Media and Shareholder Activism

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Abstract

Using more than twenty-five million firm-level articles published in the media, I examine the role of media in shareholder activism events during the years 2002-2014. I find that conditioning on numerous observable firm-specific characteristics and unobservables, broader and negative *ex-ante* media coverage is positively associated with the probability of a firm being a shareholder activist's target. The positive correlation between media coverage and the propensity for targeting by activists is robust to the use of instrumental variable (IV) approach indicating that the documented relation is plausibly *causal*. The association between negative media tone and activism is stronger during the times of greater divergence of opinion about the firm amongst analysts. However, during times of overall low sentiments, the shareholder activists become less sensitive to media tone. I further document that media coverage also plays a crucial role in determining the outcomes of activism events. Target firms with *ex-ante* positive media coverage not only have significantly lower announcement returns but also have a higher likelihood of management winning. Overall, the results provide empirical evidence for the linkage between shareholder activism and limited investor attention and investor opinion, as suggested by theories.

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"Four hostile newspapers are more to be feared than a thousand bayonets."

-Napoléon Bonaparte

1. Introduction

Shareholder activists voraciously look for information about their potential target firms through all available sources. Recent studies in finance indicate that besides the firm's fundamentals and analysts' opinions, investors pay close heed to its coverage in media, and media itself can play a crucial role in financial markets (e.g.,Veldkamp, 2006; Tetlock, 2007; Bhattacharya, Galpin, Ray and Yu, 2009; Engelberg and Parsons, 2011; Peress, 2014).[2] Anecdotal evidence suggests that media coverage can often not only reveal new information but more importantly also signal what other market participants know or believe about the firm. For instance, Michelle Edkins, global head of Blackrock's Investment Stewardship believes: *"Media coverage helps us keep in touch with a broad range of constituents' views on corporate governance issues."* Such *ex-ante* knowledge about the opinions of other market participants could be especially useful in activism situations as going forward the activist would need the support of other shareholders to influence any corporate policies. As stated by Brav, Jiang and Li (2018), in their recent paper, *"Hence, "picking friends," that is, the selection of a target with a pro-activist shareholder base, is a crucial element in activists' decision-making process prior to the decision whether to engage in a proxy contest."*

In this paper, I explore the linkage between media and shareholder activism – both in activists' decision-making process and eventual activism outcomes. The paper's main contribution is to provide evidence on the *causal* role of media in activism situations both before and after shareholder activism is announced. I find that both the broader coverage of the firm in media articles and the negative tone used in such articles before the activism announcement are positively and significantly associated with the

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[2] Tetlock (2016) provides a useful survey of the literature on the role of media in finance.

probability of the firm being a shareholder activist's target. I rely on instrumental variables approach to establish a causal connection in the relationship between media coverage and the propensity for targeting by activists. I use two instruments for media coverage. My first instrument is "name fluency," i.e., the pronounceability of company names (Green and Jame, 2013). Relying on research from psychology, Green and Jame (2013) find that corporate name fluency is positively associated with investor recognition and attention.[3] I confirm such results in the first stage regression and find a significant and positive association between media coverage and name fluency and consequently use name fluency as an instrument for media coverage, as company name fluency cannot directly impact shareholder activists' decisions. Furthermore, following Solomon (2012), I use the presence of an external investor relations consultant in the target company, as a second instrument. Such an instrument not only satisfies the relevance condition but also complies with the exclusion restriction as Solomon (2012) argues, *"IR firms do not obviously affect company operations, but may affect media coverage directly, making them a very useful way to examine the effects of media itself."* Finally, the paper documents the role of media in determining the outcomes of activism campaigns. I find a significant positive association between favorable media coverage of the firm and the likelihood of management winning in activism situations.[4]

Taken together, such results are broadly consistent with the theoretical models of *limited investor attention* (e.g., Hirshleifer and Teoh, 2003; Peng and Xiong, 2006), models of *incomplete information* (e.g., Merton, 1987), models of *investor persuadability* (e.g., Mullainathan and Shleifer, 2005; Brav, Jiang and Li, 2018) and *investor sentiments* (e.g., Barberis, Shleifer and Vishny, 1998). One might argue that institutional activist shareholders would only rely on information from the firm's fundamentals to decide which firms to target. However, to better appreciate the role played by media in activism campaigns one must recognize the resource and time constraints shareholder activists face. Along with capital constraints for activist funds, the limited attention of such institutional investors, although not as severe as that of

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[3] Alter and Oppenheimer (2009) provide an excellent review on processing fluency and its implications.
[4] To the best of my knowledge, the role of media in shareholder activism has not been studied in the extant literature.

individual investors, restricts them from focusing on the entire universe of firms, at all times. For example, asset management and investment research companies such as Vanguard or Morning Star only have around 100 equity analysts, and one can envision that this impedes their ability to monitor all the firms continually.[5,6]

I contend in this paper that the search problem faced by analysts and investors is partially addressed by narrowing the option set - to firms that have attracted investors' attention. Since shareholder activists have a higher degree of such aforementioned resource constraints, their subset of potential target firms comprises more of companies that have recently grabbed their attention. Hence in this paper, I conjecture that media is one of the important channels that attract both individual and institutional investors' limited attention.

Moreover, given that most activism campaigns rely on support from other investors to succeed, activists use media to gauge investors' overall opinion on the firm (e.g., Aggarwal, Erel and Starks, 2018; Brav, Jiang and Li, 2018). Even the most sophisticated investors or analysts can strongly disagree about the future or valuation of a firm. Relying on the tone of media could potentially be a way to circumvent the obfuscation due to possible lack or bias, or even divergence of opinion analysts may have about a firm. Such bias or divergence in analysts' opinions may likely stem out of the limited attention constraint of analysts, and shareholder activists plausibly supplement analysts' research with media's overall reflection of investors' opinion. The results documented in the paper are robust to a series of further tests, including principal component analyses and the use of different media sources.

The paper contributes to several strands of finance literature. *First*, this article contributes to the burgeoning literature on the role of media in finance. Although researchers have made significant progress in studying media's impact on stock prices, liquidity and trading volume, studies analyzing media's *causal* role in corporate finance are relatively scarce (Tetlock, 2016). *Second*, the paper also relates to the research

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[5] https://personal.vanguard.com/us/insights/article/img-vg-072017?SYND=RSS&Channel=AN
[6] http://corporate.morningstar.com/us/html/EquityResearch.htm

on media's role in corporate governance. Dyck, Volchkova and Zingales (2008) show that media can influence corporate decisions. My paper contributes to this line of research by focusing on the corporate governance role of media in the context of shareholder activism. *Third*, the paper complements several studies that explore the role of media in enabling information transmission in finance (e.g., Tetlock, 2014). It shows that media coverage is one of the primary channels for transmitting both new and old information and for catching dissidents' attention. *Fourth*, it contributes to the growing literature on shareholder activism as it pertains to wolf pack activism, where the theory predicts a coordinated effort by institutional investors to increase the likelihood of a successful campaign (e.g., Brav, Dasgupta and Mathews, 2018; Coffee and Palia, 2016). However, it is not apparent what is the channel enabling such coordination, other than private communications, which is unobservable to an empiricist.[7] The results documented in the paper indicate that media could plausibly be a critical channel through which such implicit or explicit coordination is enabled.[8] *Fifth*, the paper adds to the recent literature in finance and accounting that uses textual analysis of non-numeric information to quantify investor sentiments (Loughran and McDonald, 2016). *Finally*, the article provides evidence on the media's role in shaping public opinion about firms. Shareholder activism battles are similar to political contests, where public opinion can play an important role. The paper shows that just as for any political campaign, media can not only signal but also shape public opinion in the case of shareholder activism campaigns.

The rest of the article proceeds as follows. In section 2, I review the related theory and motivate the development of testable models. I describe the data used in the paper and present the summary statistics in section 3. In section 4, I present the main results of my hypotheses. I investigate whether the relations

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[7] Also, it is worth noting that any formal coordination among the dissident and the other shareholders would not only reduce the potential returns of the dissident but is also legally prohibited under the U.S. disclosure rules of Regulation 13D.

[8] Note that the empirical results documented in the paper do not show any direct evidence of shareholder coordination. Other researchers have recently begun exploring investor coordination (e.g., Crane, Koch and Michenaud, 2017; Gonzalez and Calluzzo, 2016; He and Li, 2017; Wong, 2017; Foroughi, 2017; Brav, Dasgupta and Mathews, 2018).

described in the primary results are *causal* in section 5. In section 6, I explore further the robustness of my results. Finally, I conclude in section 7.

2. Related Literature and Hypotheses Development

Academics have recently begun to explore the causal role of media in finance (e.g., Engelberg and Parsons, 2011; Peress, 2014; Shiller, 2015), but the role of media in shareholder activism has not been explored in the extant literature. This is primarily because in reasonably efficient markets one can argue that media cannot play any causal role in activist situations as the prices incorporate all the relevant information. However, one can also argue that prices can sometimes be impacted by the same news when circulated widely since it draws investor attention (Merton, 1987). Therefore, it is ultimately an empirical question, which I explore in this paper.

Gantchev (2013) models shareholder activism as a sequential process. In a similar vein, Figure 1 shows the three phases of shareholder activism. The first stage is the target identification phase where the shareholder activist identifies an undervalued stock based on their own research and other shareholders' opinion. It is during this stage that media can play a crucial role in reflecting other shareholders' opinion. At this stage the activist can use the information in media coverage to more accurately estimate its cost and benefit functions, should the activism reach the next phases. Note that existing opinions of other investors or shareholders matter because shareholder activism campaigns are not initiated to seek control, but rather they are battles for the market of corporate influence (Brav, 2016). Activism proceeds into the second phase of negotiation, once Schedule 13D is filed, or the activist requests changes publicly. If negotiation fails, it reaches the third phase of the proxy fight. It is during these last two phases, both the sides, i.e., the activist and the incumbent management, can intentionally use media with their competing narratives to influence other key shareholders' opinions to bring them on their respective sides. For example, in a recent incidence of shareholder activism, activist hedge fund manager Bill Ackman from Pershing Square Capital Management threatened the management of Automatic Data Processing, Inc. (ADP), a leading U.S. firm

providing human resources management software and services, with damaging media coverage. According to ADP's Schedule 14A preliminary proxy statement filed with the SEC in 2017, ADP's management disclosed that in one of the conversations, Mr. Bill Ackman threatened, *"…that, if he engaged in a proxy fight, he would use his ability to generate media coverage to damage both Mr. Rodriguez and the company, and that would be bad for the company's clients, employees and stockholders."* [9] Such an anecdote strongly suggests that both the shareholder activists and the target firms are aware of media's influence. Finally, in the ultimate stage, if there is a shareholder vote, either the management or the dissident (i.e., the shareholder activist) wins.

Insert Figure 1 here

Both static and dynamic theoretical models within rational paradigms have shown that opinions are key influencers of investor behavior (e.g., Miller, 1977; Scheinkman and Xiong, 2003; Banerjee and Kremer, 2010) and I hypothesize that it can play a critical role in all three phases of activism. Even a sophisticated investor or manager often seeks useful feedback from the opinion of other investors, especially in contested situations like shareholder activism, where each party, that is, the incumbent management and the activist, is trying to garner support from other shareholders. Therefore, the media not only reflect but could also potentially shape the opinion of shareholders in activism situations. Furthermore, models of limited investor attention predict a positive association between media coverage and investor attention (e.g., Hirshleifer and Teoh, 2003; Peng and Xiong, 2006).

Following the arguments above, an interesting question to ask is: How is media coverage associated with the likelihood of a firm being targeted by a shareholder activist? Answering this question is important because media can serve as a reflection of public opinion about the firm to both the dissidents and the firm managers. I hypothesize that broader media coverage attracts investor attention of shareholder activists, and hence the likelihood of shareholder activism. Therefore, my first primary hypothesis, the *limited investor attention hypothesis,* is as follows:

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[9] https://www.sec.gov/Archives/edgar/data/8670/000120677417002598/adp3280211-prec14a.htm

H1(Limited Investor Attention Hypothesis): All else equal, there will be a positive association between ex-ante media coverage of a firm and the likelihood of being targeted by a shareholder activist in future.

I formalize the empirical set-up with the following probit multivariate analysis where the dependent variable is either 1 or 0 depending on whether the firm was targeted by a shareholder activist or not, respectively:

$$\text{Prob (Activism}_{i,t+1}) \sim \alpha + \beta_1 \text{ Media Coverage}_{i,t} + \gamma \text{ Control Variables}_{i,t} + \varepsilon_{i,t} \text{ ----------- (i)}$$

The null hypothesis is that β_1, the coefficient on media coverage, that proxies for media attention, is equal to zero. I use *one-year lagged* media coverage as the primary independent variable, and *one-year lagged* control variables as covariates to address the simultaneity bias and to avoid noise from the actual activism event. Figure 2 demonstrates such empirical strategy on a timeline.

Insert Figure 2 here

Since non-linear models such as probit models are advised not to be estimated with many fixed effects as such models would only give consistent estimates under certain strong assumptions (Greene, 2004), I also test *H1* using linear probability model with fixed effects as shown below:

$$\text{Activism Dummy}_{i,t+1} = \alpha + \beta_1 \text{ Media Coverage}_{i,t} + \gamma \text{ Control Variables}_{i,t} + \eta \text{ Year Dummies}_t + \rho$$
$$\text{Firm Dummies}_i + \varepsilon_{i,t} \text{ ------------ (ii)}$$

In this model, the use of year and firm fixed effects control for unobserved heterogeneities across time and firms, respectively.

Tone or *sentiments* is another dimension of text used in media that researchers have begun to explore in the context of finance (Loughran and McDonald, 2016). For example, Tetlock (2007) uses Harvard's General Inquirer word list and documents that the use of negative words in a well-known daily WSJ column is associated with lower same-day stock returns. More recently, Liu and McConnell (2013) use a sample of more than six hundred acquisition attempts and find that the tone of media attention influences the acquisition abandonment decisions of managers. The extant literature on the role of media

in finance indicates that media tone not only reflects but could also shape the behavior of investors and managers, alike (Tetlock, 2016). For instance, the media tone can reflect a typical investor's perception of the firm and its management, which can be beneficial information for both the incumbent management and the activist. Hence, a potential shareholder activist would be less (more) encumbered in waging an activism campaign if there is an existing negative (positive) tone in the media about the target. Sometimes the existing negative (positive) tone in the media can also catalyze (discourage) such activism campaigns. Based on this line of thinking, I ask: How is the media tone associated with the likelihood of a firm being targeted by a shareholder activist?

I hypothesize that the worse the tone of media about a firm, the more likely the firm will be a shareholder activist's target and vice-versa. Hence, my second central hypothesis, the *investor opinion hypothesis,* is:

H2 (Investor Opinion Hypothesis): All else equal, there will be a negative (positive) association between ex-ante positive (negative) tone portrayed by the media about a firm and the likelihood of being targeted by a shareholder activist. Such association is stronger with greater media coverage.

