' sensitivity to activism and the magnitude of the activism threat appear to drive these results. We interpret these findings as evidence that disclosure is part of a multidimensional shareholder relations strategy for managers preparing for activism. In particular, managers shape their firms' information environments through disclosure to deter activism at their firms. The findings speak to the debate on whether a firm's information environment determines governance outcomes. Research in this area typically assumes that a firm's information environment is an exogenous force in activism settings rather than one that managers influence (Coffee, 1991; Maug, 1998; Edmans and Manso, 2011). We argue that managers have significant control over their firms' information environments because they can strategically disclose. Future theoretical and empirical work can take this perspective forward.

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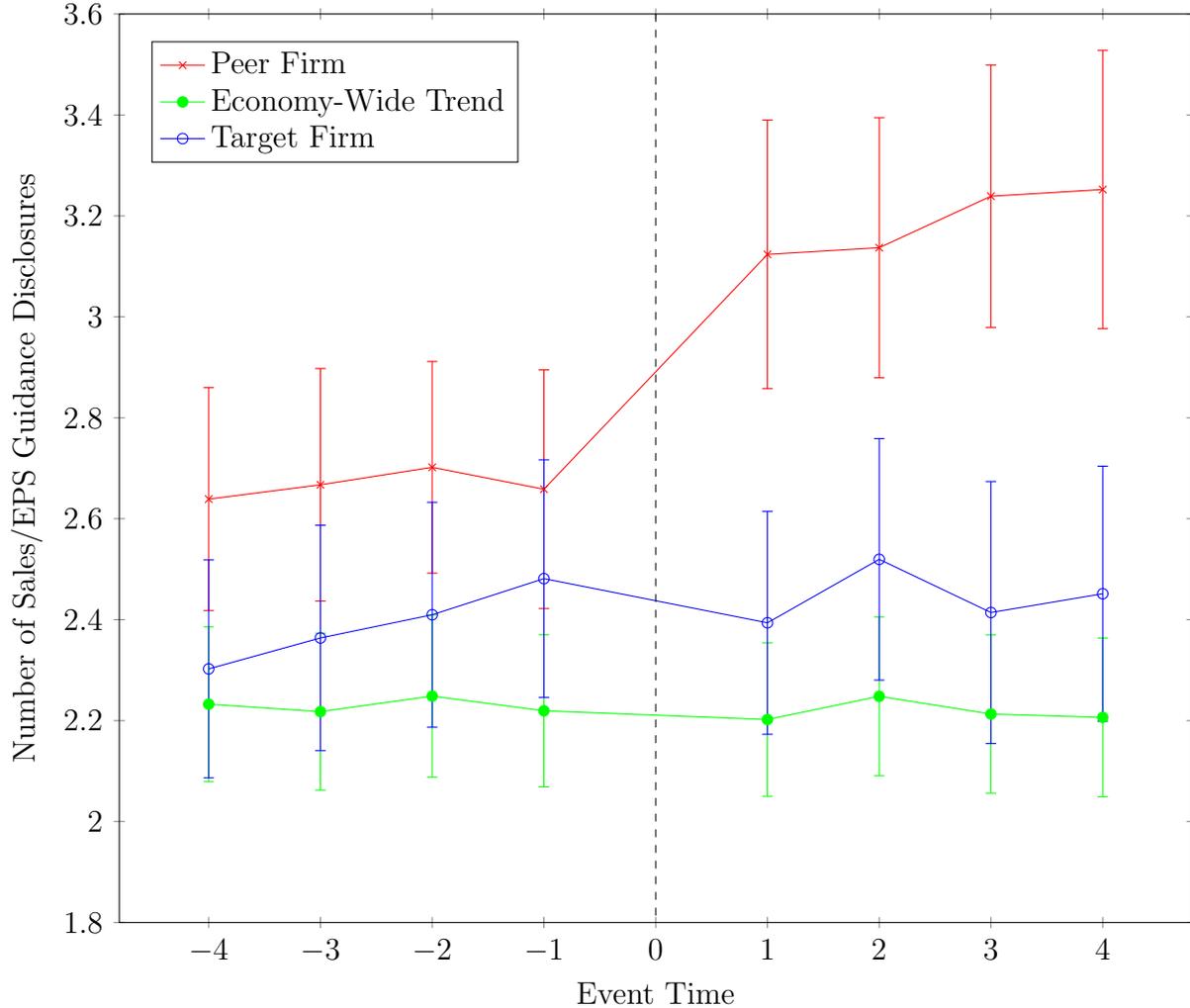
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Figure 1: Activism Firm and Peer Firm Guidance Disclosures from 2005–2011



This figure shows the frequency of EPS and sales guidance disclosures for the activist-targeted firms and propensity matched peer firms, where Event Time = 0 is the activist campaign announcement date from FactSet. The red line plots the frequency of guidance disclosures for the propensity matched peer firms that experience an increase in the threat of activism, the green line plots the frequency of guidance disclosures for the average U.S. I/B/E/S firm, and the blue line plots the frequency of guidance disclosures for the activist-targeted firms (with 95% confidence intervals marked). The Event Time periods are defined using six months time windows and we count the number of guidance disclosures in each window. Event Time 0 is the announcement date of the activism campaign, Event Time -4 refers to [-24 months, -18 months), Event Time -3 refers to [-18 months, -12 months), Event Time -2 refers to [-12 months, -6 months), Event Time -1 refers to [-6 months, 0), Event Time 1 refers to [0, +6 months), Event Time 2 refers to [+6 months, +12 months), Event Time 3 refers to [+12 months, +18 months), and Event Time 4 refers to [+18 months, +24 months).

Table 1: Distribution of Activist Campaigns by Year and Industry

Panel A: Distribution of Activist Campaigns by Year

Year	Number of Campaigns
2005	125
2006	185
2007	245
2008	235
2009	171
2010	150
2011	19
Total	1,130

Panel B: Distribution of Activist Campaigns by Industry

Industry	Number of Campaigns
Consumer Nondurables	47
Consumer Durables	35
Manufacturing	77
Energy, Oil, Gas, and Coal	45
Chemicals and Allied Products	26
Business Equipment	231
Telecommunications	45
Utilities	21
Wholesale and Retail	166
Healthcare	125
Finance	179
Other	133
Total	1,130

Table 2: Descriptive Statistics of Activism Firms and Propensity Matched Peer Firms from 2005–2011

Other than Total Assets, balance sheet variables are scaled by Total Assets. Except for returns and guidance, the variables reported below are measured in the quarter of the activist campaign announcement date ($T = 0$). Subscript M indicates matched firm and subscript A indicates activism firm.