I formally test *H2* in both probit and linear probability model specifications as shown in equations (iii) and (iv), respectively:

$$\text{Prob (Activism}_{i,t+1}) \sim \alpha + \beta_1 \text{ Positive Media Tone }_{i,t} + \gamma \text{ Control Variables }_{i,t} + \varepsilon_{i,t} \text{ ----------- (iii)}$$

$$\text{Activism Dummy}_{i,t+1} = \alpha + \beta_1 \text{ Positive Media Tone}_{i,t} + \gamma \text{ Control Variables}_{i,t} + \eta \text{ Year Dummies}_t +$$

$$\rho \text{ Firm Dummies}_i + \varepsilon_{i,t} \text{ ------------ (iv)}$$

The prediction from *H2* is that I should expect a negative and significant β_1. Next, to formally test the latter part of *H2*, I use an interaction model with the following linear probability model specification with fixed effects as shown in equation (v):

$$\text{Activism Dummy}_{i,t+1} = \alpha + \beta_1 \text{ Media Coverage}_{i,t} + \beta_2 \text{ Positive Media Tone }_{i,t} + \beta_3 \text{ Media}$$

$$\text{Coverage}_{i,t} \text{ x Positive Media Tone }_{i,t} + \gamma \text{ Control Variables}_{i,t} + \eta \text{ Year Dummies}_t + \rho \text{ Firm Dummies}_i + \varepsilon_{i,t}$$

$$\text{----------- (v)}$$

The coefficient of interest in model (v) is β_3 on the interaction term.

The third main hypothesis of the paper tests the role of media in determining the actual outcomes of activism events. If the *ex-ante* tone portrayed in the media about a firm can determine whether it would be an activist's target, it could also have an association with the *ex-post* outcomes of activist's interventions. Following the same line of thinking that *ex-ante* media tone can proxy for public opinion about the firm, I hypothesize:

*H3 (**Activism Outcome Hypothesis**): All else equal, there will be a positive (negative) association between ex-ante positive (negative) tone portrayed by the media about a firm and the likelihood of a management win. Such association is stronger with greater media coverage.*

The remainder of the tests conducted in the paper are devoted to identification and other robustness tests as described in later sections. The following section describes the data used in the paper and provides the sample overview.

3. The Data

3.1 Media Data

The data on news articles come from RavenPack, Inc., a leading global news analytics provider.[10] RavenPack uses textual analytics techniques to collect and analyze news from Dow Jones Financial Wires, Wall Street Journal, Barron's, and MarketWatch for companies around the world with specific dates and timestamps. The services of RavenPack are mainly targeted toward quantitative and algorithmic traders, who use their sentiment indicators, both at the macro and as well as the micro levels for their different trading strategies. However, this database has also been recently used in papers published in top finance and accounting journals (e.g., Dang, Moshirian and Zhang, 2015; Kolasinski, Reed and Ringgenberg, 2013; Shroff, Verdi and Yu, 2014).

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[10] https://www.ravenpack.com/

RavenPack measures news from several different perspectives. They compute for each article, the *relevance score,* which is a score measured between 0-100. The higher is the score; the more relevant is the news to the company identified.[11] For news involving multiple companies, each company is given its own score. Only articles that have a relevance score greater than 75 have been included in the analyses, since RavenPack states that, *"Values above 75 are considered significantly relevant."* [12] RavenPack also provides *sentiment scores,* where each piece of news is given a granular score between 0-100, increasing in its positive tone. Although RavenPack uses three proprietary methodologies for constructing sentiment scores and the exact algorithms for news analytics are not revealed, it is broadly a combination of mapping positive and negative word lists/phrases to the corpus of the news articles, financial experts manually tagging news stories as positive, negative or neutral and then training the machine learning algorithms such as Bayes network to perform automated computer classification. Some classifiers such as the market response classifier also use the market response, that is the reactions to news articles in terms of stock price, stock volatility, and firm's credit rating, to tag news items.

The paper uses RavenPack News Analytics version 4.0. This version of RavenPack News Analytics comprises of three different packages, namely, the Dow Jones Edition (*news sources: Dow Jones, all editions of Wall Street Journal, Barron's and MarketWatch*), the Web Edition (*news sources: industry and business publishers, blog sites, national and local news, government and regulatory updates*) and the PR Edition (*news sources: Press releases, PRNewswire, Canadian News Wire, LSE Regulatory News Service etc.*). I use the combined full edition of all the three packages for the analyses presented in the paper to get comprehensive coverage of different media outlets. Firm-level media data has been collected for the time-period 2002-2014. Figure 3 shows the number of firm-level articles collected per year for US firms. The figure also depicts the number of unique firm-level media articles during the time-period. Note that the number of firm-level articles has increased over the years from 2.1 million articles in 2002 to 27.8 million

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[11] RavenPack uses several company identifiers such as ISINs, Cusips, and Tickers.
[12] RavenPack User Guide

articles in 2014. This is not only due to the greater production and consumption of media over the sample period, but also partially due to the financial crisis of 2007, with the number of firm-level articles more than doubling from 4,264,787 articles in 2006 to 8,960,667 articles in 2007, and such an increasing trend continues following the crisis before stabilizing in 2012. I control for such time-series trends by using year-fixed effects in the specifications. Moreover, the results are qualitatively similar pre- and post- financial crisis.

Insert Figure 3 here

The two main independent variables used for media coverage are the number of articles and aggregate event volume (AEV). The three primary variables used for media sentiments are Event Sentiment Score (ESS), Composite Sentiment Score (CSS) and Aggregate Event Sentiment (AES). While the number of articles and AEV are simply a count, the three sentiment scores range from 0 to 100. Detailed definitions of these variables have been provided in Appendix A. Table 1, Panel A provides the descriptive statistics of these media variables. Table 1, Panels B and C show the correlation matrices between these variables. It can be noted that the two media coverage variables and the three sentiments variables are significantly correlated even though they are computed differently and arguably cover different dimensions of coverage and sentiments.

Insert Table 1 here

3.2 Activism Data

The primary source of data on shareholder activism in the U.S. is the required Schedule 13D SEC filings, which any investor who crosses a 5% ownership of a publicly traded firm needs to file within the first ten days of crossing the 5% mark. Therefore, I begin by collecting all the electronically filed Schedule13Ds and its amendments (i.e., Schedule 13D/As) from EDGAR (Electronic Data Gathering, Analysis, and Retrieval system) during the time-period 2003-2014. There were 51,658 Schedule 13Ds and 113,821 Schedule 13D/As filed with the SEC during this period. Item 4 on SEC Schedule 13D provides

information on the purpose of the transaction. I include only those filings as activism events where the filer's intention to pursue activism is clearly stated in Item 4. For the sub-sample analyses in the robustness section, where I focus solely on hedge funds, I closely follow the methodology described in Brav, Jiang, Partnoy and Thomas (2008) to identify hedge fund activists. Item 2 on SEC Schedule 13D filings provides information on the identity of the filers. I identify them as hedge funds based on their names and description and also conduct additional internet searches if there is any ambiguity.[13]

Following the extant literature, I exclude transactions that involve reorganizations due to financial distress or bankruptcy and merger and acquisition-related risk arbitrage. For the target firms, I utilize SEC's Central Index Key (CIK) to merge them with the firm-level accounting and return data from Compustat and CRSP respectively. I exclude the cases where the target is a closed-end fund or any other non-corporation. Figure 4 presents the distribution of all activism events and the hedge fund activism events during the sample period 2003-2014.

Insert Figure 4 here

There are two key aspects to note in Figure 4. First, there has been a rising trend in both the total number of activism events and the number of hedge fund-initiated activism events during the sample period, indicating that it is indeed a successful investment strategy for many shareholder activists. Second, there is a pro-cyclical pattern in shareholder activism as also pointed out by Brav, Jiang and Kim (2015) and Burkart and Dasgupta (2015). For instance, most recently there was a dip in both the total number of activism events and the number of hedge fund-initiated activism events right after the 2007-2008 financial crisis. Such a dip is gradually reverting to its pre-crisis levels as seen in Figure 4.

Outcomes of shareholder vote have been manually collected from the 8-K, 10-Q and 10-K filings. I classify them into three categories as management win, shareholder activist win, and settlements. Settlements are considered as partial wins for the management. An example of a partial win for the

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[13] Professor Wei Jiang from Columbia University has kindly provided data on non-public hedge fund activism campaigns. These are the campaigns where the hedge fund activists do not cross the 5% threshold.

management would be if the dissident were not able to put its nominee on the board, but the management agreed to the activist's demand for increasing dividends.

3.3 Name Fluency

Following Green and Jame (2013), I create three different measures of company name fluency. The first measure is simply based on the number of words in a company name, which proxies for the degree of fluency. I exclude articles, conjunctions, and hyphens from the names and omit words such as Co., .com, Corp., Inc., Ltd., LLC, and FSB from company names. Firm names consisting of one word, two words and more than two words are given length scores of 3, 2 and 1, respectively. The second measure is based on word familiarity, as it pertains to whether the company name in their lowercase letters passes through Microsoft spell-check, which also proxies for pronounceability. Lowercase letters are used so that larger and well-known companies do not pass such a test simply because they are popular firms. For example, "Microsoft" passes such a spell-check, but "microsoft" in lowercase does not. Company names that pass this spell-check filter are given a score of 1 and 0, otherwise.

The third measure of name fluency known as Englishness is developed using a linguistic algorithm that was created by Travers and Olivier (1978).[14] Travers and Olivier (1978) defined the Englishness (E) of an n-letter string $\#L_1, L_2, L_3, \ldots, L_{n-1}, L_n\#$ as the probability that the string will be generated according to the following algorithm:

$$E = P(\#L_1L_2L_3\ldots L_{n-1}L_n\#) = P(\#)P(L_1 \mid \#)P(L_2 \mid \# L_1)P(L_3 \mid L_1 L_2),\ldots,P(L_n \mid L_{n-2} L_{n-1})P(\# \mid L_{n-1} L_n)$$

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where, # denotes space; L_i denotes the letter in the ith position in the string; each conditional probability $P(L_k \mid L_{k-2} L_{k-1})$ is the probability that letter L_k follows letters L_{k-2} and L_{k-1} in printed English and is generated by substituting relative bigram and trigram frequencies $F(L_{k-2} L_{k-1}L_k)/F(L_{k-2} L_{k-1})$. The data used to estimate $F(L_{k-2} L_{k-1}L_k)$ comes from "The Corpus of Contemporary American English (COCA)," which

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[14] Green and Jame (2013) also use Englishness as one of their fluency measures.

is the largest, most widely-used freely-available corpus of English containing more than 560 million words.[15]

Following Green and Jame (2013), I focus on the word with the lowest Englishness score within a firm's name. After ranking the firms based on their lowest Englishness scores, I give firms in the bottom quintile a score of 0 and all other firms a score of 1. Finally, I use the aggregate score defined as the sum of these three company name fluency measures in the regressions.

3.4 Investor Relations (IR) Firm Data

Following Solomon (2012), I manually collect Investor Relations (IR) firm data from O'Dwyer's public relations annual directories for my sample period.[16] For each year in my sample, I only keep those public relations firms that specifically mention their investor relations service. Following it, I collect the names of all the publicly listed clients of such IR firms and then match it with firms that have been targeted by shareholder activists in my sample.

3.5 Investor Sentiments in the Stock Market

To measure the overall macro-level investor sentiments, I use Baker and Wurgler's (2006) sentiment index, which is available at Prof. Jeffrey Wurgler's website.[17] Baker and Wurgler (2006) construct their investor sentiment index using five proxies such as the dividend premium, the closed-end fund discount, the trading volume, the IPO volume and the equity share in new shares.

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[15] https://corpus.byu.edu/coca/
[16] https://www.odwyerpr.com/
[17] http://people.stern.nyu.edu/jwurgler/

3.6 Firm Characteristics

I obtain the firm-level data from CRSP (return data), Compustat (accounting data), Thomson Reuters Institutional (13f) Holdings (ownership data), Institutional Shareholder Services (G-Index and E-Index) and IBES (analyst data). Table 2 presents the descriptive statistics of the independent variables. Detailed variable definitions of these firm characteristics can be found in Appendix A.

Insert Table 2 here

The following section presents the main results of the paper starting with the univariate tests and then moving on to multivariate results.

4. Main Results

Before formally testing my hypotheses in a multivariate setting with different controls, I test whether there is any significant difference in media coverage and media sentiments between firms targeted by activism and firms not targeted by shareholder activism. Such univariate results are presented in Table 3.

Insert Table 3 here

The t-statistics for the differences in their means have been presented in the last column. The t-statistics for the differences in their medians are qualitatively similar. I find that without controlling for any other factors, the firms targeted by activists seem to have a significantly broader and greater negative media coverage in the prior year. Such univariate tests seem to support my primary hypotheses, *H1* and *H2*. I test my hypotheses more formally in the following sections.

4.1 Media Coverage and Activism

I test the primary hypothesis, *H1*, i.e., the association between media coverage and the likelihood of shareholder activism in a multivariate setting and present the results in Table 4. The dependent variable in all the ten models of Table 4 is a dummy indicating whether a firm is targeted by shareholder activists in

year t+1. Panel A of Table 4 examines the association of news coverage of a firm with its probability of being an activist's target using Probit models with two different proxies for media coverage. While model 1 uses AEV (Aggregate Event Volume)[18], i.e., a measure signaling the volume of highly relevant firm-specific news, as the main independent variable, model 2 simply uses the raw number of media articles as a proxy for media coverage as the main independent variable. The results in both these models indicate a strong positive association between media coverage and the likelihood of shareholder activism, significant at the 1% level. For instance, according to model 2, holding all else equal, tripling the number of articles about a firm in a given year, would result in approximately more than 34% increase in odds of being targeted by an activist in the following year. Standard errors are clustered at the firm level, and t statistics are reported in parentheses. Both these models also include the control variables for the firm's fundamentals, motivated from the extant literature (e.g., Brav et al., 2010; Brav et al., 2015; Coffee and Palia, 2016) such as market value, market-to-book, sales growth, return on assets, leverage, dividend yield, R&D, analyst following, institutional ownership, liquidity (proxied by Amihud's illiquidity measure), trading volume, stock volatility and stock return. After removing observations with missing data, the final sample consists of 4,732 firms (with and without shareholder activist intervention) with 32,004 firm-year observations and more than 25.5 million media articles during the sample period 2002-2014. Consistent with the extant literature, I also find that the probability of activism is inversely related to the target firm's market value, market-to-book ratio and profitability (e.g., Clifford, 2008; Greenwood and Schor, 2009; Klein and Zur, 2009; Brav et al., 2015). The idea here is that in general activists tend to target undervalued and less profitable firms. Furthermore, I find that target firms have significantly greater institutional ownership, which is also similar to the findings of other researchers in activism literature (e.g., Brav et al., 2015).

Insert Table 4 here

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[18] AEV (Aggregate Event Volume) has been defined under the section of Media Variables in Appendix A: Variable Definitions.

Despite the inclusion of these observable controls, it can be argued that such positive association between media coverage and the likelihood of shareholder activism is driven by some time-invariant firm-level unobservable factor or some time-variant unobservable factor. To address such concerns Panel B of Table 4 repeats the tests using linear probability models with firm and year fixed effects. While models 5 & 6 use year fixed effects, that control for any time-varying unobservable differences, models 7 & 8 use firm fixed effects to control for any time-invariant firm level unobservable explanatory variable. Finally, models 9 & 10 include both year and firm fixed effects to control for unobserved heterogeneities (Gormley and Matsa, 2014). In all these models in Panel B, the results again strongly indicate a positive association between media coverage and the likelihood of shareholder activism, significant at the 1% level. Such results are also economically significant. For instance, in model 10, all else constant, for a one-unit change in Ln (1+#of articles) in a given year, the probability of being an activist's target in the following year will increase by 2.2 percentage points. In other words, holding all else equal, tripling the number of articles about a firm in a given year, would result in approximately more than 2.2 percentage points increase in the probability of being an activist's target in the following year. Also note that in all these 10 models, the independent variables are lagged by one-year to address the issue of reverse causality.