Panel A: Activism Firms

Variable (N=1,130)	Mean	Std. Dev.	25th Perc.	Median	75th Perc.
Market Cap. _A (millions)	7,255.11	32,400.00	85.78	293.87	1,366.37
Total Assets _A (millions)	22,376.98	160,161.70	135.07	531.21	2,084.57
Market to Book _A	1.02	1.07	0.39	0.77	1.31
Firm CAR [−730, −11 days] _A	−0.02	0.75	−0.46	−0.13	0.20
Cash _A	0.14	0.16	0.02	0.08	0.19
Debt _A	0.24	0.28	0.02	0.18	0.34
Intangibles _A	0.15	0.18	0.00	0.06	0.24
Dividend Payer _A	0.40	0.49	0.00	0.00	1.00
CAPEX _A	0.04	0.06	0.01	0.03	0.06
R&D _A	0.04	0.10	0.00	0.00	0.05
ROA _A	−0.04	0.21	−0.05	0.01	0.05
Inst. Ownership _A	0.62	0.29	0.38	0.66	0.86
Analyst Following _A	4.78	5.99	0.00	2.00	7.00
[−2 years, 0) Guidance Disclosures _A	9.64	13.65	0.00	3.00	16.00
[0, +2 years] Guidance Disclosures _A	9.79	14.77	0.00	3.00	14.00

Panel B: Propensity Matched Peer Firms

Variable (N=1,130)	Mean	Std. Dev.	25th Perc.	Median	75th Perc.
Market Cap. _M (millions)	4,517.28	18,200.00	137.25	540.26	2,098.06
Total Assets _M (millions)	11,368.72	88,065.01	206.96	818.06	2,985.07
Market to Book _M	1.09	1.22	0.36	0.76	1.33
Firm CAR [−730, −11 days] _M	0.13	1.01	−0.37	−0.01	0.38
Cash _M	0.13	0.16	0.02	0.07	0.18
Debt _M	0.24	0.24	0.03	0.18	0.35
Intangibles _M	0.15	0.18	0.00	0.07	0.22
Dividend Payer _M	0.44	0.50	0.00	0.00	1.00
CAPEX _M	0.04	0.06	0.01	0.02	0.05
R&D _M	0.04	0.12	0.00	0.00	0.04
ROA _M	−0.02	0.21	−0.02	0.02	0.06
Inst. Ownership _M	0.63	0.31	0.39	0.68	0.87
Analyst Following _M	5.44	5.61	1.00	3.00	8.00
[−2 years, 0) Guidance Disclosures _M	10.71	13.82	0.00	5.00	17.00
[0, +2 years] Guidance Disclosures _M	12.73	16.25	0.00	6.00	21.00

Table 3: Abnormal Returns Around the Activist Campaign Announcement Date for Activism Firms and Propensity Matched Peer Firms from 2005–2011

This table reports regressions of absolute cumulative abnormal returns on characteristics of activism firms and their propensity score matched peer firm. All variables are defined in Appendix C. T-statistics are in parentheses. Standard errors are clustered by two-digit SIC code. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	Activism Firms		Matched Peer Firms	
	(1)	(2)	(1)	(2)
	[-10, +10] Absolute CAR		[-10, +10] Absolute CAR	
Intercept	0.088**	(3.47)	0.062**	(7.12)
Log of Total Assets	-0.001	(-0.23)	-0.002	(-1.21)
Market to Book	-0.006	(-0.91)	-0.002**	(-2.42)
Firm CAR [-730, -11 days]	-0.007	(-1.13)	-0.001	(-1.14)
Cash	-0.024*	(-1.82)	-0.009	(-0.78)
Debt	0.017	(0.98)	0.027**	(3.06)
Intangibles	-0.040***	(-3.18)	-0.024**	(-2.69)
Dividend Payer	-0.010	(-1.36)	-0.012**	(-2.37)
CAPEX	0.092**	(2.46)	0.059***	(4.29)
R&D	0.030*	(1.88)	0.010	(0.88)
ROA	-0.021	(-1.68)	-0.026*	(-2.01)
Institutional Ownership	-0.012*	(-1.87)	0.000	(0.02)
Analyst Following	0.000	(-0.16)	0.000	(-0.90)
Observations	1,130		1,130	
Adjusted- R^2	0.023		0.056	

Table 4: Descriptive Statistics of Differenced Propensity Matched Peer Firm Characteristics from 2005–2011

Other than Total Assets, balance sheet variables are scaled by Total Assets. Differenced variables are computed using the following procedure: $\Delta_F X_i = X_{i_{F=M,A;T=1}} - X_{i_{F=M,A;T=0}}$, where X = variable, $F = M$ for matched firm or A for activism firm, and $T = 0$ for pre period or 1 for post period. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable (N=1,130)	Mean	Std. Dev.	25th Perc.	Median	75th Perc.
Δ_M Mgmt. Guidance Issuances	2.02***	10.30	-1.00	0.00	5.00
Δ_M Total Assets	-0.15***	0.61	-0.45	-0.15	0.14
Δ_M ROA	0.02***	0.25	-0.03	0.01	0.06
Δ_M CAPEX	0.01***	0.05	-0.01	0.00	0.02
Δ_M R&D	0.00	0.09	0.00	0.00	0.00
Δ_M Debt	0.00	0.18	-0.05	0.00	0.06
Δ_M Intangibles	-0.01**	0.12	-0.03	0.00	0.02
Δ_M Cash	-0.02***	0.15	-0.06	0.00	0.03
Δ_M Dividend Payer	0.06***	0.24	0.00	0.00	0.00
Δ_M Institutional Investor Holdings	0.02***	0.16	-0.03	0.00	0.09
Δ_M Analyst Following	0.52***	3.25	-1.00	0.00	2.00
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	0.17	0.16	-0.05	0.16	0.29
Δ_A Activism Firm Mgmt. Guidance Issuances	0.15	10.67	-2.00	0.00	3.00
Δ_M Matched Firm CAR	0.04	1.38	-0.37	0.01	0.39
[-2 years, -11 day] Matched Firm CAR	0.02	0.95	-0.39	-0.13	0.17
Positive [-10 day, +10 day] Matched Firm CAR	0.46***	0.50	0.00	0.00	1.00
Positive [-10 day, +10 day] Activism Firm CAR	0.62***	0.49	0.00	1.00	1.00
Absolute [-10 days, +10 days] Matched Firm CAR	0.04***	0.06	0.01	0.03	0.06
Absolute [-10 days, +10 days] Activism Firm CAR	0.07***	0.10	0.02	0.04	0.08

Table 5: Correlation Matrix for Activism Firms and Propensity Matched Peer Firms from 2005–2011

Subscript M indicates matched firm and subscript A indicates activism firm. Bold indicates statistical significance at the 5% level.

Variable (N=1,130)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) Δ_M Mgmt. Guidance Issuances	1.00																		
(2) Δ_M Total Assets	-0.12	1.00																	
(3) Δ_M ROA	-0.02	0.23	1.00																
(4) Δ_M CAPEX	-0.08	0.05	-0.03	1.00															
(5) Δ_M R&D	0.02	-0.29	-0.55	0.03	1.00														
(6) Δ_M Debt	0.04	0.04	-0.14	-0.05	0.01	1.00													
(7) Δ_M Intangibles	-0.06	0.34	0.00	-0.02	-0.04	0.11	1.00												
(8) Δ_M Cash	0.02	-0.16	0.05	-0.03	-0.02	-0.09	-0.29	1.00											
(9) Δ_M Dividend Payer	-0.04	0.08	0.02	0.06	0.01	-0.08	0.00	0.03	1.00										
(10) Δ_M Institutional Investor Holdings	0.09	-0.24	-0.11	-0.11	0.08	0.10	-0.06	0.00	-0.04	1.00									
(11) Δ_M Analyst Following	0.11	-0.24	-0.03	-0.04	0.02	0.05	-0.08	0.08	-0.06	0.15	1.00								
(12) $\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	-0.07	-0.01	0.03	-0.03	-0.01	-0.05	-0.01	-0.03	-0.01	0.06	-0.02	1.00							
(13) Δ_A Activism Firm Mgmt. Guidance Issuances	0.03	-0.02	-0.02	-0.01	0.01	0.02	-0.02	0.10	0.00	0.00	0.02	-0.07	1.00						
(14) Δ_M Matched Firm CAR	-0.08	0.14	0.01	0.04	-0.05	0.03	0.06	-0.05	-0.01	-0.14	-0.12	0.03	0.07	1.00					
(15) [-2 years, -11 days] Matched Firm CAR	0.13	-0.31	-0.12	-0.11	0.10	0.07	-0.03	0.00	-0.06	0.26	0.18	-0.03	-0.04	-0.70	1.00				
(16) Positive [-10 day, +10 day] Matched Firm CAR	0.00	-0.02	-0.01	-0.01	0.02	-0.03	0.00	0.02	0.02	0.01	0.04	0.01	0.01	-0.04	0.02	1.00			
(17) Positive [-10 day, +10 day] Activism Firm CAR	0.01	0.02	0.02	0.00	-0.04	0.08	0.04	-0.05	-0.02	-0.02	-0.01	-0.01	-0.02	0.01	-0.01	0.02	1.00		
(18) Absolute [-10 days, +10 days] Matched Firm CAR	-0.08	0.10	-0.01	0.07	0.00	0.00	0.08	-0.07	0.05	-0.03	-0.09	0.00	0.09	0.20	-0.04	0.02	0.11	1.00	
(19) Absolute [-10 days, +10 days] Activism Firm CAR	-0.05	0.04	-0.03	0.08	0.07	-0.03	0.00	0.02	0.03	-0.05	-0.06	-0.03	0.12	0.15	-0.05	0.16	0.00	0.17	1.00

Table 6: Effect of Activism Threat on Guidance Disclosures for Propensity Matched Peer Firms from 2005–2011

This table reports the regression of the propensity matched peer firms' change in management guidance on contemporaneous changes in firm characteristics. The pre period is $[-2 \text{ years}, 0)$ and the post period is $[0, +2 \text{ years}]$, where $T = 0$ is the announcement date of the activist investor campaign. Subscript M indicates matched firm and subscript A indicates activism firm. All variables are defined in Appendix C. The empirical specification eliminates firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are clustered by two-digit SIC code. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	(1) Δ_M Mgmt. Guidance Issuances	
Intercept	3.027**	(3.43)
Δ_M Total Assets	-0.988*	(-1.99)
Δ_M ROA	0.341	(0.27)
Δ_M CAPEX	-11.203*	(-1.81)
Δ_M R&D	-0.862	(-0.42)
Δ_M Debt	1.189	(0.75)
Δ_M Intangibles	-2.982	(-1.21)
Δ_M Cash	-0.388	(-0.19)
Δ_M Dividend Payer	-0.497	(-0.47)
Δ_M Inst. Inv. Holdings	2.836	(1.59)
Δ_M Analyst Following	0.183	(0.96)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	-0.429**	(-2.20)
Δ_A Activism Firm Mgmt. Guidance Issuances	0.026	(0.83)
Δ_M Matched Firm CAR	0.242	(0.84)
$[-2 \text{ years}, -11 \text{ days}]$ Matched Firm CAR	1.056**	(2.24)
Positive $[-10 \text{ days}, +10 \text{ days}]$ Matched Firm CAR	0.311	(0.70)
Positive $[-10 \text{ days}, +10 \text{ days}]$ Activism Firm CAR	-0.098	(-0.15)
Absolute $[-10 \text{ days}, +10 \text{ days}]$ Matched Firm CAR	-9.919*	(-1.99)
Absolute $[-10 \text{ days}, +10 \text{ days}]$ Activism Firm CAR	-2.075	(-0.57)
Observations		1,130
Adjusted- R^2		0.030

Table 7: Effect of Activism Threat on Guidance Disclosures for Propensity Matched Peer Firms from 2005–2011 Split by Dividend Payer

This table reports regressions of the propensity matched peer firms' change in management guidance on contemporaneous changes in firm characteristics. The sample is split on whether a firm pays a dividend in the pre period. The pre period is [-2 years, 0) and the post period is [0, +2 years], where T = 0 is the announcement date of the activist investor campaign. Subscript *M* indicates matched firm and subscript *A* indicates activism firm. All variables are defined in Appendix C. The empirical specifications eliminate firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are robust to heteroscedasticity. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	Non-Dividend Payers		Dividend Payers	
	Δ_M Mgmt. Guidance Issuances	(1)	Δ_M Mgmt. Guidance Issuances	(2)
Intercept	3.793**	(4.00)	2.349**	(2.26)
Δ_M Total Assets	-0.876	(-1.17)	-0.349	(-0.29)
Δ_M ROA	0.189	(0.12)	0.433	(0.07)
Δ_M CAPEX	-14.642*	(-1.95)	10.558	(0.90)
Δ_M R&D	-0.454	(-0.10)	36.895	(0.74)
Δ_M Debt	0.679	(0.32)	3.357	(0.83)
Δ_M Intangibles	-2.623	(-0.78)	-6.017	(-1.01)
Δ_M Cash	-0.500	(-0.21)	2.489	(0.42)
Δ_M Dividend Payer	-0.459	(-0.33)	-	-
Δ_M Inst. Inv. Holdings	4.955*	(1.92)	-1.943	(-0.57)
Δ_M Analyst Following	0.376***	(2.71)	-0.062	(-0.47)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	-0.212	(-0.79)	-0.614**	(-2.18)
Δ_A Activism Firm Mgmt. Guidance Issuances	0.011	(0.31)	0.054	(1.24)
Δ_M Matched Firm CAR	0.225	(0.59)	-0.378	(-0.47)
[-2 years, -11 days] Matched Firm CAR	0.833	(1.46)	1.065	(0.82)
Positive [-10 day, +10 day] Matched Firm CAR	-0.459	(-0.56)	1.298	(1.43)
Positive [-10 day, +10 day] Activism Firm CAR	-0.378	(-0.44)	0.013	(0.01)
Absolute [-10 days, +10 days] Matched Firm CAR	-8.475	(-1.26)	-14.416	(-1.20)
Absolute [-10 days, +10 days] Activism Firm CAR	-10.788**	(-2.08)	7.147	(1.63)
	<i>t</i> -test for difference in means by split: 0.00***			
Observations	715		415	
Adjusted- <i>R</i> ²	0.050		0.010	