Such empirical results corroborate the predictions of theoretical models along the lines of incomplete information (Merton, 1987), models of limited investor attention (Hirshleifer and Teoh, 2003; Peng and Xiong, 2006) and dynamic models of opinion as key influencers of investor behavior (Banerjee and Kremer, 2010). It also suggests that shareholder activists do not function in a vacuum and take into consideration the public opinion as proxied in the media before they take any actions.

4.2 Media Tone and Activism

The following Table 5 analyzes a different dimension of text used in media known as *tone* or *sentiments*. In this table, I formally test hypothesis *H2* that there will be a negative (positive) association between positive (negative) tone portrayed by the media and the likelihood of being a shareholder activist's

target, as the potential activist would be more likely to initiate an intervening campaign if there is already an existing negative tone, plausibly signaling a typical investor's perception. To capture the tone portrayed in the text used in media articles, I use three different measures provided by RavenPack, namely, ESS (Event Sentiment Score), CSS (Composite Sentiment Score), and AES (Aggregate Event Sentiment).[19] All these three sentiment measures are based on different proprietary algorithms used by RavenPack and are scored between 0 and 100, with higher scores signaling more positive sentiment. I scale these scores by 100 to improve interpretation. Panel A of Table 5 presents the results of three multivariate probit models with dependent variable 1 or 0 depending on whether the firm was targeted by a shareholder activist or not, and one of the three sentiment scores as the main independent variable of interest. These models include the same 13 firm-level control variables as before. Models 1 & 3 show strong positive associations, significant at the 1% levels, between negative tone portrayed by the media and the likelihood of being a shareholder activist's target. Such results are also economically meaningful. For instance, in model 1, holding all else equal, a one-standard-deviation decrease in ESS score would result in 6.09% increase in the odds of being targeted. Model 2 shows a similar directional relation, although not significant.

Insert Table 5 here

In Panel B, I again test hypothesis 2, using 12 different linear probability models and find a significant positive association with the negative tone in the media in 10 out of the 12 models. The results stay significant after controlling for both firm and year fixed effects (models 14-15). The independent variables in all the models in Table 5 have been lagged by a year to address the concern of simultaneity. All the three sentiment measures have been independently produced, and consistent results using either of the measures also serves as robustness tests for the results documented. Such results indicate that media tone plays a key role in signaling the general perception of the firm and its management to potential shareholder activists. Note that a dissident would only intervene if the benefits of intervention outweigh its

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[19] ESS (Event Sentiment Score), CSS (Composite Sentiment Score), and AES (Aggregate Event Sentiment) have been defined under the section of Media Variables in Appendix A: Variable Definitions.

costs. Negative media coverage signals the activist that the coordination costs post-intervention would be lower, which increases the likelihood of the intervention to be a positive NPV endeavor.

4.3 Media Coverage and Media Tone Interaction – Activism Decision

Table 6 presents the results of the last part of the hypothesis, *H2*, where I test whether the positive association between negative tone portrayed by the media and the likelihood of being targeted by a shareholder activist is stronger with greater coverage. In other words, I am testing whether the positive association between media coverage of a firm and the likelihood of being targeted by a shareholder activist is stronger for coverage with more negative tones. I test this hypothesis using all the three proxies for media tone, i.e., ESS, CSS and AES and the two proxies for media coverage, i.e., number of articles and AEV. I classify the firms into high versus low media coverage terciles based on the number of articles and AEV. While Panel A, uses the number of articles as media coverage, Panel B uses AEV. To examine the latter part of *H2*, I use a two-way interaction of media coverage and media tone.

Insert Table 6 here

I find that in all the six models, the key explanatory variable, i.e., the interaction term between the firm's media coverage and the negative media tone, has negative and statistically significant (1% or 5% levels) coefficient estimates. Such findings are robust to the use of control variables for the firm's fundamentals and also to the inclusion of firm and year fixed effects. Such results are also consistent with the predictions of hypothesis two, that media coverage is more effective in influencing the decisions of activists if it is in a more negative tone. Alternatively, another interpretation of the same results could be that the negative tone of the coverage is more influential when it is noticed by a larger fraction of the population as proxied by its coverage.

4.4 Media Tone and Activism Outcome

I test *H3, i.e.,* the *activism outcome hypothesis* in the next set of regressions. I hypothesize that if there is already an existing positive tone in the media about a firm, then it likely signals a favorable opinion about the firm and its current management. This should increase (decrease) the likelihood of a management (dissident) win in case of an activist situation. Table 7 shows the results, where the dependent variable is an activist win dummy, which is 1 when the activist wins and 0 when the incumbent management wins or achieves a partial win. The regressions in Panel A are conducted using Probit Model, and the regressions in Panel B are conducted using the Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses. The main variable of interest on the right-hand side is the media tone in the prior year. Rest of the control variables are the same. Consistent with *H3,* I find that target firms with *ex-ante* positive media coverage have a significantly lower (5% or 10%) likelihood of activist winning as shown in models 1, 3, 4 and 6.

Insert Table 7 here

4.5 Media Coverage and Media Tone Interaction – Activism Outcome

Table 8 presents the results of the latter part of *H3*, where I test whether the negative association between positive media coverage of a firm and the likelihood of an activist win is stronger with broader coverage. I conjecture that the impact of media tone would be more effective with broader coverage as it would reach more people. Consistent with such hypothesis, I find significant results as shown by the coefficients on the interaction terms in models 1, 3, 4 and 6, that use ESS and AES measures as proxies for media tone. Note that the results are consistent using both the log of one plus the number of news articles as a proxy for media coverage as done in Panel A and also using log of one plus AEV (aggregate event volume) as a proxy for media coverage as conducted in Panel B.

Insert Table 8 here

5. Causality

Articles published in media and shareholder activism could be endogenously determined, as it is possible that the event of activism itself is driving media coverage and tone. I recognize this issue of simultaneity or reverse causality and address it by using media variables that were created prior to the activism announcement date in all my specifications as shown in figure 2. It is a lot less likely that media variables created from news articles a year before the year of activism announcement would be prone to simultaneity bias. Another primary source of endogeneity in the empirical specifications used in the paper is the omitted variables bias. Along with using the appropriate controls borrowed from the extant shareholder activism literature, I also employ fixed effects models, that at least control for different types of unobserved heterogeneities, and address the omitted variables bias to some extent.

However, there could still be a concern that shareholder activists target firms that happen to be covered by the media in a certain way and the activists' interventions are unrelated to the actual media coverage. To address this potential identification issue, I rely on the instrumental variables (IV) approach. I use two different instruments for media coverage. My first instrument for media coverage of a firm is the firm's name fluency.[20] Following Green and Jame (2013), I create three different measures of company name fluency and use the aggregate score defined as the sum of these three company name fluency measures as an instrument. The details on the construction of these measures have been provided in section 3.3. Alter and Oppenheimer (2009) discuss vast literature in psychology that suggests that fluency can be perceived as more familiar, likable and preferred by humans. Hence, it can be argued that companies that have more fluent names are given broader coverage in the media. However, name fluency itself cannot directly influence activism decisions of shareholders. This is because company names are not only decided at the time of incorporation but also it would be very difficult to envision a scenario where a shareholder activist would intervene a firm simply because of its name fluency. Hence, such an instrument satisfies both the

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[20] I am grateful to Prof. Charles Trzcinka for suggesting the "firm's name fluency" IV.

relevance and exclusion conditions. The evidence on the relevance condition can be seen econometrically in the first-stage estimation in Panel A of Table 9 (significant at 1% level; $R^2=76.4\%$).

Insert Table 9, Panel A here

Table 9, Panel A, presents the results on the relationship between media coverage of a firm and its likelihood of being targeted, where media coverage is instrumented by a firm's name fluency. The IV estimates in the second stages confirm the linear probability model estimates, significant at the 1% level. I use a two-stage residual inclusion (2SRI), as recently several econometricians have favored the estimation of a linear probability model (LPM) with instrumental variables using a two-stage residual inclusion (2SRI) over traditional two-stage least squares (2SLS), as they have found that 2SRI produces more consistent estimates in empirical models with nonlinear dependent variables (e.g., Terza, Basu and Rathouz, 2008; Dong and Lewbel, 2015). However, the results are also consistent using two-stage least squares (2SLS) as shown in Appendix C.

Following Solomon (2012), I use a firm's choice of using an external Investor Relations (IR) firm as a second instrument for media coverage as it can be argued that IR firm can influence media coverage but is unlikely to impact firm's operations or activism events directly. Hence, such an instrument is valid, as it not only satisfies the relevance condition, but it also satisfies the exclusion condition.

We can see from the results of the first stage in both columns 1 and 3 in Table 9, Panel B that the presence of an external IR is a positive and significant predictor of media coverage (significant at 1% level; $R^2=75.8\%$). This satisfies the relevance restriction. Since the instrument also satisfies the exclusion restriction, as it is very unlikely that IR consultants can directly influence firm's operations or activism events, the instrument seems to satisfy the identification assumptions (Solomon, 2012).

Columns 2 and 4 in Table 9, Panel B report the IV estimates. Here the presence of an external IR consultant is used to instrument for media coverage. The IV estimates confirm the linear probability model estimates, significant at the 1% level. Such results are also robust to using two-stage least squares (2SLS) as shown in Appendix C. The following section focusses on robustness tests.

6. Additional Robustness Tests

In this section, I conduct a series of robustness tests for my main results.

6.1 Media Tone and Analysts' Divergence of Opinion

The empirical tests in the main results section show that even after including many observable control variables for the firm's fundamentals and including year and firm fixed effects to control for both time-variant and time-invariant unobservable factors, there exists a significant positive association between the negative tone portrayed in the media about a firm and its likelihood of getting attacked by a shareholder activist. However, if such an association is causal in nature, one should observe the association getting stronger during the times of disagreement amongst investors. The idea here is that during the times of the greatest divergence of opinion, the investors would rely more on the media.

Insert Table 10 here

Table 10 presents the results of such a conjecture. Model 1 of Table 10 presents the results on a two-way interaction of media tone measured as ESS and divergence of opinion as proxied by the standard deviation of analyst recommendations. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The model also includes all the previous control variables including firm and year fixed effects, with standard errors clustered at the firm level. Models 2 and 3 repeat the same specification with media tone measured as CSS and AES, respectively. It can be seen that in all the three models, the key explanatory variable, i.e., the interaction term between the firm's media tone and divergence of opinion, has negative and statistically significant coefficient estimates, indicating that the influence of tone in media on shareholder activism becomes more important during the times of greater divergence in opinion. In other words, when there is a divergence of opinion amongst analysts, shareholder activists become more sensitive to the tone of the media.

6.2 Media Tone and Investor Sentiment Index

Brav, Jiang and Kim (2015) and Burkart and Dasgupta (2015) note that shareholder activist engagements increase during good times and decline in recessions. I also find a similar pro-cyclical pattern as depicted earlier in Figure 4. This is because, during the times of macroeconomic downturns, it not only becomes costlier to wage activism campaigns, but it also becomes prohibitively costly to exit such investments. Therefore, one might expect that during recessions when the overall sentiments are low, the activists will be less sensitive to the tone in media. I formally test such a hypothesis in Table 11 using interaction models.

Insert Table 11 here

Table 11 presents the results on the two-way interaction of media tone and investor sentiment. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are the interaction terms between measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), AES (aggregate event sentiment), and the measure of investor sentiment. To measure investor sentiments at the macro level, I rely on Baker and Wurgler's (2006) investor sentiment index. Baker and Wurgler (2006) construct their investor sentiment index using five proxies such as the dividend premium, the closed-end fund discount, the trading volume, the IPO volume and the equity share in new shares. The data is freely available at Prof. Jeffrey Wurgler's website.[21] While Panel A uses the sentiment index based on the first principal component of these five standardized sentiment proxies where each of the proxies has first been orthogonalized with respect to a set of six macroeconomic indicators (e.g., NBER recession indicator, Industrial production index, Consumer price index, etc.), Panel B uses the sentiment index simply based on first principal component of these five sentiment proxies. All the six models also include the same controls as before, including the year and firm fixed effects. Note that in both these panels, the results consistently show that during times of overall low sentiments, the

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[21] http://people.stern.nyu.edu/jwurgler/

shareholder activists become less sensitive to media tone as given by the negative and significant coefficients on the interaction terms.

6.3 Media Coverage/Tone and Activism – Principal Component Analysis (PCA)

As seen in Panel B of Table 1, the two measures of media coverage, that is, the Number of Articles and Aggregate Event Volume (AEV) are highly correlated. Similarly, the three measures of media tone, that is, Event Sentiment Score (ESS), Composite Sentiment Score (CSS) and Aggregate Event Sentiment (AES) are also significantly correlated as shown in Panel C of Table 1. Since I cannot put these measures together in the same regression, because of multicollinearity, I do check the robustness of these measures using the econometric technique of principal component analysis (PCA), by preserving their unrelated components via vector space transformation, and creating one composite measure each for media coverage and media tone, respectively. Then, I re-run my main tests on the association between media coverage/tone and activism and the results are depicted in Table 12.

Insert Table 12 here

The dependent variable in all these four models is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variable of interest on the right-hand-side is either the first principal components of media coverage (i.e., models 1 & 2) or media tone (i.e., models 3 & 4). While models 1 and 3 are conducted using Probit Model, and the models 2 and 4 are conducted using the Linear Probability Model, like the main tests. The controls are lagged by a year and are the same as before, including the year and firm fixed effects. Standard errors are clustered at the firm level, and t statistics are reported in parentheses. It can be seen that the results are consistent in all the four models using PCA. Broader and negative ex-ante media coverage, measured using PCA, is positively and significantly associated with the probability of a firm being a shareholder activist's target (significant at the 1% or 5% levels).

6.4 Different Sources of Media

In this subsection, I check whether the primary results are robust to the different sources of media articles. Following Ahern and Sosyura (2014), I separate the media articles into firm generated press releases and other independent media articles such as newspapers, business publications, trade journals, regulatory news, etc. Then I re-run the same regressions including the PCA regressions as in the prior sections, omitting the firm generated press releases. The idea here is that although the press releases are important sources of media and can provide critical information about firms, they are also susceptible to media manipulation as both firms and activists have an incentive to manage media during activism situations. For brevity, I only present the PCA regressions that exclude the press releases in Table 13.

Insert Table 13 here

As in the prior table, the dependent variable in all the four models in Table 13 is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. The main independent variables of interest are the first principal components of either media coverage or media tone developed from media articles excluding the press releases. Models 1 and 3 are conducted using Probit Models, and the Models 2 and 4 are conducted using Linear Probability Models with the year and firm fixed effects. Standard errors are clustered at the firm level, and t statistics are reported in parentheses. The results are consistent and significant at the 1% or 5% levels and show that only press releases do not drive the main results.

6.5 Media Tone and The Market Response

The results documented in the paper show that media tone can influence both shareholder activism decision and activism outcome. The rest of the market also observes the same media tone. And, if financial markets are reasonably efficient (Fama, 1970), then the firms' stock prices would react differently to the

announcement of activism for firms covered with different media tones. The extant literature has found that on an average the market reacts positively to the announcement of shareholder activism (Brav et al., 2015). I conjecture that if there is any causal relation between shareholder activism and media tone, then, I should find a negative association between cumulative abnormal return (CAR) on the announcement of activism and positive tone. I test this hypothesis in a multivariate regression set-up, and the results are presented in Table 14.

Insert Table 14 here

The dependent variables in all the models in Table 14 are the cumulative abnormal returns (CARs) around the time of activism announcement with five different windows. I have computed the abnormal returns as the difference between the actual stock price return and the expected market model (CRSP Value Weighted Index) return over the windows indicated. Market model has been estimated using 255 days of daily returns ending 46 days prior to the activism campaign announcement date. The main independent variable of interest here is media tone as measured with AES. The controls are the same as before. In all these models, I find that the CAR is negatively and significantly associated with positive media tone. For example, in model 1, holding all else equal, a one-standard-deviation increase in AES score would result in a 2.5% decrease in CAR, around the window of [-20,+20] days. In other words, if a firm is positively covered by media, the jump in the CAR on the announcement of activism is significantly lower, indicating a lesser potential for value creation by the activist going forward. Alternatively, a firm which is covered in a negative tone by media would have a significantly higher CAR on the announcement of activist intervention. Such results are also robust to the use of other proxies of tone and the use of other event study estimation methods and benchmarks. Overall, these results indicate that the financial markets incorporate the influence of media in their response.

6.6 Hedge Fund Activism

The main results depicted in the paper include shareholder activism initiated by all types of institutional investors (e.g., pension funds, mutual funds, hedge funds, etc.). Some of these institutional investors are prone to regulatory restrictions or misaligned incentives. However, it can be argued that activist hedge funds are less afflicted by such regulatory restrictions or improperly aligned incentives and hence can be more effective in shareholder activism (Brav et al., 2008). Moreover, one can question that since activist hedge funds also hold stakes in fewer companies as compared to pension funds or mutual funds, are they also influenced by media the same way? To answer this, I conduct a subsample analysis of activist hedge funds only in this subsection. I identify institutional investors as hedge fund activists following Brav et al., (2008), as described in section 3.2. Table 15 presents the results on the association between the media coverage of a firm and its likelihood of being targeted by a shareholder activist when the activist is a hedge fund.

Insert Table 15 here

All the 10 models tested in Table 15 are the same as tested in the main Table 4, except here the activist is a hedge fund. Note that the results are consistent with the main results and are significant at the 1% level (t statistics are reported in parentheses). However, the magnitudes of the coefficients have reduced, which is perhaps indicating that hedge fund activist are relatively less influenced by media than other types of institutional investors. Re-running the tests for media tone with the activist hedge fund only sample yields similar results.

6.7 Other Tests

Finally, I conduct several other robustness tests. I test whether the primary results hold once I control for governance indices such as G-Index (Gompers, Ishii and Metrick, 2003) and E-Index (Bebchuk, Cohen and Ferrell, 2009). I find that the results are robust to the use of governance indices as controls, although there is a significant loss in observations due to the data availability of these indices. Appendix B

presents the results with Bebchuk, Cohen and Ferrell's (2009) entrenchment index, that uses six governance provisions (e.g., staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, supermajority requirements for mergers and charter amendments). Furthermore, I repeat the main tests (untabulated) using only news articles that were published two years before the activism year, instead of just one year, and the results stay the same qualitatively.

7. Conclusion

The paper examines the impact of media coverage on the initiation and outcomes of shareholder activism events in the US. It uses textual content of more than twenty-five million unique firm-level articles that appeared in the media during the years 2002-2014 about publicly listed US firms. The results show that both coverage and tone of media can influence not only the likelihood of a firm being a shareholder activists' target but also the outcomes of dissidents' interventions. After controlling for both observable and unobservable firm-specific characteristics and for omitted time-varying forces with the firm- and time-fixed effects, I find that broader and negative *ex-ante* media coverage is positively associated with the probability of a firm being a shareholder activist's target. Relying on instrumental variable (IV) approach for identifying causal effect, I use two instruments that have been successfully used in the extant finance literature and find that the positive correlation between media coverage and the propensity for targeting by activists is robust to the use of instrumental variable (IV) approach, indicating that the documented relation is causal.

The multivariate analyses further show that target firms with *ex-ante* positive media coverage not only have significantly lower shareholder activism announcement returns but also have a higher likelihood of management winning. The results presented in the paper are robust to a battery of further tests and demonstrate an important role of media as a source and transmitter of public opinion in influencing shareholder activism.

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Figure 1: The Three Phases of Shareholder Activism

This figure depicts the three stages of shareholder activism: Target Identification, Negotiations, and Proxy Fight.
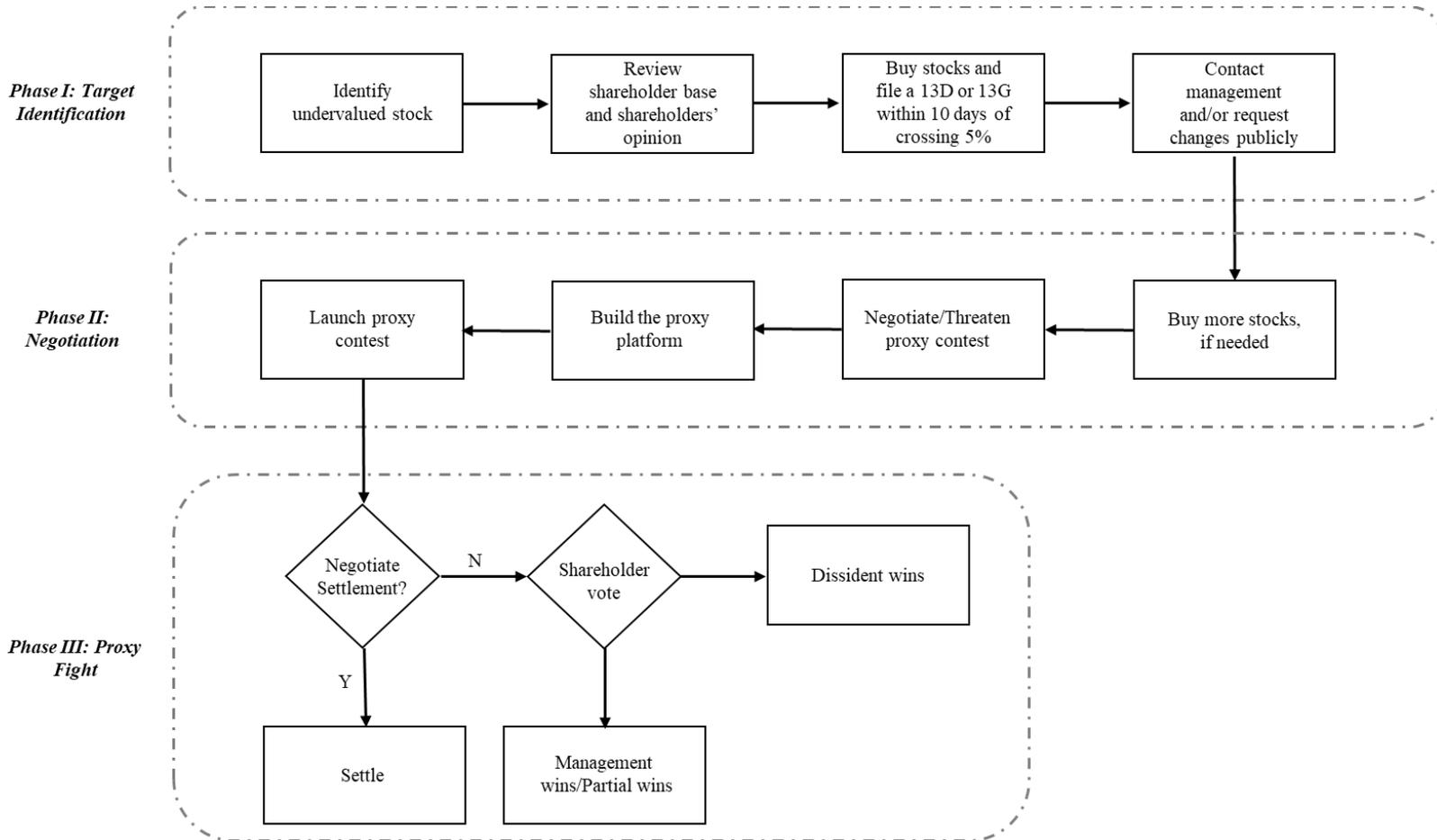
Figure 2: Time Line

This time line shows the empirical strategy of analyzing media articles published in year t-1 for shareholder activism announced in year t to address reverse causality to a certain extent.

Year t=-1

13D Filing or Public
Announcement of Activism

Time

Media articles from
Year t=-1 analyzed

Year t = 0
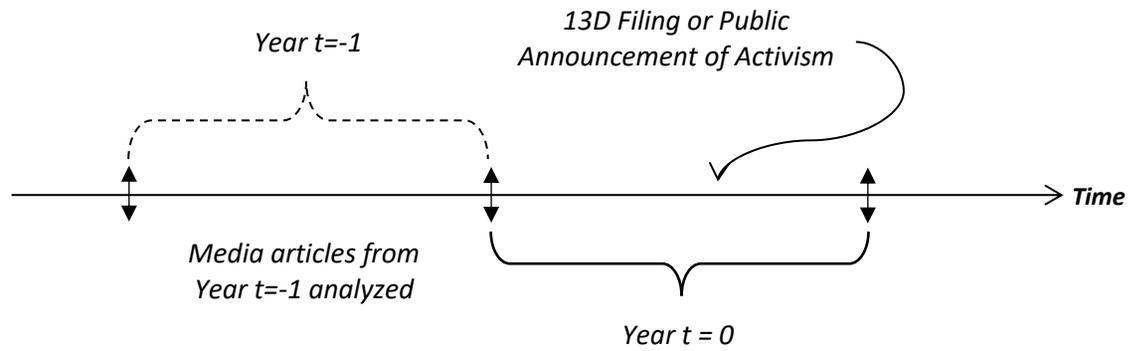
Figure 3: Firm-level Media Coverage

This graph shows the number of firm-specific media articles every year during the sample period (2002-2014). The solid line depicts the total number of news articles, while the dashed line shows the number of unique news articles. The sources of the media articles include Dow Jones Newswires, all editions of Wall Street Journal, Barron's, MarketWatch, industry and business publishers, blog sites, national and local news, government and regulatory updates, Press releases, PRNewswire, Canadian News Wire, LSE Regulatory News Service, etc.

Firm-Level Media Articles 2002-2014
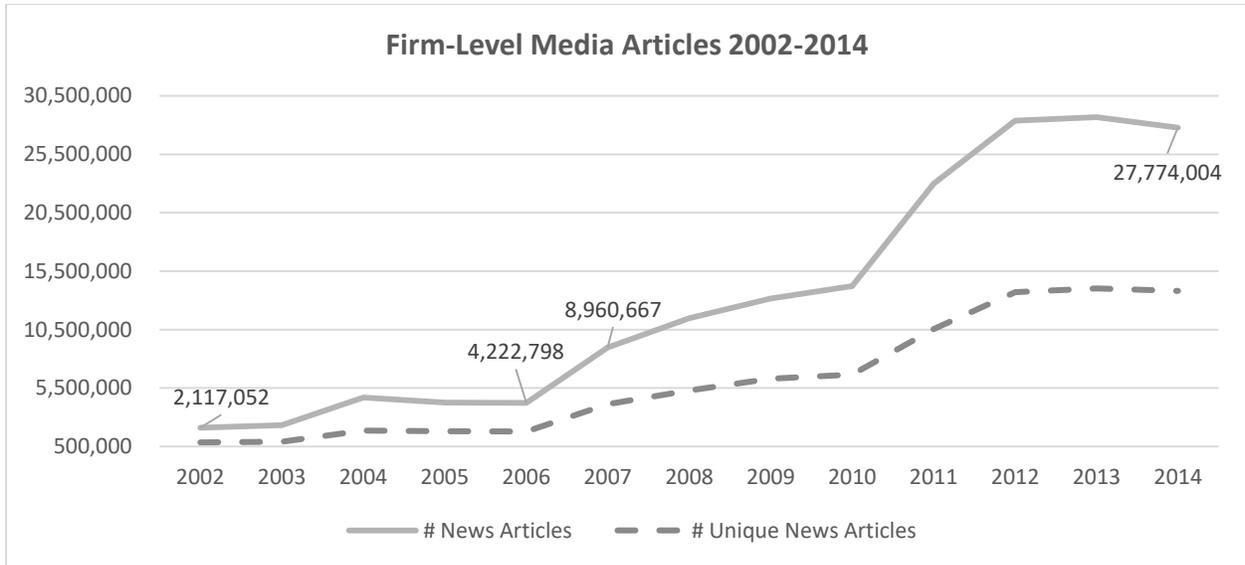
Figure 4: Distribution of Activism Events

This bar graph depicts the distribution of all activism events and hedge fund-initiated activism events during the sample period (2003-2014). The dark bars and the grey bars show the total number of activism events and hedge fund activism events, respectively. Events are classified as activism events when the filer has filed SEC Schedule 13D and clearly states the intention to pursue activism in Item 4 on SEC Schedule 13D. Events are classified as hedge fund-initiated events following the methodology in Brav et al. (2008).
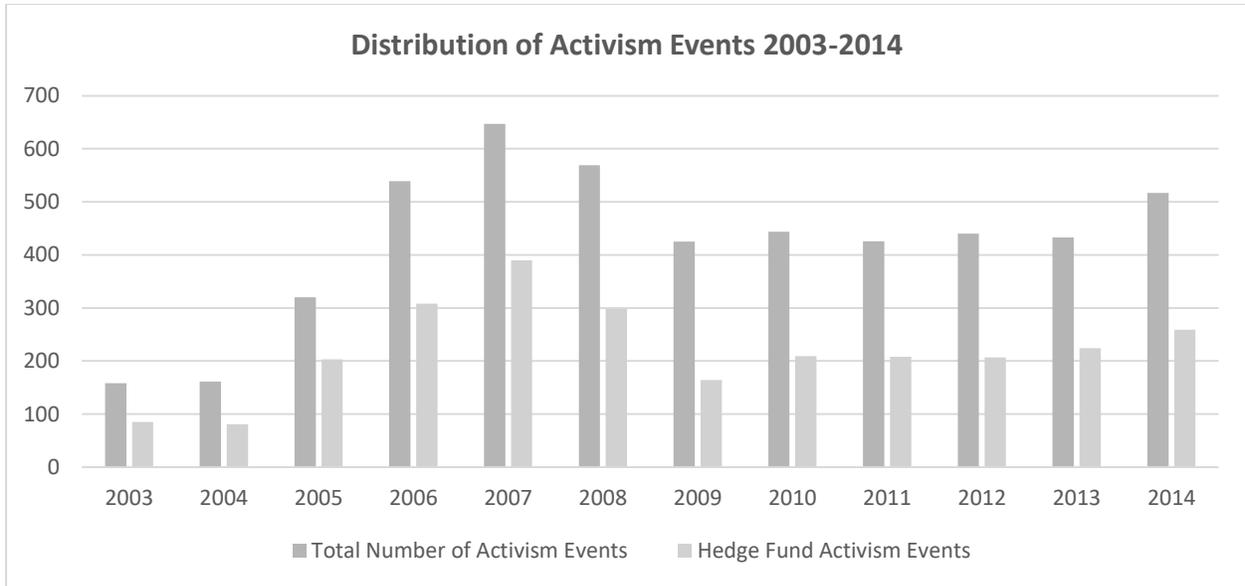
Table 1: Descriptive Statistics – Media Variables

Panel A:

This table provides the summary statistics of two main variables used as proxies for media coverage (i.e., Number of articles and Aggregate Event Volume) and three main variables used as proxies for media tone (i.e., Event Sentiment Score, Composite Sentiment Score and Aggregate Event Sentiment). Appendix A provides the variable definitions. Total number of articles analyzed in the sample period (2002-2013): 25,501,171.