Table 8: Effect of Activism Threat on Guidance Disclosures for Propensity Matched Peer Firms from 2005–2011 Split by Takeover Defense Strength

This table reports regressions of the propensity matched peer firms' change in management guidance on contemporaneous changes in firm characteristics. The sample is split on whether the firm is above the median takeover defense rating assigned by FactSet. The takeover defense rating is similar to the Bebchuk et al. (2009) Entrenchment Index, and is compiled from a company's articles of incorporation and bylaws, including whether the company has staggered board voting and a shareholder rights plan, such as a poison pill, factors known to insulate managers from outside shareholders (Bebchuk and Cohen, 2005; Bebchuk et al., 2009). The pre period is $[-2 \text{ years}, 0)$ and the post period is $[0, +2 \text{ years}]$, where $T = 0$ is the announcement date of the activist investor campaign. Subscript M indicates matched firm and subscript A indicates activism firm. All variables are defined in Appendix C. The empirical specifications eliminate firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are robust to heteroskedasticity. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	Weak Takeover Defense Firms (1)		Strong Takeover Defense Firms (2)	
	Δ_M Mgmt. Guidance Issuances		Δ_M Mgmt. Guidance Issuances	
Intercept	3.840**	(3.53)	2.350**	(2.52)
Δ_M Total Assets	-0.113	(-0.12)	-1.481*	(-1.82)
Δ_M ROA	-2.096	(-0.84)	1.751	(0.94)
Δ_M CAPEX	-5.075	(-0.55)	-17.989**	(-2.15)
Δ_M R&D	-5.355	(-0.63)	1.326	(0.27)
Δ_M Debt	-2.259	(-0.76)	3.545	(1.54)
Δ_M Intangibles	1.281	(0.30)	-6.649*	(-1.70)
Δ_M Cash	1.671	(0.51)	-1.795	(-0.64)
Δ_M Dividend Payer	-1.412	(-0.75)	1.055	(0.57)
Δ_M Inst. Inv. Holdings	3.073	(0.93)	2.719	(1.03)
Δ_M Analyst Following	0.348**	(2.14)	0.086	(0.71)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	-0.636**	(-2.06)	-0.252	(-0.99)
Δ_A Activism Firm Mgmt. Guidance Issuances	0.060	(1.36)	0.001	(0.02)
Δ_M Matched Firm CAR	-0.389	(-0.74)	0.555	(1.26)
$[-2 \text{ years}, -11 \text{ days}]$ Matched Firm CAR	0.662	(0.82)	1.104*	(1.70)
Positive $[-10 \text{ day}, +10 \text{ day}]$ Matched Firm CAR	1.193	(1.22)	-0.331	(-0.42)
Positive $[-10 \text{ day}, +10 \text{ day}]$ Activism Firm CAR	-0.430	(-0.42)	0.379	(0.46)
Absolute $[-10 \text{ days}, +10 \text{ days}]$ Matched Firm CAR	-11.454	(-1.35)	-6.625	(-0.84)
Absolute $[-10 \text{ days}, +10 \text{ days}]$ Activism Firm CAR	-8.624	(-1.34)	-0.827	(-0.21)
	<i>t</i> -test for difference in means by split: 0.00***			
Observations	471		659	
Adjusted- R^2	0.034		0.028	

**Table 9: Effect of Activism Threat on Guidance Disclosures for Propensity Matched Peer Firms from 2005–2011
Split by Public Disclosure of Activist Campaign**

This table reports regressions of the propensity matched peer firms' change in management guidance on contemporaneous changes in firm characteristics. The sample is split on whether the activist publicly disclosed their campaign through an open letter to management and/or shareholders. The pre period is [-2 years, 0) and the post period is [0, +2 years], where T = 0 is the announcement date of the activist investor campaign. Subscript *M* indicates matched firm and subscript *A* indicates activism firm. All variables are defined in Appendix C. The empirical specifications eliminate firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are robust to heteroskedasticity. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	Public Disclosure of the Campaign		No Public Disclosure of the Campaign	
	Δ_M Mgmt. Guidance Issuances	(1)	Δ_M Mgmt. Guidance Issuances	(2)
Intercept	3.468**	(3.74)	2.351**	(2.14)
Δ_M Total Assets	-1.169	(-1.41)	-0.806	(-0.85)
Δ_M ROA	0.678	(0.27)	-0.373	(-0.20)
Δ_M CAPEX	-16.435**	(-2.01)	-4.442	(-0.46)
Δ_M R&D	-3.665	(-0.51)	-0.949	(-0.17)
Δ_M Debt	0.465	(0.20)	1.786	(0.61)
Δ_M Intangibles	-3.858	(-0.99)	-1.576	(-0.36)
Δ_M Cash	-1.193	(-0.38)	0.187	(0.06)
Δ_M Dividend Payer	-2.249	(-1.33)	2.062	(1.01)
Δ_M Inst. Inv. Holdings	0.536	(0.20)	5.605*	(1.79)
Δ_M Analyst Following	-0.026	(-0.20)	0.440***	(3.07)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	-0.425	(-1.61)	-0.333	(-1.11)
Δ_A Activism Firm Mgmt. Guidance Issuances	0.043	(1.04)	0.012	(0.31)
Δ_M Matched Firm CAR	0.291	(0.68)	0.109	(0.20)
[-2 years, -11 days] Matched Firm CAR	1.260*	(1.67)	0.789	(1.10)
Positive [-10 day, +10 day] Matched Firm CAR	0.725	(0.86)	0.125	(0.14)
Positive [-10 day, +10 day] Activism Firm CAR	-0.478	(-0.55)	0.325	(0.34)
Absolute [-10 days, +10 days] Matched Firm CAR	-7.832	(-0.98)	-12.363	(-1.50)
Absolute [-10 days, +10 days] Activism Firm CAR	-0.590	(-0.15)	-6.983	(-1.09)
		<i>t</i> -test for difference in means by split: 0.00***		
Observations		632		498
Adjusted- R^2		0.014		0.043

Table 10: Effect of Activism Threat on Guidance Initiation for Propensity Matched Peer Firms from 2005–2011