	Mean	25th Percentile	Median	75th Percentile	Std. Dev.
Number of Articles	603.42	84	184	420	5,517.88
Aggregate Event Volume (AEV) (count of events)	17.32	3.72	7.24	14.36	81.44
Event Sentiment Score (ESS) (range: 0 to 100)	53.72	51.07	53.52	56.16	4.41
Composite Sentiment Score (CSS) (range: 0 to 100)	50.17	49.68	50.36	50.95	1.46
Aggregate Event Sentiment (AES) (range: 0 to 100)	67.89	55.55	69.45	80.72	16.92

Panel B:

This table provides the correlations between the two measures of media coverage. Appendix A provides the variable definitions. Total number of articles analyzed in the sample period (2002-2013): 25,501,171.

	Number of Articles	Aggregate Event Volume (AEV) (count of events)
Number of Articles	1.0000	
Aggregate Event Volume (AEV) (count of events)	0.9159 ***	1.0000

Panel C:

This table provides the correlations between the three measures of media tone. Appendix A provides the variable definitions. Total number of articles analyzed in the sample period (2002-2013): 25,501,171.

	Event Sentiment Score (ESS) (range: 0 to 100)	Composite Sentiment Score (CSS) (range: 0 to 100)	Aggregate Event Sentiment (AES) (range: 0 to 100)
Event Sentiment Score (ESS) (range: 0 to 100)	1.0000		
Composite Sentiment Score (CSS) (range: 0 to 100)	0.3777 ***	1.0000	
Aggregate Event Sentiment (AES) (range: 0 to 100)	0.6119 ***	0.3822 ***	1.0000

Table 2: Descriptive Statistics – Independent Variables

This table presents the descriptive statistics of the independent variables used in different regressions models in the study. Detailed definitions of the independent variables can be found in Appendix A.

	Mean	25th Percentile	Median	75th Percentile	Std. Dev.
Market Value	6.080	4.757	6.026	7.353	1.965
Market-to-Book	2.245	1.051	1.354	2.056	22.033
Sales Growth	0.009	0.000	0.001	0.002	0.814
Return on Assets	1.770	0.023	0.096	0.169	226.758
Book Leverage	0.211	0.020	0.153	0.321	0.240
Dividend Yield	0.016	0.000	0.000	0.021	0.062
Research & Development	0.052	0.000	0.000	0.030	0.713
Analyst Following	1.577	0.693	1.792	2.485	1.127
Institutional Ownership	0.515	0.216	0.543	0.790	0.334
Illiquidity	0.385	0.035	0.093	0.289	0.924
Stock Return	1.174	0.854	1.090	1.345	0.862
Trading Volume	12.672	11.261	12.819	14.147	2.123
Stock Volatility	0.402	0.213	0.330	0.504	0.308

Table 3: Univariate Results

This table presents the univariate results. The last column shows the t-statistics for the differences in means. Detailed definitions of the media coverage and tone variables can be found in Appendix A. Total number of articles analyzed in the sample period (2002-2013: 25,501,171).

	Firms Targeted by Activism			Firms NOT Targeted by Activism			Difference
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	t-statistics
Number of Articles	2,009.72	263	16,530.30	507.86	182	2,856.64	(13.78)
Aggregate Event Volume (AEV) (count of events)	43.71	9.42	219.52	15.36	7.17	53.51	(16.74)
Event Sentiment Score (ESS) (range: 0 to 100)	53.18	53.09	3.98	53.81	53.60	4.36	6.08
Composite Sentiment Score (CSS) (range: 0 to 100)	50.11	50.25	1.28	50.19	50.38	1.44	2.45
Aggregate Event Sentiment (AES) (range: 0 to 100)	66.96	68.56	15.83	68.21	69.78	16.86	3.12

Table 4: Media Coverage and Activism

The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media coverage: log of one plus AEV (aggregate event volume) provided by RavenPack used in Models with odd numbers; log of one plus the number of news articles used in Models with even numbers. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using Probit Model, and the regressions in Panel B are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1									
	Panel A: Probit Model		Panel B: Linear Probability Model							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Media Coverage (AEV)	0.329***		0.035***		0.037***		0.031***		0.026***	
	(14.62)		(12.60)		(11.07)		(8.49)		(5.70)	
Media Coverage (No. Articles)		0.290***		0.027***		0.034***		0.027***		0.022***
		(16.15)		(13.62)		(10.49)		(10.66)		(4.43)
Market Value	-0.187***	-0.184***	-0.017***	-0.016***	-0.016***	-0.017***	-0.016***	-0.015***	-0.018***	-0.018***
	(-10.54)	(-10.33)	(-9.82)	(-9.10)	(-9.36)	(-9.70)	(-4.53)	(-4.27)	(-4.94)	(-4.81)
Market-to-Book	-0.068***	-0.066***	0.000	-0.000	-0.000	-0.000	0.000	-0.000	0.000	-0.000
	(-4.67)	(-4.54)	(0.28)	(-0.61)	(-0.07)	(-0.33)	(0.57)	(-0.62)	(0.13)	(-0.41)
Sales Growth	0.051	0.049	0.009***	0.009***	0.009***	0.009***	0.008***	0.008***	0.008***	0.008***
	(1.03)	(0.97)	(24.31)	(23.50)	(23.86)	(23.48)	(27.62)	(27.71)	(27.73)	(27.97)
Return on Assets	-0.146*	-0.131*	-0.000	-0.000	-0.000	-0.000	-0.000*	-0.000*	-0.000*	-0.000*
	(-1.94)	(-1.75)	(-1.20)	(-0.97)	(-0.65)	(-0.43)	(-1.70)	(-1.80)	(-1.76)	(-1.76)
Book Leverage	0.105	0.126*	0.014*	0.016**	0.015*	0.016**	0.000	0.004	-0.001	0.002
	(1.50)	(1.79)	(1.76)	(2.10)	(1.92)	(2.06)	(0.01)	(0.27)	(-0.07)	(0.15)
Dividend Yield	0.119	-0.057	0.051	0.016	0.045	0.030	0.001	-0.017	-0.008	-0.015
	(0.50)	(-0.23)	(1.17)	(0.36)	(1.03)	(0.68)	(0.01)	(-0.28)	(-0.14)	(-0.25)
Research & Development	-0.225	-0.173	-0.035***	-0.030***	-0.035***	-0.035***	-0.011	-0.009	-0.010	-0.010
	(-1.23)	(-0.94)	(-3.36)	(-2.89)	(-3.34)	(-3.32)	(-0.68)	(-0.57)	(-0.63)	(-0.61)
Analyst Following	-0.143***	-0.150***	-0.014***	-0.014***	-0.013***	-0.013***	-0.005	-0.007*	-0.004	-0.005
	(-5.28)	(-5.51)	(-5.51)	(-5.52)	(-4.93)	(-5.06)	(-1.09)	(-1.66)	(-0.94)	(-1.02)
Institutional Ownership	0.457***	0.421***	0.036***	0.032***	0.031***	0.031***	0.045***	0.032***	0.023*	0.021*
	(6.80)	(6.22)	(5.39)	(4.55)	(4.32)	(4.34)	(5.07)	(3.28)	(1.90)	(1.76)
Illiquidity	0.077	0.057	0.008	0.006	0.007	0.006	0.010	0.008	0.008	0.008
	(0.85)	(0.60)	(0.61)	(0.46)	(0.51)	(0.46)	(0.69)	(0.58)	(0.55)	(0.53)
Stock Return	-0.026	-0.028	-0.004**	-0.004**	-0.004*	-0.004*	-0.002	-0.002	-0.001	-0.001
	(-1.19)	(-1.28)	(-2.16)	(-2.06)	(-1.74)	(-1.76)	(-0.87)	(-0.87)	(-0.51)	(-0.56)
Trading Volume	0.110***	0.104***	0.009***	0.008***	0.007***	0.007***	0.012***	0.007**	0.002	0.003
	(6.43)	(6.00)	(5.77)	(5.52)	(4.53)	(4.32)	(4.52)	(2.41)	(0.84)	(1.04)
Stock Volatility	-0.478***	-0.466***	-0.036***	-0.034***	-0.029***	-0.029***	-0.034***	-0.032***	-0.020**	-0.020***
	(-6.51)	(-6.31)	(-6.33)	(-5.98)	(-4.95)	(-4.88)	(-4.53)	(-4.22)	(-2.54)	(-2.60)
Constant	-2.579***	-3.313***	-0.013	-0.082***	-0.031***	-0.093***	-0.083***	-0.082***	0.031	-0.018
	(-18.38)	(-23.14)	(-1.08)	(-6.14)	(-2.60)	(-7.00)	(-2.83)	(-2.79)	(0.97)	(-0.51)
Year Fixed Effects	N	N	N	N	Y	Y	N	N	Y	Y
Firm Fixed Effects	N	N	N	N	N	N	Y	Y	Y	Y
Cluster by firm	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Firm-Year	32,004	32,004	32,004	32,004	32,004	32,004	32,004	32,004	32,004	32,004
# Firms	4,732	4,732	4,732	4,732	4,732	4,732	4,732	4,732	4,732	4,732
# Articles	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171
Adjusted R^2			0.018	0.019	0.022	0.021	0.095	0.097	0.100	0.099

Table 5: Media Tone and Activism

The table presents the results on the relationship between media tone of a firm and its likelihood of being targeted. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), and AES (aggregate event sentiment) provided by RavenPack. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using Probit Model, and the regressions in Panel B are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	Panel A: Probit Model			Panel B: Linear Probability Model											
Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1															
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Media Tone (ESS)	-1.382***			-0.118***			-0.067**			-0.145***			-0.061		
	(-3.71)			(-3.58)			(-1.98)			(-3.66)			(-1.50)		
Media Tone (CSS)		-0.484			-0.175*			-0.448***			0.041			-0.255**	
		(-0.43)			(-1.90)			(-4.66)			(0.32)			(-2.03)	
Media Tone (AES)			-0.260***			-0.028***			-0.025***			-0.032***			-0.024**
			(-2.92)			(-3.47)			(-3.07)			(-3.32)			(-2.46)
Market Value	-0.126***	-0.132***	-0.129***	-0.011***	-0.012***	-0.011***	-0.010***	-0.010***	-0.010***	-0.009**	-0.010***	-0.008**	-0.014***	-0.014***	-0.014***
	(-7.15)	(-7.50)	(-7.35)	(-6.07)	(-6.23)	(-6.16)	(-5.45)	(-5.15)	(-5.42)	(-2.47)	(-2.80)	(-2.38)	(-3.92)	(-3.62)	(-3.74)
Market-to-Book	-0.085***	-0.086***	-0.084***	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-5.77)	(-5.87)	(-5.72)	(-1.44)	(-1.39)	(-1.43)	(-1.38)	(-1.34)	(-1.39)	(-0.73)	(-0.27)	(-0.51)	(-0.56)	(-0.62)	(-0.66)
Sales Growth	0.046	0.046	0.045	0.009***	0.009***	0.009***	0.009***	0.009***	0.009***	0.008***	0.008***	0.008***	0.008***	0.008***	0.008***
	(0.93)	(0.96)	(0.94)	(22.77)	(22.80)	(22.71)	(22.56)	(22.79)	(22.56)	(28.05)	(27.85)	(28.18)	(28.01)	(28.41)	(28.40)
Return on Assets	-0.125*	-0.146**	-0.127*	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-1.65)	(-1.99)	(-1.69)	(-0.83)	(-0.88)	(-0.95)	(-0.89)	(-0.44)	(-0.85)	(-0.97)	(-0.90)	(-0.94)	(-1.47)	(-1.51)	(-1.55)
Book Leverage	0.126*	0.135*	0.121*	0.017**	0.017**	0.016**	0.018**	0.017**	0.017**	0.011	0.012	0.010	0.005	0.005	0.004
	(1.76)	(1.90)	(1.70)	(2.10)	(2.15)	(1.99)	(2.26)	(2.10)	(2.11)	(0.68)	(0.75)	(0.63)	(0.33)	(0.30)	(0.27)
Dividend Yield	-0.031	0.027	-0.007	0.017	0.024	0.017	0.011	0.014	0.009	0.004	0.009	0.007	-0.009	-0.007	-0.009
	(-0.12)	(0.11)	(-0.03)	(0.39)	(0.56)	(0.40)	(0.25)	(0.31)	(0.21)	(0.08)	(0.15)	(0.13)	(-0.16)	(-0.12)	(-0.15)
Research & Development	-0.040	-0.069	-0.039	-0.025**	-0.026**	-0.024**	-0.028***	-0.029***	-0.026**	-0.008	-0.008	-0.009	-0.008	-0.007	-0.008
	(-0.23)	(-0.40)	(-0.23)	(-2.45)	(-2.56)	(-2.36)	(-2.66)	(-2.76)	(-2.56)	(-0.51)	(-0.54)	(-0.55)	(-0.48)	(-0.47)	(-0.52)
Analyst Following	-0.116***	-0.112***	-0.114***	-0.011***	-0.011***	-0.011***	-0.011***	-0.010***	-0.010***	-0.002	-0.000	-0.001	-0.004	-0.004	-0.004
	(-4.25)	(-4.13)	(-4.20)	(-4.41)	(-4.31)	(-4.35)	(-4.10)	(-4.01)	(-4.08)	(-0.35)	(-0.10)	(-0.33)	(-0.79)	(-0.80)	(-0.85)
Institutional Ownership	0.335***	0.356***	0.355***	0.029***	0.031***	0.030***	0.026***	0.027***	0.027***	0.039***	0.041***	0.040***	0.022*	0.021*	0.021*
	(4.86)	(5.20)	(5.19)	(3.81)	(4.17)	(4.16)	(3.32)	(3.52)	(3.49)	(4.43)	(4.62)	(4.52)	(1.75)	(1.69)	(1.70)
Illiquidity	0.085	0.087	0.088	0.010	0.010	0.010	0.008	0.007	0.008	0.010	0.010	0.011	0.008	0.008	0.008
	(0.93)	(0.95)	(0.96)	(0.72)	(0.73)	(0.74)	(0.60)	(0.56)	(0.61)	(0.72)	(0.71)	(0.74)	(0.54)	(0.54)	(0.55)
Stock Return	-0.013	-0.021	-0.016	-0.004*	-0.004**	-0.004**	-0.005**	-0.005**	-0.005**	-0.002	-0.003	-0.002	-0.002	-0.002	-0.002
	(-0.60)	(-0.98)	(-0.75)	(-1.94)	(-2.19)	(-1.99)	(-2.26)	(-2.16)	(-2.19)	(-0.71)	(-1.03)	(-0.84)	(-0.72)	(-0.80)	(-0.70)
Trading Volume	0.174***	0.177***	0.176***	0.015***	0.015***	0.015***	0.013***	0.013***	0.013***	0.016***	0.016***	0.016***	0.005	0.005	0.005
	(10.23)	(10.46)	(10.38)	(9.59)	(9.80)	(9.72)	(8.58)	(8.47)	(8.60)	(5.70)	(5.90)	(5.80)	(1.64)	(1.62)	(1.59)
Stock Volatility	-0.515***	-0.508***	-0.520***	-0.038***	-0.038***	-0.039***	-0.023***	-0.025***	-0.024***	-0.039***	-0.038***	-0.040***	-0.018**	-0.018**	-0.018**
	(-6.95)	(-6.83)	(-7.00)	(-6.53)	(-6.51)	(-6.64)	(-3.87)	(-4.20)	(-4.03)	(-5.13)	(-4.96)	(-5.20)	(-2.29)	(-2.36)	(-2.38)
Constant	-2.216***	-2.725***	-2.791***	0.018	0.040	-0.027*	-0.033	0.151***	-0.053***	-0.025	-0.124**	-0.086***	0.066*	0.155**	0.048
	(-9.07)	(-4.76)	(-18.26)	(0.81)	(0.86)	(-1.94)	(-1.40)	(3.14)	(-3.75)	(-0.68)	(-2.00)	(-2.87)	(1.77)	(2.41)	(1.48)
Year Fixed Effects	N	N	N	N	N	N	Y	Y	Y	N	N	N	Y	Y	Y
Firm Fixed Effects	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y
Cluster by firm	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm-Year	31,952	32,004	32,004	31,952	32,004	32,004	31,952	32,004	32,004	31,952	32,004	32,004	31,952	32,004	32,004
# Firms	4,730	4,732	4,732	4,730	4,732	4,732	4,730	4,732	4,732	4,730	4,732	4,732	4,730	4,732	4,732
# Articles	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171	25,501,171
Adjusted R^2				0.008	0.008	0.008	0.013	0.014	0.013	0.091	0.090	0.091	0.099	0.099	0.099

Table 6: Media Coverage and Media Tone Interaction – Activism Decision

The table presents the results on the two-way interaction of media coverage and media tone. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are the interaction terms between measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), AES (aggregate event sentiment), and measures of media coverage: log of one plus AEV (aggregate event volume), log of one plus the number of news articles. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using log of one plus the number of news articles as a proxy for media coverage, and the regressions in Panel B are conducted using log of one plus AEV (aggregate event volume) as a proxy for media coverage. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1					
	Linear Probability Model					
	Panel A: Media Coverage (No. Articles)			**Panel B: Media Coverage (AEV)**		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
High Media Coverage	0.138**	0.572***	0.039	0.157**	0.579***	0.068***
	(2.12)	(2.92)	(1.44)	(2.39)	(3.04)	(2.59)
Media Tone (ESS)	0.010			-0.003		
	(0.16)			(-0.05)		
Media Tone (ESS) x High Media Coverage	-0.292**			-0.253**		
	(-2.40)			(-2.08)		
Media Tone (CSS)		-0.028			-0.034	
		(-0.18)			(-0.22)	
Media Tone (CSS) x High Media Coverage		-1.171***			-1.110***	
		(-3.00)			(-2.92)	
Media Tone (AES)			-0.000			-0.005
			(-0.00)			(-0.30)
Media Tone (AES) x High Media Coverage			-0.080***			-0.067**
			(-2.73)			(-2.27)
Market Value	-0.008	-0.006	-0.007	-0.009	-0.007	-0.008
	(-1.35)	(-0.98)	(-1.25)	(-1.52)	(-1.15)	(-1.42)
Market-to-Book	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-1.02)	(-1.33)	(-1.23)	(-1.02)	(-1.32)	(-1.22)
Sales Growth	-0.022	-0.023	-0.023	-0.023	-0.023	-0.023
	(-0.80)	(-0.80)	(-0.81)	(-0.80)	(-0.81)	(-0.81)
Return on Assets	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.85)	(-1.04)	(-0.90)	(-0.89)	(-1.05)	(-0.95)
Book Leverage	0.018	0.017	0.014	0.015	0.014	0.012
	(0.61)	(0.58)	(0.49)	(0.53)	(0.48)	(0.42)
Dividend Yield	-0.013	-0.011	-0.011	-0.009	-0.008	-0.008
	(-0.17)	(-0.14)	(-0.15)	(-0.12)	(-0.10)	(-0.11)
Research & Development	-0.026	-0.024	-0.027	-0.029	-0.027	-0.031
	(-0.95)	(-0.88)	(-1.00)	(-1.07)	(-1.00)	(-1.11)
No. Analyst Following	0.004	0.003	0.003	0.003	0.002	0.002
	(0.53)	(0.42)	(0.43)	(0.43)	(0.33)	(0.35)
Institutional Ownership	0.008	0.005	0.007	0.006	0.004	0.005
	(0.35)	(0.24)	(0.32)	(0.25)	(0.16)	(0.21)
Illiquidity	0.013	0.013	0.013	0.013	0.013	0.013
	(0.80)	(0.81)	(0.81)	(0.80)	(0.81)	(0.81)
Stock Return	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-0.21)	(-0.21)	(-0.23)	(-0.15)	(-0.16)	(-0.17)
Trading Volume	0.007	0.007	0.006	0.006	0.006	0.006
	(1.47)	(1.48)	(1.38)	(1.33)	(1.33)	(1.28)
Stock Volatility	-0.015	-0.017	-0.017	-0.015	-0.017	-0.017
	(-1.08)	(-1.23)	(-1.18)	(-1.08)	(-1.23)	(-1.19)
Constant	-0.035	-0.031	-0.029	-0.036	-0.035	-0.034
	(-0.59)	(-0.37)	(-0.55)	(-0.60)	(-0.40)	(-0.65)
Year Fixed Effects	Y	Y	Y	Y	Y	Y
Firm Fixed Effects	Y	Y	Y	Y	Y	Y
Cluster by firm	Y	Y	Y	Y	Y	Y
Firm-Year	16,686	16,733	16,733	16,686	16,733	16,733
# Firms	3,757	3,759	3,759	3,757	3,759	3,759
Adjusted R^2	0.100	0.101	0.101	0.100	0.101	0.101

Table 7: Media Tone and Activism Outcome

The table presents the results on the relationship between media tone of a firm and activism outcome. The dependent variable is a dummy that equals to one if activist wins, and zero if management wins, or there are settlement or concessions made. The main variables of interest are measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), and AES (aggregate event sentiment) provided by RavenPack. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using Probit Model, and the regressions in Panel B are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Dependent Variable: Activism Outcome					
	Panel A: Probit Model			Panel B: Linear Probability Model		
	(1)	(2)	(3)	(4)	(5)	(6)
Media Tone (ESS)	-2.461**			-0.533**		
	(-2.32)			(-1.97)		
Media Tone (CSS)		-3.731			-0.901	
		(-1.11)			(-1.02)	
Media Tone (AES)			-0.504**			-0.118*
			(-2.01)			(-1.80)
Market Value	0.006	0.002	-0.001	-0.001	-0.003	-0.003
	(0.17)	(0.04)	(-0.02)	(-0.13)	(-0.27)	(-0.32)
Market-to-Book	-0.001	-0.005	-0.009	-0.007	-0.007	-0.008
	(-0.03)	(-0.11)	(-0.19)	(-0.53)	(-0.58)	(-0.67)
Sales Growth	1.713	1.861	1.779	0.524	0.556	0.541
	(1.37)	(1.47)	(1.44)	(1.22)	(1.26)	(1.27)
Return on Assets	0.469*	0.435	0.441	0.168**	0.161**	0.162**
	(1.65)	(1.49)	(1.54)	(2.12)	(1.98)	(2.05)
Book Leverage	0.013	0.073	0.061	-0.001	0.011	0.008
	(0.09)	(0.54)	(0.44)	(-0.03)	(0.30)	(0.22)
Dividend Yield	-2.126*	-1.861*	-1.932*	-0.219**	-0.189**	-0.201**
	(-1.76)	(-1.68)	(-1.70)	(-2.34)	(-2.08)	(-2.19)
Research & Development	0.549	0.479	0.551	0.224	0.207	0.224
	(0.90)	(0.79)	(0.91)	(1.27)	(1.17)	(1.27)
No. Analyst Following	-0.113*	-0.090	-0.102	-0.025	-0.021	-0.023
	(-1.70)	(-1.36)	(-1.54)	(-1.42)	(-1.18)	(-1.30)
Institutional Ownership	0.408**	0.415**	0.424**	0.097**	0.100**	0.100**
	(2.46)	(2.51)	(2.55)	(2.23)	(2.31)	(2.32)
Illiquidity	-2.899	-2.918	-3.142	-0.344***	-0.333***	-0.336***
	(-1.05)	(-1.00)	(-0.98)	(-4.21)	(-4.03)	(-4.05)
Trading Volume	-0.014	-0.020	-0.015	-0.002	-0.003	-0.002
	(-0.34)	(-0.49)	(-0.37)	(-0.20)	(-0.29)	(-0.20)
Stock Volatility	0.049	0.050	0.023	0.028	0.025	0.021
	(0.27)	(0.28)	(0.13)	(0.53)	(0.48)	(0.40)
Stock Return	0.128**	0.120**	0.129**	0.020	0.017	0.019
	(2.04)	(1.97)	(2.06)	(1.03)	(0.89)	(1.02)
Constant	0.285	0.913	-0.640*	0.567***	0.749	0.369***
	(0.44)	(0.53)	(-1.66)	(3.05)	(1.63)	(2.87)
Year Fixed Effects	N	N	N	Y	Y	Y
Firm Fixed Effects	N	N	N	N	N	N
Firm-Year	1681	1684	1684	1681	1684	1684
Pseudo/Adjusted R^2	0.021	0.018	0.019	0.021	0.021	0.022

Table 8: Media Coverage and Media Tone Interaction – Activism Outcome

The table presents the results on the two-way interaction of media coverage and media tone. The dependent variable is a dummy that equals to one if activist wins, and zero if management wins, or there are settlement or concessions made. The main variables of interest are the interaction terms between measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), AES (aggregate event sentiment), and measures of media coverage: log of one plus AEV (aggregate event volume), log of one plus the number of news articles. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using log of one plus the number of news articles as a proxy for media coverage, and the regressions in Panel B are conducted using log of one plus AEV (aggregate event volume) as a proxy for media coverage. t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	Dependent Variable: Activism Outcome					
	Linear Probability Model					
	Panel A: Media Coverage (No. Articles)			Panel B: Media Coverage (AEV)		
	(1)	(2)	(3)	(4)	(5)	(6)
Media Coverage	0.028***	0.005	0.020***	0.935*	-0.162	0.897***
	(3.14)	(0.10)	(6.52)	(1.94)	(-0.09)	(3.98)
Media Tone (ESS)	-0.382			-0.410		
	(-1.36)			(-1.42)		
Media Tone (ESS) x High Media Coverage	-0.050***			-1.634*		
	(-3.11)			(-1.89)		
Media Tone (CSS)		-0.742			-0.772	
		(-0.82)			(-0.85)	
Media Tone (CSS) x High Media Coverage		-0.009			0.401	
		(-0.09)			(0.11)	
Media Tone (AES)			-0.070			-0.063
			(-1.05)			(-0.92)
Media Tone (AES) x High Media Coverage			-0.029***			-1.259***
			(-6.30)			(-3.91)
Market Value	-0.005	-0.006	-0.005	-0.005	-0.006	-0.007
	(-0.50)	(-0.60)	(-0.52)	(-0.57)	(-0.61)	(-0.69)
Market-to-Book	-0.007	-0.008	-0.010	-0.007	-0.008	-0.009
	(-0.59)	(-0.68)	(-0.82)	(-0.53)	(-0.63)	(-0.76)
Sales Growth	0.517	0.555	0.513	0.528	0.562	0.520
	(1.18)	(1.25)	(1.19)	(1.22)	(1.27)	(1.22)
Return on Assets	0.161**	0.145*	0.145*	0.164**	0.149*	0.147*
	(2.04)	(1.80)	(1.84)	(2.07)	(1.85)	(1.87)
Book Leverage	0.004	0.016	0.015	0.004	0.015	0.016
	(0.11)	(0.43)	(0.39)	(0.11)	(0.41)	(0.42)
Dividend Yield	-0.208**	-0.190**	-0.195**	-0.212**	-0.190**	-0.195**
	(-2.27)	(-2.10)	(-2.15)	(-2.31)	(-2.10)	(-2.17)
Research & Development	0.229	0.198	0.225	0.224	0.198	0.221
	(1.30)	(1.13)	(1.29)	(1.27)	(1.12)	(1.27)
No. Analyst Following	-0.023	-0.021	-0.022	-0.024	-0.021	-0.022
	(-1.33)	(-1.21)	(-1.25)	(-1.35)	(-1.19)	(-1.24)
Institutional Ownership	0.111**	0.113***	0.106**	0.114***	0.115***	0.113**
	(2.55)	(2.59)	(2.43)	(2.59)	(2.60)	(2.55)
Illiquidity	-0.348***	-0.340***	-0.335***	-0.352***	-0.342***	-0.340***
	(-4.23)	(-4.10)	(-4.05)	(-4.27)	(-4.12)	(-4.11)
Trading Volume	-0.003	-0.002	-0.002	-0.003	-0.003	-0.002
	(-0.28)	(-0.23)	(-0.21)	(-0.29)	(-0.29)	(-0.23)
Stock Volatility	0.018	0.017	0.007	0.018	0.019	0.005
	(0.34)	(0.33)	(0.13)	(0.35)	(0.36)	(0.09)
Stock Return	0.021	0.018	0.021	0.021	0.018	0.022
	(1.08)	(0.98)	(1.11)	(1.10)	(0.97)	(1.16)
Constant	0.510***	0.677	0.352***	0.526***	0.697	0.353***
	(2.69)	(1.44)	(2.73)	(2.74)	(1.48)	(2.73)
Year Fixed Effects	Y	Y	Y	Y	Y	Y
Firm Fixed Effects	N	N	N	N	N	N
Firm-Year	1681	1684	1684	1681	1684	1684
Adjusted R^2	0.025	0.021	0.031	0.023	0.021	0.028

Table 9 Panel A: Instrumental Variable – Name Fluency (Two Stage Residual Inclusion)

The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted, where media coverage is instrumented by a firm's name fluency. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media coverage: log of one plus the number of news articles used in Model 1; log of one plus AEV (aggregate event volume) provided by RavenPack used in Model 2. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. Columns 1 and 3 report the instrumental variable (IV) estimates. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	(1)		(2)	
	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism
Company Name Fluency	0.052***		0.038***	
	(4.11)		(4.33)	
Media Coverage (No. Articles) - instrumented by Name Fluency		0.259***		
		(8.35)		
Media Coverage (AEV) - instrumented by Name Fluency				0.365***
				(7.22)
Market Value	0.186***	-0.160***	0.177***	-0.168***
	(22.89)	(-6.25)	(22.54)	(-6.61)
Market-to-Book	-0.021***	-0.085***	-0.032***	-0.090***
	(-4.46)	(-2.62)	(-5.13)	(-2.65)
Sales Growth	0.005*	0.049	0.007**	0.049
	(1.83)	(0.06)	(2.18)	(0.05)
Return on Assets	-0.111***	-0.172	-0.156***	-0.164
	(-3.13)	(-1.24)	(-3.69)	(-1.18)
Book Leverage	0.207***	0.136	0.252***	0.103
	(8.21)	(1.32)	(9.25)	(1.01)
Dividend Yield	0.299***	-0.283	0.062	-0.117
	(3.28)	(-0.46)	(0.92)	(-0.22)
Research & Development	0.024	-0.108	0.020	-0.139
	(0.35)	(-0.43)	(0.30)	(-0.55)
Analyst Following	0.077***	-0.127***	0.048***	-0.123***
	(8.60)	(-3.50)	(5.22)	(-3.38)
Institutional Ownership	-0.027	0.351***	-0.132***	0.383***
	(-0.69)	(3.96)	(-2.63)	(4.35)
Illiquidity	0.007	-0.901	-0.002	-0.898
	(1.16)	(-0.32)	(-0.28)	(-0.32)
Stock Return	-0.015*	-0.044	-0.020*	-0.054
	(-1.66)	(-0.85)	(-1.87)	(-0.99)
Trading Volume	0.126***	0.097***	0.133***	0.084***
	(18.40)	(4.26)	(21.83)	(3.58)
Stock Volatility	0.082***	-0.376***	0.092***	-0.331***
	(5.10)	(-3.61)	(5.40)	(-3.26)
Residual		0.022		-0.053
		(0.44)		(-0.82)
Constant	1.511***	-3.177***	-0.879***	-2.405***
	(8.49)	(-15.29)	(-5.24)	(-12.38)
Year Fixed Effects	Y	N	Y	N
Firm Fixed Effects	N	N	N	N
Cluster by firm	Y	N	Y	N
Firm-Year	26,884	26,884	26,884	26,884
# Firms	4,028	4,028	4,028	4,028
R^2	0.764		0.707	