This table reports a linear probability model of whether the propensity matched peer firms initiate guidance during the post period on contemporaneous changes in firm characteristics. The pre period is [-2 years, 0) and the post period is [0, +2 years], where T = 0 is the announcement date of the activist investor campaign. Subscript *M* indicates matched firm and subscript *A* indicates activism firm. All variables are defined in Appendix C. The empirical specification eliminates firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are clustered by two-digit SIC code. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	(1) Initiate Guidance _{<i>M</i>}	
Intercept	0.092**	(4.50)
Δ_M Total Assets	0.026	(1.13)
Δ_M ROA	-0.023	(-0.49)
Δ_M CAPEX	-0.413***	(-3.31)
Δ_M R&D	0.184**	(2.16)
Δ_M Debt	-0.009	(-0.14)
Δ_M Intangibles	0.029	(0.36)
Δ_M Cash	0.167***	(3.94)
Δ_M Dividend Payer	0.019	(0.56)
Δ_M Inst. Inv. Holdings	0.030	(0.57)
Δ_M Analyst Following	0.002	(0.94)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	0.002	(0.51)
Δ_A Activism Firm Mgmt. Guidance Issuances	0.000	(0.37)
Δ_M Matched Firm CAR	0.019**	(2.02)
[-2 years, -11 days] Matched Firm CAR	0.035*	(1.67)
Positive [-10 days, +10 days] Matched Firm CAR	-0.020	(-1.10)
Positive [-10 days, +10 days] Activism Firm CAR	0.011	(0.65)
Absolute [-10 days, +10 days] Matched Firm CAR	-0.084	(-0.52)
Absolute [-10 days, +10 days] Activism Firm CAR	0.160	(1.41)
Observations	1,130	
R^2	0.030	

Table 11: Effect of Change in Guidance Issuances on the Probability of Activist Event for Propensity Matched Peer Firms from 2005–2011

This table reports linear probability regressions of the probability of an activist event at the propensity matched peer firm in years $[0, +2 \text{ years}]$ on contemporaneous changes in peer firm characteristics. The sample is split into high disclosers and low disclosers. High disclosers comprise of peer firms whose percent change in guidance issuances from the pre to the post period is above the sample median percent change. Guidance initiators will not have such a change, and are included in the high discloser sample. The pre period is $[-2 \text{ years}, 0)$ and the post period is $[0, +2 \text{ years}]$, where $T = 0$ is the announcement date of the activist investor campaign. Subscript M indicates matched firm and subscript A indicates activism firm. All variables are defined in Appendix C. The empirical specifications eliminate firm-fixed effects, time effects common to each matched firm and activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are robust to heteroskedasticity. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	High Disclosers $_M$		Low Disclosers $_M$	
	(1)		(2)	
	Activist Event in $(0, +2 \text{ years}]_M$		Activist Event in $(0, +2 \text{ years}]_M$	
Intercept	0.115**	(4.49)	0.137**	(3.36)
Δ_M Total Assets	0.060***	(2.87)	0.038	(0.88)
Δ_M ROA	-0.160***	(-2.65)	0.043	(0.58)
Δ_M CAPEX	0.161	(0.73)	-0.379	(-1.00)
Δ_M R&D	-0.056	(-0.38)	0.278	(0.89)
Δ_M Debt	0.033	(0.53)	-0.198	(-1.64)
Δ_M Intangibles	-0.153	(-1.48)	-0.268	(-1.63)
Δ_M Cash	0.039	(0.53)	-0.136	(-0.91)
Δ_M Dividend Payer	-0.045	(-0.97)	0.148*	(1.87)
Δ_M Inst. Inv. Holdings	0.048	(0.64)	0.290**	(2.46)
Δ_M Analyst Following	0.003	(0.67)	0.014***	(2.80)
Δ_M Economy-Wide Mgmt. Guidance Issuances	0.007	(0.93)	0.005	(0.41)
Δ_M Activism Firm Mgmt. Guidance Issuances	-0.001	(-0.62)	0.002	(0.97)
Δ_M Matched Firm CAR	-0.013	(-1.06)	-0.013	(-0.73)
$[-2 \text{ years}, -11 \text{ day}]$ Matched Firm CAR	-0.014	(-0.81)	-0.061*	(-1.73)
Positive $[-10 \text{ day}, +10 \text{ day}]$ Matched Firm CAR	-0.002	(-0.09)	-0.030	(-0.83)
Positive $[-10 \text{ day}, +10 \text{ day}]$ Activism Firm CAR	-0.007	(-0.30)	-0.008	(-0.21)
Absolute $[-10 \text{ days}, +10 \text{ days}]$ Matched Firm CAR	-0.242	(-1.17)	-0.294	(-0.89)
Absolute $[-10 \text{ days}, +10 \text{ days}]$ Activism Firm CAR	0.031	(0.28)	0.062	(0.28)
	<i>t</i> -test for difference in means by split: 0.04**			
Observations	764		366	
Adjusted- R^2	0.010		0.041	

Appendix A: Activist Open Letter to Shareholders

On Monday, 24 February 2014, Carl Icahn sent the following letter to eBay's shareholders, demanding governance changes in the form of new board members and a strategic sell-off of PayPal. He simultaneously released the letter to the media. The text of that letter follows:

Dear Fellow eBay Stockholders,

We have recently accumulated a significant position in eBay's common stock because we believe there is great long-term value in the business. However, after diligently researching this company we have discovered multiple lapses in corporate governance. These include certain material conflicts of interest, which we believe could put the future of our company in peril. We have found ourselves in many troubling situations over the years, but the complete disregard for accountability at eBay is the most blatant we have ever seen. Indeed, for the first time in our long history, we have encountered a situation where we believe we should not even have to run a proxy fight to change the board composition. Rather, we believe that in any sane business environment these directors would simply resign immediately from the eBay Board, either out of pure decency or sheer embarrassment at the public exposure of the extent of their self-serving activities.

How is it possible for the current board to engage in any meaningful discussions about long-term stockholder value while: (1) at least two board members are directly competing with eBay, (2) one board member is demanding eBay cease hiring the most talented employees, (3) another board member is routinely funding competitors while buying companies from eBay and reaping significant personal riches, (4) at least two board members appear to have put their own financial gain in ongoing conflict with their fiduciary responsibilities to stockholders and (5) the CEO seems to be completely asleep or, even worse, either naive or willfully blind to these grave lapses of accountability and stockholder value destruction?

The Board's Transgressions and CEO Mr. John Donahoe's Ineptitude in Addressing Them

Mr. Marc Andreessen — Independent Director

Since Mr. Andreessen has been an eBay insider, he has engaged in several transactions that lead us to question his loyalty to eBay. During Mr. Andreessen's time on the eBay Board he has purchased large stakes in two former eBay subsidiaries, reaping significant personal riches. In September 2009, an investor group that included Mr. Andreessen, preempted a planned Skype IPO (in which stockholders would have ended up making multiple billions of dollars) and bought 70% of Skype for less than what eBay had paid to acquire it. Mr. Andreessen basked in the purchase, saying that "Skype is the archetypal phenomenon: a breakthrough technology". His partner was even more excited, stating that "Skype is on its way to becoming one of the most important companies in the world". One cannot help but wonder what happened to Mr. Andreessen's fiduciary responsibility to share his feelings with Mr. Donahoe and the board rather than pre-empt the planned IPO to further his own interests. A mere 18 months later, Mr. Andreessen's investor group flipped Skype to Microsoft for \$8.5 billion, a value three times what they paid for it, netting approximately \$4 billion at the expense of eBay stockholders. After the sale to Microsoft, Mr. Andreessen, a sitting eBay Board member and fiduciary to stockholders, stated: "one reason we were enthusiastic about buying Skype was that even though we thought it would be a tremendous standalone business, we also knew that for Microsoft and a number of other companies Skype would be an obvious thing to buy. We knew we'd always have the fall-back of selling to strategic buyers". Did Mr. Andreessen share this strong view with Mr. Donahoe? Was Mr. Donahoe completely asleep, or even worse, so naive and deferential to his "world-class board" that he allowed a sitting board member and several private equity firms to walk away with over \$4

billion in what was essentially stockholder's money after a sale to a strategic that he obviously should have orchestrated himself? Many others have been vocally critical of the Skype transaction, but, until now, none have taken on the task of standing up to Mr. Donahoe and this board.

Mr. Andreessen's next eBay sourced grand slam was his investment in Kynetic. In March 2011, as part of eBay's \$2.4 billion acquisition of GSI Commerce, the eBay Board decided they no longer wanted the Kynetic portion of GSI Commerce and sold it back to the company's founder for just \$31 million in cash and a \$467 million sellers note at below market interest. In June 2012, Mr. Andreessen pounced, making a \$150 million investment in Kynetic at a \$1.5 billion valuation, leveraging the low sale price and below market financing which the eBay Board had recently approved. Just a year later, Kynetic was valued at \$3.1 billion, giving Mr. Andreessen a paper gain of more than 100%.

Additionally, during Mr. Andreessen's time on the eBay Board—a time when he has been privy to non-public eBay Board information—he has made investments in and actively advised, no less than five direct competitors of eBay (four of which are competitors of PayPal), including Boku (mobile payments platform), Coinbase (Bitcoin wallet), Dwolla (secure online money management), Jumio (online and mobile credit card payments) and Fab (design e-commerce). How can Mr. Donahoe and the eBay Board allow Mr. Andreessen to advise these competitors while he simultaneously possesses not only non-public eBay Board information but also intimate proprietary information about PayPal's operations? But perhaps more importantly, how can Mr. Andreessen be trusted to objectively advise Mr. Donahoe and the eBay Board about the strategic direction of PayPal when he has vested interest in so many of its competitors? Regarding Square, another powerful PayPal competitor, Mr. Andreessen publicly lamented his regret in passing on the opportunity to invest in that company as well.

Mr. Scott Cook — Independent Director and Member of the Corporate Governance and Nominating Committee

Mr. Cook is the founder, former CEO and a current board member of Intuit Inc. Mr. Cook has retained almost \$1 billion of Intuit stock (100x the \$9 million of eBay stock he owns). Intuit and PayPal are direct competitors in payment processing as Intuit Go-Payment provides virtually the same capabilities to merchants as PayPal Here. How can the board have a conversation about the strategy or performance of PayPal when a representative of a direct competitor who has so much at stake is in the room? Even worse, Mr. Cook also apparently believes he can tell eBay whom the company cannot hire. Unbelievably, according to a pending DOJ complaint, “eBay ultimately agreed to an expansive no-solicitation and no-hire agreement in large part to placate Intuit's Mr. Cook, who was serving as a member of eBay's Board of Directors and who, at the same time, was making several complaints on behalf of Intuit about eBay's hiring practices”. Furthermore, according to the complaint, in an effort to placate Mr. Cook, eBay instructed its employees not to pursue potential hires from Intuit and to discard their resumes. Is Mr. Cook wary of how a standalone PayPal could impact the company he founded? Is he worried that it would diminish the value of his \$1 billion in Intuit stock? The best question, however, is where has Mr. Donahoe been when all of this has been going on?

Mr. John Donahoe — Chief Executive Officer, President and Director

While Mr. Donahoe is feeding information to competitors on the eBay Board and selling the company's assets to board members, notable PayPal architects including Elon Musk and David Yammer are publicly questioning his strategy. David Yammer recently stated that “if you allowed PayPal to pursue its destiny there are moves it could make to become the largest financial company in the world”. Elon Musk has said “it doesn't make sense that a global payment system is a subsidiary of an auction website...it's as if Target owned Visa or something” and that “[PayPal] will either wither or be spun out”.

Mr. Donahoe has resoundingly highlighted the strength of his “world-class board of directors”, including Mr. Andreessen and Mr. Cook. In our opinion, world-class directors focus on creating long-term stockholder value, not furthering their own financial and professional interests at the expense of stockholders. Amazingly, Mr. Donahoe has also publicly boasted about eBay’s sale of Skype, claiming that it was an opportunity for eBay to “have its cake and eat it, too”. The facts, however, show that the transaction was disastrous for stockholders to the tune of more than \$4 billion. Additionally, Mr. Donahoe has touted his record of creating stockholder value over handpicked time periods. The more applicable facts show that not only from the time Mr. Donahoe took over as CEO, but also since the beginning of 2013, the stock has dramatically underperformed its applicable peers. From March 31, 2008 through our initial involvement on January 10, 2014, eBay stock returned 75% while Amazon, Visa and MasterCard returned 462%, 271% and 285%, respectively. For all of 2013 through our initial involvement on January 10, 2014, Amazon, Visa and MasterCard returned 60%, 48%, and 73%(26), respectively, while eBay stock returned only 2%.

It is very sad to us that Mr. Donahoe appears to lack awareness about what is going on around him on his board and in the marketplace. It makes us seriously question his judgement and ability to make the crucial decisions that must be made concerning the future of PayPal. How can Mr. Donahoe be the right person to make the strategic decisions necessary to achieve long-term value creation when he relies on his “world-class board of directors” with competing interests that challenge their fiduciary responsibility to eBay stockholders? We are convinced that not only has Mr. Donahoe failed to address eBay’s corporate governance crisis but also that his general stewardship of the company has been myopic. Elon Musk, one of the most pre-eminent technological visionaries of our generation, predicts that “[PayPal] will get cut to pieces by Amazon Payments, or by others such as Apple and by start-ups if it continues to be part of eBay”. It is time for us to address this critical problem that now faces the company.

Our Proposal

We believe creating two dedicated and highly focused independent businesses would provide employees and stockholders the best opportunity to remain competitive over the long term. We believe that the separation of the traditional eBay and PayPal businesses will: (1) highlight the significant value of the disparate businesses currently shrouded by a conglomerate discount the market has afforded eBay; (2) focus and empower independent management teams to most effectively build two very different business platforms, make economic decisions independent of each other and, most importantly, foster innovation; and (3) provide an even more valuable currency for future bolt-on acquisition opportunities and for recruiting the top talent necessary for PayPal to remain the market leader in payment technology.

In an environment where an accomplished leader such as Scott Thompson, the former CEO of Yahoo, is dismissed for adding two words, Computer Science, to a degree from Stonehill College, it is incredible that so many blatant indiscretions at eBay have been tolerated by Mr. Donahoe and the other board members. We believe eBay needs fresh stockholder representation on the board to steer it towards long-term success and away from becoming yet another example of a technology company with a management team and board that refused to adapt (such as Nokia, Blackberry, Dell, Eastman Kodak, Polaroid, Nintendo, Xerox, Sony, Palm, and AOL, among many others). Our experience creating long-term stockholder value at companies such as Chesapeake Energy, Forest Labs, Motorola and R.J. Reynolds Tobacco, among many others, has showcased our ability to influence boards to meaningfully enhance long-term stockholder value by, among other things, holding management, and in certain cases other directors, accountable. We hope you will VOTE FOR OUR SLATE OF DIRECTORS

and afford us the opportunity to represent and serve all eBay stockholders as members of the eBay Board, just as we have successfully done at many other companies in the past.