Table 9 Panel B: Instrumental Variable – Investor Relations Consultants
The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted, where media coverage is instrumented by a firm's use of external investor relation consultants. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media coverage: log of one plus the number of news articles used in Model 1; log of one plus AEV (aggregate event volume) provided by RavenPack used in Model 2. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. Columns 1 and 3 report the instrumental variable (IV) estimates. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	(1)		(2)	
	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism
Investor Relation	0.061***		0.107***	
	(5.31)		(7.95)	
Media Coverage (No. Articles) - instrumented by IR		0.295***		
		(10.78)		
Media Coverage (AEV) - instrumented by IR				0.404***
				(8.21)
Market Value	0.151***	-0.184***	0.134***	-0.192***
	(19.45)	(-8.19)	(18.05)	(-8.63)
Market-to-Book	-0.000	-0.066**	-0.000**	-0.071**
	(-1.55)	(-2.50)	(-2.36)	(-2.54)
Sales Growth	-0.000	0.049	0.001*	0.051
	(-0.30)	(0.08)	(1.86)	(0.07)
Return on Assets	0.003***	-0.131	0.002***	-0.148
	(10.74)	(-1.25)	(4.11)	(-1.39)
Book Leverage	0.156***	0.125	0.194***	0.089
	(6.06)	(1.24)	(7.21)	(0.90)
Dividend Yield	0.266***	-0.061	-0.011	0.116
	(3.52)	(-0.14)	(-0.19)	(0.31)
Research & Development	0.102**	-0.172	0.084**	-0.233
	(2.14)	(-0.74)	(2.43)	(-0.96)
Analyst Following	0.089***	-0.151***	0.063***	-0.152***
	(10.55)	(-4.42)	(7.41)	(-4.44)
Institutional Ownership	-0.005	0.419***	-0.106***	0.458***
	(-0.19)	(4.99)	(-2.87)	(5.46)
Illiquidity	0.007	0.056	-0.013	0.073
	(0.90)	(0.03)	(-1.13)	(0.04)
Stock Return	-0.026**	-0.029	-0.027**	-0.030
	(-2.42)	(-0.68)	(-2.36)	(-0.70)
Trading Volume	0.128***	0.103***	0.135***	0.099***
	(21.03)	(4.86)	(24.25)	(4.51)
Stock Volatility	0.110***	-0.464***	0.086***	-0.461***
	(7.66)	(-4.58)	(6.05)	(-4.65)
Residual		-0.012		-0.112*
		(-0.27)		(-1.78)
Constant	2.067***	-3.330***	-0.202***	-2.558***
	(30.98)	(-17.83)	(-3.47)	(-14.42)
Year Fixed Effects	Y	N	Y	N
Firm Fixed Effects	N	N	N	N
Cluster by firm	Y	N	Y	N
Firm-Year	32,003	32,003	32,003	32,003
# Firms	4,732	4,732	4,732	4,732
R^2	0.758		0.678	

Table 10: Media Tone and Analysts' Divergence of Opinion

The table presents the results on the two-way interaction of media tone and divergence of opinion. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are the interaction terms between measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), AES (aggregate event sentiment), and measure of divergence of opinion as proxied by the standard deviation of analyst recommendations. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1 Linear Probability Model		
	(1)	(2)	(3)
Divergence of Opinion (DIVOP)	0.154**	0.298*	0.037*
	(2.41)	(1.69)	(1.68)
Media Tone (ESS)	0.142		
	(1.63)		
Media Tone (ESS) x DIVOP	-0.299**		
	(-2.53)		
Media Tone (CSS)		0.035	
		(0.14)	
Media Tone (CSS) x DIVOP		-0.605*	
		(-1.72)	
Media Tone (AES)			0.018
			(0.79)
Media Tone (AES) x DIVOP			-0.061**
			(-2.07)
Market Value	-0.019***	-0.018***	-0.018***
	(-4.18)	(-3.82)	(-4.01)
Market-to-Book	-0.001	-0.002	-0.001
	(-1.08)	(-1.11)	(-1.10)
Sales Growth	0.008***	0.008***	0.008***
	(12.89)	(13.10)	(12.99)
Return on Assets	-0.013	-0.011	-0.012
	(-1.59)	(-1.49)	(-1.57)
Book Leverage	-0.007	-0.007	-0.007
	(-0.45)	(-0.43)	(-0.47)
Dividend Yield	0.028	0.028	0.028
	(0.32)	(0.33)	(0.33)
Research & Development	-0.012	-0.010	-0.012
	(-0.55)	(-0.46)	(-0.56)
No. Analyst Following	-0.003	-0.004	-0.004
	(-0.58)	(-0.72)	(-0.70)
Institutional Ownership	0.024**	0.024**	0.024**
	(2.00)	(1.98)	(2.01)
Illiquidity	-0.000	-0.000	-0.000
	(-0.23)	(-0.07)	(-0.13)
Stock Return	0.000	0.000	0.000
	(0.02)	(0.05)	(0.05)
Trading Volume	0.009**	0.009**	0.008**
	(2.44)	(2.35)	(2.28)
Stock Volatility	-0.021**	-0.022**	-0.022**
	(-2.18)	(-2.29)	(-2.25)
Constant	-0.054	-0.001	0.013
	(-0.86)	(-0.01)	(0.29)
Year Fixed Effects	Y	Y	Y
Firm Fixed Effects	Y	Y	Y
Cluster by firm	Y	Y	Y
Firm-Year	26,488	26,510	26,510
# Firms	4,121	4,122	4,122
Adjusted R^2	0.106	0.106	0.106

Table 11: Media Tone and Investor Sentiment Index
The table presents the results on the two-way interaction of media tone and investor sentiment. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are the interaction terms between measures of media tone: ESS (event sentiment score), CSS (composite sentiment score), AES (aggregate event sentiment), and measure of investor sentiment as proxied by the sentiment index from Baker and Wurgler (2006). Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Panel A uses the sentiment index based on the first principal component of these five standardized sentiment proxies where each of the proxies has first been orthogonalized with respect to a set of six macroeconomic indicators (e.g., NBER recession indicator, Industrial production index, Consumer price index, etc.), and Panel B uses the sentiment index simply based on the first principal component of these five sentiment proxies. Appendix A provides the variable definitions. The unit of analysis is firm-year. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1					
	Linear Probability Model					
	Panel A: Investor Sentiment 1			Panel B: Investor Sentiment 2		
	(1)	(2)	(3)	(4)	(5)	(6)
Investor Sentiment	-0.564***	-0.538***	-0.705***	-0.104*	-0.113	-0.252***
	(-6.47)	(-3.78)	(-9.95)	(-1.72)	(-0.90)	(-7.99)
Media Tone (ESS)	-0.065			-0.118***		
	(-1.58)			(-2.60)		
Media Tone (ESS) x Investor Sentiment	-0.317***			-0.333***		
	(-3.28)			(-3.34)		
Media Tone (CSS)		-0.275**			-0.323**	
		(-2.14)			(-2.28)	
Media Tone (CSS) x Investor Sentiment		-0.483*			-0.380	
		(-1.80)			(-1.51)	
Media Tone (AES)			-0.026***			-0.034***
			(-2.68)			(-3.11)
Media Tone (AES) x Investor Sentiment			-0.055**			-0.053**
			(-2.35)			(-2.14)
Market Value	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***	-0.014***
	(-3.85)	(-3.62)	(-3.75)	(-3.84)	(-3.62)	(-3.73)
Market-to-Book	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.34)	(-0.61)	(-0.44)	(-0.40)	(-0.62)	(-0.51)
Sales Growth	0.008***	0.008***	0.008***	0.008***	0.008***	0.008***
	(28.24)	(28.48)	(28.59)	(28.27)	(28.45)	(28.57)
Return on Assets	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-1.50)	(-1.46)	(-1.58)	(-1.41)	(-1.48)	(-1.52)
Book Leverage	0.005	0.005	0.004	0.006	0.005	0.005
	(0.34)	(0.32)	(0.28)	(0.35)	(0.32)	(0.29)
Dividend Yield	-0.011	-0.007	-0.010	-0.012	-0.008	-0.010
	(-0.20)	(-0.13)	(-0.17)	(-0.20)	(-0.13)	(-0.18)
Research & Development	-0.008	-0.007	-0.008	-0.008	-0.007	-0.008
	(-0.49)	(-0.47)	(-0.52)	(-0.48)	(-0.47)	(-0.52)
No. Analyst Following	-0.004	-0.003	-0.004	-0.004	-0.004	-0.004
	(-0.81)	(-0.78)	(-0.84)	(-0.83)	(-0.80)	(-0.86)
Institutional Ownership	0.021*	0.021*	0.021*	0.021*	0.021*	0.021*
	(1.69)	(1.68)	(1.68)	(1.71)	(1.69)	(1.68)
Illiquidity	0.007	0.008	0.008	0.007	0.008	0.008
	(0.51)	(0.56)	(0.55)	(0.51)	(0.55)	(0.55)
Stock Return	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
	(-0.77)	(-0.75)	(-0.65)	(-0.76)	(-0.76)	(-0.65)
Trading Volume	0.005	0.005	0.005	0.005	0.005	0.005
	(1.61)	(1.60)	(1.60)	(1.62)	(1.62)	(1.62)
Stock Volatility	-0.016**	-0.017**	-0.017**	-0.017**	-0.018**	-0.018**
	(-2.09)	(-2.25)	(-2.25)	(-2.16)	(-2.31)	(-2.31)
Constant	0.182***	0.285***	0.164***	0.136***	0.230***	0.093***
	(4.50)	(4.13)	(4.44)	(3.44)	(3.14)	(2.77)
Year Fixed Effects	Y	Y	Y	Y	Y	Y
Firm Fixed Effects	Y	Y	Y	Y	Y	Y
Cluster by firm	Y	Y	Y	Y	Y	Y
Firm-Year	31952	32004	32004	31952	32004	32004
# Firms	4,730	4,732	4,732	4,730	4,732	4,732
Adjusted R^2	0.099	0.099	0.099	0.099	0.099	0.099

Table 12: Media Coverage/Tone and Activism – Principal Component Analysis (PCA)

The table presents the results on the relationship between the principal components of media coverage/tone of a firm and its likelihood of being targeted using principal component analysis. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The Models 1 and 3 are conducted using Probit Model, and the Models 2 and 4 are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1			
	(1)	(2)	(3)	(4)
	Probit Model	Linear Probability Model	Probit Model	Linear Probability Model
Media Coverage	0.305***	0.027***		
	(16.70)	(5.87)		
Media Tone			-0.033***	-0.003**
			(-2.98)	(-2.36)
Market Value	-0.195***	-0.019***	-0.126***	-0.014***
	(-10.93)	(-5.13)	(-7.18)	(-3.64)
Market-to-Book	-0.064***	-0.000	-0.084***	-0.000
	(-4.40)	(-0.02)	(-5.71)	(-0.64)
Sales Growth	0.051	0.008***	0.045	0.008***
	(1.00)	(27.71)	(0.93)	(28.24)
Return on Assets	-0.137*	-0.000*	-0.124	-0.000
	(-1.80)	(-1.86)	(-1.62)	(-1.50)
Book Leverage	0.111	-0.001	0.122*	0.005
	(1.58)	(-0.07)	(1.72)	(0.29)
Dividend Yield	0.038	-0.013	-0.011	-0.009
	(0.15)	(-0.22)	(-0.04)	(-0.15)
Research & Development	-0.226	-0.010	-0.045	-0.008
	(-1.22)	(-0.66)	(-0.26)	(-0.48)
Analyst Following	-0.152***	-0.005	-0.114***	-0.004
	(-5.61)	(-1.07)	(-4.19)	(-0.85)
Institutional Ownership	0.453***	0.022*	0.350***	0.021*
	(6.73)	(1.86)	(5.10)	(1.71)
Illiquidity	0.064	0.008	0.086	0.008
	(0.69)	(0.54)	(0.94)	(0.55)
Stock Return	-0.028	-0.001	-0.015	-0.002
	(-1.27)	(-0.41)	(-0.68)	(-0.67)
Trading Volume	0.095***	0.002	0.174***	0.005
	(5.52)	(0.70)	(10.28)	(1.61)
Stock Volatility	-0.466***	-0.021***	-0.521***	-0.018**
	(-6.33)	(-2.68)	(-7.01)	(-2.37)
Constant	-1.641***	0.110***	-2.967***	0.029
	(-10.47)	(3.29)	(-20.97)	(0.90)
Year Fixed Effects	N	Y	N	Y
Firm Fixed Effects	N	Y	N	Y
Cluster by firm	N	Y	N	Y
Firm-Year	32,004	32,004	31,952	31,952
Adjusted R^2		0.100		0.099

Table 13: Media Coverage/Tone (excluding press releases) and Activism – Principal Component Analysis (PCA)

The table presents the results on the relationship between the principal components of media coverage/tone of a firm and its likelihood of being targeted using principal component analysis. Here, I exclude the press releases. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The Models 1 and 3 are conducted using Probit Model, and the Models 2 and 4 are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1			
	(1)	(2)	(3)	(4)
	Probit Model	Linear Probability Model	Probit Model	Linear Probability Model
Media Coverage	0.294***	0.025***		
	(16.54)	(5.72)		
Media Tone			-0.034***	-0.002**
			(-3.06)	(-2.09)
Market Value	-0.192***	-0.018***	-0.126***	-0.014***
	(-10.79)	(-5.04)	(-7.12)	(-3.71)
Market-to-Book	-0.064***	-0.000	-0.084***	-0.000
	(-4.42)	(-0.01)	(-5.75)	(-0.56)
Sales Growth	0.051	0.008***	0.046	0.008***
	(0.99)	(27.75)	(0.94)	(28.16)
Return on Assets	-0.141*	-0.000*	-0.122	-0.000
	(-1.88)	(-1.83)	(-1.59)	(-1.50)
Book Leverage	0.112	-0.000	0.126*	0.005
	(1.60)	(-0.01)	(1.77)	(0.30)
Dividend Yield	0.025	-0.012	-0.003	-0.009
	(0.10)	(-0.21)	(-0.01)	(-0.15)
Research & Development	-0.208	-0.010	-0.052	-0.007
	(-1.13)	(-0.65)	(-0.30)	(-0.48)
Analyst Following	-0.152***	-0.005	-0.114***	-0.004
	(-5.58)	(-1.05)	(-4.18)	(-0.83)
Institutional Ownership	0.445***	0.022*	0.349***	0.021*
	(6.60)	(1.80)	(5.09)	(1.71)
Illiquidity	0.063	0.008	0.087	0.008
	(0.68)	(0.55)	(0.95)	(0.55)
Stock Return	-0.028	-0.001	-0.014	-0.002
	(-1.29)	(-0.44)	(-0.64)	(-0.68)
Trading Volume	0.098***	0.002	0.173***	0.005
	(5.69)	(0.69)	(10.22)	(1.64)
Stock Volatility	-0.468***	-0.021***	-0.519***	-0.018**
	(-6.36)	(-2.67)	(-6.99)	(-2.34)
Constant	-1.685***	0.109***	-2.962***	0.029
	(-10.81)	(3.23)	(-20.94)	(0.90)
Year Fixed Effects	N	Y	N	Y
Firm Fixed Effects	N	Y	N	Y
Cluster by firm	N	Y	N	Y
Firm-Year	31,982	31,982	31,939	31,939
Adjusted R^2		0.100		0.099