Even more importantly, however, we urge you to vote in favor of our precatory proposal in order to send a clear message to the eBay Board that eBay and PayPal must be separated—NOW. We hope that all eBay stockholders recognize that PayPal is at a critical point in its development and that the payments market is rapidly evolving around it. Particularly with respect to technology, business opportunities are either seized by those who truly appreciate their potential, or they vanish and are relegated to the dustbin of history. Do not allow PayPal to be, in the words of Elon Musk, “cut to pieces” because it remains part of eBay. VOTE FOR OUR PRECATORY TO SEPARATE PAYPAL FROM EBAY NOW.

Sincerely,

Carl C. Icahn

Appendix B: eBay's Response to Carl Icahn

On Monday, 24 February 2014, Carl Icahn sent an open letter to eBay's shareholders—see Appendix A. On that same day, eBay responded to Carl Icahn's letter with a public post to their blog:

New eBay shareholder Carl Icahn has cherry-picked old news clips and anecdotes out of context to attack the integrity of two of the most respected, accomplished and value-driven technology leaders in Silicon Valley. Marc Andreessen and Scott Cook bring extraordinary insight, expertise and leadership to eBay's board, which is scrupulous in its governance practices and fully transparent with regard to its directors' other affiliations and businesses. And eBay Inc. President and CEO John Donahoe is widely respected for his turnaround of eBay and leadership of the company over the past six years.

As we are sure our other shareholders would agree, we prefer to engage in more constructive and substantive discussions of why, in our view, PayPal and eBay are better together. Instead, Mr. Icahn unfortunately has resorted to mudslinging attacks against two impeccably qualified directors.

Mr. Icahn has nominated two of his employees to eBay's board. As we have said, the board's nominating committee will review the nominations of his employees in due course. Even if our board does not support the nominations, ultimately shareholders will decide whether they believe Mr. Icahn's employees are better qualified than directors such as Mr. Cook (Mr. Andreessen is not up for re-election this year) to sit on the board of a leading technology company.

The board has been clear in its view that shareholders are best served by keeping PayPal part of eBay. The board regularly assesses all strategic options for the company; should circumstances change the board is entirely capable of evaluating alternatives for optimizing shareholder value.

In response to Mr. Icahn's specific claims, the facts are:

1) Skype: Skype was a great stand-alone business but had limited synergies with eBay's global commerce and payments businesses. Consistent with its practice of regularly reviewing all of eBay's operations, the Board determined that because of these limited synergies, it would be in the best longer term interest of stockholders to explore a divestiture of Skype. The company explored all options for divesting Skype, including an IPO and sale to a strategic buyer, and pursued the option that offered the highest return at the time, which was the sale of a controlling stake. We retained a 30% stake upon the sale to a private equity group led by Silver Lake Partners. That stake meant that the company earned a total of \$1.4 billion when Microsoft acquired Skype. Because Mr. Andreessen's fund had a small stake in the acquiring group, Mr. Andreessen was recused from all decision making. This recusal was dictated by eBay's published Board Governance Guidelines and Code of Business Conduct, and Mr. Andreessen fully supported his recusal. Separating Skype enabled eBay to invest in its core growth engines of e-commerce and online payments, while allowing for potential upside if Skype's potential was fully realized.

2) Marc Andreessen: Andreessen Horowitz is one of the most successful venture capital firms in the world, and Mr. Andreessen's track record of creating value and driving innovation makes him an extraordinary asset on eBay's board. Regarding other investments Mr. Andreessen and his firm have made, this sort of potential conflict exists whenever venture capitalists serve on a Board of Directors. This is true for many public companies which have found experienced venture capital investors to be extraordinarily valuable directors, especially in high tech. The eBay Board has guidelines to minimize the impact of any such conflicts. Also, in regards to Kynetic, any benefits from the terms of eBay's purchase of GSI Commerce accruing to Kynetic would have been built into the price at which Andreessen Horowitz purchased their shares; as such, any relationship with eBay was irrelevant. eBay

subsequently disposed of its note and equity interests in Kynetic and related Rubin enterprises at a profit.

3) *Scott Cook: As founder of Intuit and chairman of the company's executive committee, Mr. Cook also has an exceptional track record of creating value and driving innovation. He has been an enormous asset to eBay's board for many years. The overlap between Intuit and eBay is small, fully disclosed and within the safe harbor for interlocking directorates. Regarding hiring, this is old news, any restrictions ended years ago, and Intuit historically had not been a source of talent for eBay Inc.*

Important Additional Information

eBay Inc., its directors and certain of its executive officers are participants in the solicitation of proxies from stockholders in connection with eBay's 2014 Annual Meeting of Stockholders. eBay intends to file a proxy statement and WHITE proxy card with the U.S. Securities and Exchange Commission (the "SEC") in connection with such solicitation of proxies from eBay shareholders. EBAY STOCKHOLDERS ARE STRONGLY ENCOURAGED TO READ ANY SUCH PROXY STATEMENT (INCLUDING ANY AMENDMENTS AND SUPPLEMENTS) AND ACCOMPANYING WHITE PROXY CARD WHEN THEY BECOME AVAILABLE AS THEY WILL CONTAIN IMPORTANT INFORMATION.

Information regarding the names of eBay's directors and executive officers and their respective interests in eBay by security holdings or otherwise is set forth in eBay's proxy statement for the 2013 Annual Meeting of Stockholders, filed with the SEC on March 18, 2013. To the extent holdings of such participants in eBay's securities have changed since the amounts described in the 2013 proxy statement, such changes have been reflected on Initial Statements of Beneficial Ownership on Form 3 or Statements of Change in Ownership on Form 4 filed with the SEC. Additional information can also be found in eBay's Annual Report on Form 10-K for the year ended December 31, 2013, filed with the SEC on January 31, 2014.

These documents, including any proxy statement (and amendments or supplements thereto) and other documents filed by eBay with the SEC, are available for no charge at the SEC's website at <http://www.sec.gov> and at eBay's investor relations website at <http://investor.ebayinc.com>. Copies may also be obtained by contacting eBay Investor Relations by mail at 2065 Hamilton Avenue, San Jose, California 95125 or by telephone at 866-696-3229.

Appendix C: Variable Definitions

In this Appendix, we describe our empirical measures and provide their sources.

Variable	Definition	Source
Management Guidance Issuances	Annual and quarterly management EPS and sales estimates and revisions	I/B/E/S
Market Cap. (millions)	Log of firm market value	CRSP
Total Assets (millions)	Log of total assets	Compustat
Market to Book	Market Cap. / (Total Assets – Accumulated Depreciation)	CRSP, Compustat
Cash	Cash / Total Assets	Compustat
Debt	(Long Term Debt + Current Debt) / Total Assets	Compustat
Intangibles	Intangibles / Total Assets	Compustat
Dividend Payer	1 if firm paid a dividend in the observation period, 0 otherwise	Compustat
CAPEX	Capital Expenditures / Total Assets	Compustat
R&D	R&D / Total Assets	Compustat
ROA	Net Income Before Extraordinary Items / Total Assets	Compustat
Inst. Ownership	Percentage of outstanding shares held by institutional investors	Thomson 13F Database
Analyst Following	Number of outstanding analyst EPS forecasts	I/B/E/S
Cumulative Abnormal Returns	CARs are computed using the market value-weighted return as a baseline. All cumulative abnormal return (CAR) variables use the announcement date of the activist campaign for $T = 0$.	CRSP

Appendix D: Propensity Score Matching Specification for Activist Campaigns from 2005–2011

The specification includes two-digit industry and year controls. When selecting the matched firm, we select the closest match within the activism firm’s two-digit SIC industry and year of the activist campaign announcement date (see Section 3 for more on the matching procedure). All variables are defined in Appendix C. T-statistics are in parentheses and standard errors are clustered by two-digit SIC code. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	(1) Activism Firm = 1
Log of Total Assets	0.018*** (16.11)
Market Cap.	−0.016*** (−14.03)
Market to Book	0.000 (1.20)
P/E Ratio	0.000 (−0.59)
Firm CAR [−730, −11 days]	0.002*** (2.65)
ROA	0.003 (1.24)
CAPEX	−0.036** (−2.39)
R&D	−0.005 (−1.10)
Debt	−0.004* (−1.70)
Intangibles	−0.021*** (−3.72)
Cash	0.024*** (4.01)
Dividend Payer	−0.007*** (−3.35)
Institutional Ownership	0.001 (0.92)
Analyst Following	0.037 (1.02)
[−2 years, 0) Guidance Disclosures	−0.313** (−2.41)
Observations	70,520
Adjusted- R^2	0.041

Appendix E: Effect of Activism Threat on Guidance Disclosures — Sensitivity Analysis of Second Peer Firm Match from 2005–2011

This table reports the regression of the *second* propensity matched peer firms' change in management guidance on contemporaneous changes in firm characteristics. The second firm is the furthest within industry match based on propensity score. We use this firm to test whether managers at a less comparable firm are less sensitive to the threat of activism. The pre period is [-2 years, 0) and the post period is [0, +2 years], where T = 0 is the announcement date of the activist investor campaign. Subscript *M* indicates matched firm and subscript *A* indicates activism firm. All variables are defined in Appendix C. The empirical specification eliminates firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are clustered by two-digit SIC code. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	(1) Δ_M Mgmt. Guidance Issuances	
Intercept	0.764*	(1.67)
Δ_M Total Assets	-0.241	(-0.60)
Δ_M ROA	-0.436	(-0.45)
Δ_M CAPEX	-3.703	(-0.92)
Δ_M R&D	-0.208	(-0.08)
Δ_M Debt	-0.706	(-0.60)
Δ_M Intangibles	0.491	(0.27)
Δ_M Cash	1.235	(0.89)
Δ_M Dividend Payer	0.850	(2.19)
Δ_M Inst. Inv. Holdings	-0.653	(-0.49)
Δ_M Analyst Following	0.070	(1.11)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	0.053	(0.41)
Δ_A Activism Firm Mgmt. Guidance Issuances	0.001	(0.08)
Δ_M Matched Firm CAR	0.162	(0.75)
[-2 years, -11 days] Matched Firm CAR	0.043**	(0.13)
Positive [-10 days, +10 days] Matched Firm CAR	-0.291	(-0.73)
Positive [-10 days, +10 days] Activism Firm CAR	0.762*	(1.84)
Absolute [-10 days, +10 days] Matched Firm CAR	-0.757	(-0.20)
Absolute [-10 days, +10 days] Activism Firm CAR	-3.263	(-1.52)
Observations		1,130
Adjusted- R^2		0.014

Appendix F: Effect of Activism Threat on Guidance Disclosures — Sensitivity Analysis of Closest Propensity Score Peer Firms from 2005–2011

This table reports regressions of the propensity matched peer firms' change in management guidance on contemporaneous changes in firm characteristics. The sample is split by the peer firm and activism firm median difference in propensity score from the propensity score specification in Appendix D. The Top 50% Closest Matches are the below median group, and the Bottom 50% Closest Matches are the above median group. The pre period is [-2 years, 0) and the post period is [0, +2 years], where T = 0 is the announcement date of the activist investor campaign. Subscript *M* indicates matched firm and subscript *A* indicates activism firm. All variables are defined in Appendix C. The empirical specifications eliminate firm-fixed effects, time effects common to each matched firm-activism firm pairing, and time effects common to all firms. T-statistics are in parentheses and standard errors are robust to heteroskedasticity. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variable	Top 50% Closest Matches		Bottom 50% Closest Matches	
	Δ_M Mgmt. Guidance Issuances	(1)	Δ_M Mgmt. Guidance Issuances	(2)
Intercept	3.789**	(3.63)	2.296**	(2.36)
Δ_M Total Assets	-1.389	(-1.43)	-0.997	(-1.23)
Δ_M ROA	0.654	(0.34)	0.698	(0.28)
Δ_M CAPEX	-12.153	(-1.33)	-11.912	(-1.39)
Δ_M R&D	-1.957	(-0.40)	2.525	(0.26)
Δ_M Debt	0.754	(0.31)	2.613	(0.93)
Δ_M Intangibles	-2.041	(-0.48)	-3.410	(-0.89)
Δ_M Cash	-2.543	(-0.86)	1.693	(0.53)
Δ_M Dividend Payer	-0.038	(-0.02)	-0.795	(-0.48)
Δ_M Inst. Inv. Holdings	2.086	(0.68)	2.871	(1.02)
Δ_M Analyst Following	0.250*	(1.74)	0.127	(0.94)
$\Delta_{M,A}$ Economy-Wide Mgmt. Guidance Issuances	-0.559**	(-1.97)	-0.327	(-1.18)
Δ_A Activism Firm Mgmt. Guidance Issuances	-0.017	(-0.42)	0.065	(1.59)
Δ_M Matched Firm CAR	0.553	(1.06)	0.057	(0.13)
[-2 years, -11 days] Matched Firm CAR	1.683**	(2.31)	0.426	(0.58)
Positive [-10 day, +10 day] Matched Firm CAR	0.045	(0.05)	0.724	(0.83)
Positive [-10 day, +10 day] Activism Firm CAR	-1.113	(-1.22)	0.846	(0.93)
Absolute [-10 days, +10 days] Matched Firm CAR	-9.664	(-1.22)	-10.102	(-1.21)
Absolute [-10 days, +10 days] Activism Firm CAR	-4.650	(-0.82)	-1.114	(-0.27)
	<i>t</i> -test for difference in means by split: 0.00***			
Observations	565		565	
Adjusted- <i>R</i> ²	0.034		0.012	