Table 14: Media Tone and Activism Announcement CAR

The table presents the results on the relationship between media tone of a firm and the cumulative abnormal return (CAR) at the announcement of activism. The dependent variables are the CARs around the time of activism announcement with various windows, using the market model. The main variable of interest is the measure of media tone: AES (aggregate event sentiment) provided by RavenPack. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Media Tone and CAR				
	(1)	(2)	(3)	(4)	(5)
	CAR Windows				
	(-20, +20)	(-10, +10)	(-5, +5)	(-2, +2)	(-1, +1)
Media Tone (AES)	-0.148***	-0.103***	-0.061***	-0.042**	-0.031**
	(-3.18)	(-3.05)	(-2.61)	(-2.48)	(-1.98)
Market Value	-0.000**	-0.000***	-0.000	-0.000*	-0.000*
	(-2.28)	(-2.92)	(-1.60)	(-1.88)	(-1.91)
Market-to-Book	-0.009	-0.005	-0.002	0.001	-0.000
	(-1.29)	(-1.10)	(-0.48)	(0.22)	(-0.05)
Sales Growth	-0.000**	-0.000	-0.000	-0.000	-0.000
	(-2.23)	(-1.50)	(-1.35)	(-0.98)	(-0.22)
Return on Assets	0.052	0.014	-0.021	-0.000	0.003
	(0.83)	(0.30)	(-0.61)	(-0.02)	(0.15)
Book Leverage	-0.101*	-0.077*	-0.041*	-0.019**	-0.010
	(-1.76)	(-1.87)	(-1.94)	(-1.97)	(-1.23)
Dividend Yield	0.188**	0.114*	0.094**	0.023	0.000
	(1.98)	(1.70)	(2.33)	(1.01)	(0.02)
Research & Development	0.333**	0.128	0.113*	0.005	-0.010
	(2.46)	(1.50)	(1.75)	(0.18)	(-0.42)
No. Analyst Following	0.000	0.000	0.000	0.000	0.000
	(0.09)	(0.15)	(0.85)	(1.09)	(0.48)
Institutional Ownership	-0.003	-0.008	-0.007	-0.009	0.000
	(-0.28)	(-0.91)	(-0.99)	(-1.56)	(0.11)
Illiquidity	0.000	-0.000***	-0.000***	-0.000***	-0.000**
	(1.37)	(-6.63)	(-4.11)	(-3.59)	(-2.09)
Stock Return	-0.013	-0.010	-0.007	-0.007	-0.006
	(-0.99)	(-1.01)	(-0.93)	(-1.52)	(-1.52)
Constant	0.200***	0.105***	0.152***	0.032	0.051***
	(4.18)	(2.81)	(6.26)	(1.60)	(2.65)
Year Fixed Effects	Y	Y	Y	Y	Y
Firm Fixed Effects	N	N	N	N	N
Firm-Year	2,560	2,560	2,560	2,560	2,560
# Firms	1,455	1,455	1,455	1,455	1,455
Adjusted R^2	0.034	0.024	0.038	0.012	0.003

Table 15: Media Coverage and Hedge Fund Activism

The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted by hedge fund activists. The dependent variable is a dummy indicating whether a firm is targeted by hedge fund activists in year t+1. The main variables of interest are measures of media coverage: log of one plus AEV (aggregate event volume) provided by RavenPack used in Models with odd numbers; log of one plus the number of news articles used in Models with even numbers. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using Probit Model, and the regressions in Panel B are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1									
	Panel A: Probit Model		Panel B: Linear Probability Model							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Media Coverage (AEV)	0.276***		0.016***		0.016***		0.017***		0.013***	
	(9.65)		(8.95)		(7.65)		(6.18)		(3.99)	
Media Coverage (No. Articles)		0.226***		0.012***		0.014***		0.013***		0.010***
		(9.97)		(9.34)		(7.72)		(6.98)		(3.17)
Market Value	-0.313***	-0.307***	-0.017***	-0.016***	-0.016***	-0.017***	-0.011***	-0.010***	-0.015***	-0.015***
	(-13.71)	(-13.45)	(-13.71)	(-13.32)	(-13.45)	(-13.39)	(-4.01)	(-3.72)	(-5.22)	(-5.11)
Market-to-Book	-0.042**	-0.041**	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000
	(-2.57)	(-2.56)	(1.31)	(0.32)	(0.59)	(0.32)	(-0.02)	(-0.64)	(-0.09)	(-0.32)
Sales Growth	-1.325	-1.206	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(-0.83)	(-0.77)	(-0.94)	(-1.18)	(-0.67)	(-0.62)	(-0.66)	(-0.65)	(-0.58)	(-0.48)
Return on Assets	-0.109	-0.098	-0.000	-0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000
	(-1.22)	(-1.10)	(-0.25)	(-0.11)	(0.16)	(0.26)	(-1.43)	(-1.42)	(-1.47)	(-1.46)
Book Leverage	0.044	0.060	0.005	0.006	0.006	0.006	-0.004	-0.001	-0.005	-0.003
	(0.52)	(0.70)	(0.91)	(1.15)	(1.01)	(1.09)	(-0.31)	(-0.10)	(-0.38)	(-0.25)
Dividend Yield	-0.325	-0.516	-0.000	-0.017	0.006	-0.000	-0.047	-0.055*	-0.047	-0.050
	(-0.91)	(-1.36)	(-0.02)	(-0.53)	(0.19)	(-0.01)	(-1.44)	(-1.68)	(-1.39)	(-1.48)
Research & Development	0.002	0.039	-0.005	-0.003	-0.008	-0.008	-0.004	-0.003	-0.004	-0.004
	(0.01)	(0.20)	(-0.58)	(-0.31)	(-0.91)	(-0.92)	(-0.29)	(-0.21)	(-0.28)	(-0.27)
Analyst Following	-0.096***	-0.100***	-0.006***	-0.006***	-0.005***	-0.005***	-0.000	-0.001	0.001	0.001
	(-2.93)	(-3.03)	(-3.32)	(-3.29)	(-2.73)	(-2.81)	(-0.14)	(-0.40)	(0.23)	(0.19)
Institutional Ownership	0.781***	0.755***	0.044***	0.042***	0.042***	0.042***	0.040***	0.033***	0.030***	0.029***
	(9.79)	(9.42)	(9.23)	(8.68)	(8.53)	(8.59)	(5.69)	(4.25)	(3.40)	(3.32)
Illiquidity	-1.299	-1.200	-0.004**	-0.005***	-0.004**	-0.005***	0.000	-0.001	-0.001	-0.001
	(-0.75)	(-0.78)	(-2.45)	(-3.04)	(-2.52)	(-2.70)	(0.10)	(-0.45)	(-0.54)	(-0.65)
Stock Return	0.058**	0.057**	0.002	0.002	0.001	0.001	0.002	0.002	0.002	0.002
	(2.56)	(2.46)	(0.97)	(1.04)	(0.41)	(0.41)	(0.79)	(0.79)	(0.78)	(0.74)
Trading Volume	0.145***	0.143***	0.007***	0.007***	0.006***	0.006***	0.005***	0.003	0.002	0.002
	(6.81)	(6.70)	(6.39)	(6.43)	(5.84)	(5.76)	(2.66)	(1.33)	(0.70)	(0.86)
Stock Volatility	-0.730***	-0.719***	-0.035***	-0.034***	-0.026***	-0.026***	-0.030***	-0.029***	-0.017***	-0.017***
	(-7.54)	(-7.39)	(-8.47)	(-8.30)	(-6.25)	(-6.24)	(-5.48)	(-5.32)	(-3.16)	(-3.19)
Constant	-2.759***	-3.355***	0.003	-0.027***	-0.009	-0.035***	-0.018	-0.019	0.036	0.013
	(-15.71)	(-18.57)	(0.39)	(-3.24)	(-1.08)	(-4.16)	(-0.87)	(-0.89)	(1.51)	(0.53)
Year Fixed Effects	N	N	N	N	Y	Y	N	N	Y	Y
Firm Fixed Effects	N	N	N	N	N	N	Y	Y	Y	Y
Cluster by firm	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Firm-Year	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466
# Firms	4,727	4,727	4,727	4,727	4,727	4,727	4,727	4,727	4,727	4,727
Adjusted R^2			0.014	0.014	0.017	0.017	0.095	0.096	0.099	0.099

Appendix A: Variable Definitions

	Variable Name	Definition	Source
Media Coverage			
1	No. of Articles	It is simply the natural log of (1+number of firm-related articles) published in various news sources such as Dow Jones Newswires, all editions of Wall Street Journal, Barron's and MarketWatch, industry and business publishers, blog sites, national and local news, government and regulatory updates, Press releases, PRNewswire, Canadian News Wire, LSE Regulatory News Service etc.	RavenPack News Analytics
2	Aggregate Event Volume (AEV)	This is a proxy of firm-specific news coverage using 'RavenPack's proprietary Expert Consensus methodology' computed over a 91-day rolling window. I use the natural log of (1+AEV) here.	RavenPack News Analytics
Media Tone/Sentiments			
3	Event Sentiment Score (ESS)	A score between 0 and 100 given to each media article, with higher scores indicating a more positive sentiment. ESS scores are generated using RavenPack's proprietary event detection technology that constructs firm-specific sentiment scores. Depending on the event type, ESS along with the expert consensus survey data, also uses factors such as: • Emotional Factor • Weather and Climate Factor • Analyst Rating Factor • Credit Rating Factor • Fundamental Comparison Factor	RavenPack News Analytics
4	Composite Sentiment Score (CSS)	A granular score between 0 and 100 given to each media article by combining various textual sentiment analysis techniques. CSS scores are produced by combining RavenPack's Traditional, Expert Consensus, and Market Response algorithms	RavenPack News Analytics
5	Aggregate Event Sentiment (AES)	It is a sentiment score ranging between 0 and 100 and representing the ratio of positive events reported on a firm compared to the total count of events measured over a rolling 91-day window.	RavenPack News Analytics

	Controls		
7	Market Value	Log of Market Capitalization (in millions)	Compustat
8	Market to Book	(total assets – book equity – deferred tax + market value of equity + liquidation value of preferred stock)/total assets	Compustat
9	Sales Growth	growth rate of sales over the prior year	Compustat
10	Return on Assets	EBITDA/total assets (lagged)	Compustat
11	Leverage	Debt/ (Debt+Market Value of Equity)	Compustat
12	Dividend Yield	Common Dividend/Market Value of Equity	Compustat
13	Research and Development (R&D)	R&D expenses scaled by lagged assets	Compustat
14	Analyst Following	Number of analysts covering the firm	I/B/E/S
15	Institutional Ownership	Proportion of shares held by institutions	Thomson Reuters Institutional (13f) Holdings - Stock Ownership
16	Illiquidity	Amihud (2002) illiquidity measure: yearly average (using daily data) of 1000*Sqrt(|Return|/(Dollar Trading Volume))	CRSP
17	Stock Return	Natural log of annualized stock return adjusted by inflation	CRSP
18	Trading Volume	Log of yearly trading volume	CRSP
19	Stock Volatility	Annualized standard deviation of stock price	CRSP
20	E-Index	Entrenchment Index	Institutional Shareholder Services (ISS)
21	Analyst - Divergence of Opinion (DIVOP)	Standard Deviation of Analyst Recommendation	I/B/E/S
22	Investor sentiment	Proxied by the sentiment index from Baker and Wurgler (2006)	Prof. Jeffrey Wurgler's website http://people.stern.nyu.edu/jwurgler/
23	IR Dummy variable	A dummy indicating whether the company has hired an external Investor Relations (IR) Firm	O'Dwyer's Public Relations Annual Directories

Appendix B: Media Coverage and Activism (with E-Index)

The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media coverage: log of one plus AEV (aggregate event volume) provided by RavenPack used in Models with odd numbers; log of one plus the number of news articles used in Models with even numbers. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, Stock Volatility, and E-Index. Appendix A provides the variable definitions. The unit of analysis is firm-year. The regressions in Panel A are conducted using Probit Model, and the regressions in Panel B are conducted using Linear Probability Model. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* p<0.10, ** p<0.05, *** p<0.010).

	Dependent Variable: Dummy indicating whether a firm is targeted by Activists in Year t+1									
	Panel A: Probit Model		Panel B: Linear Probability Model							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Media Coverage (AEV)	0.367***		0.041***		0.045***		0.037***		0.035***	
	(11.11)		(9.73)		(8.26)		(6.49)		(4.17)	
Media Coverage (No. Articles)		0.313***		0.031***		0.042***		0.030***		0.028***
		(11.41)		(9.69)		(7.79)		(6.89)		(3.19)
Market Value	-0.150***	-0.153***	-0.013***	-0.012***	-0.013***	-0.015***	-0.011	-0.013	-0.020**	-0.019**
	(-4.69)	(-4.73)	(-3.64)	(-3.40)	(-3.57)	(-4.05)	(-1.27)	(-1.46)	(-2.18)	(-2.08)
Market-to-Book	-0.090***	-0.089***	-0.005***	-0.006***	-0.006***	-0.006***	-0.011***	-0.010**	-0.008*	-0.010**
	(-2.75)	(-2.70)	(-2.67)	(-2.96)	(-2.80)	(-3.08)	(-2.61)	(-2.29)	(-1.87)	(-2.18)
Sales Growth	-3.072	-2.618	-0.307	-0.334	-0.479	-0.535	0.325	0.274	0.160	0.122
	(-0.49)	(-0.43)	(-0.65)	(-0.68)	(-0.99)	(-1.05)	(0.47)	(0.39)	(0.25)	(0.18)
Return on Assets	-0.055	-0.037	-0.009	-0.003	-0.005	0.004	-0.090**	-0.079*	-0.067	-0.067
	(-0.22)	(-0.15)	(-0.44)	(-0.17)	(-0.24)	(0.22)	(-2.00)	(-1.76)	(-1.49)	(-1.49)
Book Leverage	0.163	0.215	0.014	0.021	0.019	0.018	-0.033	-0.025	-0.031	-0.025
	(1.24)	(1.62)	(1.04)	(1.52)	(1.33)	(1.28)	(-1.14)	(-0.88)	(-1.06)	(-0.86)
Dividend Yield	-0.737	-1.127	-0.022	-0.062	-0.018	-0.037	-0.157**	-0.175**	-0.163**	-0.170**
	(-0.99)	(-1.29)	(-0.42)	(-1.27)	(-0.35)	(-0.73)	(-2.08)	(-2.40)	(-2.22)	(-2.31)
Research & Development	-0.227	-0.043	-0.034	-0.009	-0.035	-0.029	-0.058	-0.057	-0.073	-0.062
	(-0.48)	(-0.09)	(-0.83)	(-0.22)	(-0.85)	(-0.69)	(-0.64)	(-0.64)	(-0.84)	(-0.71)
Analyst Following	-0.167***	-0.160***	-0.018***	-0.017***	-0.016***	-0.015***	-0.003	-0.003	-0.000	-0.001
	(-3.68)	(-3.46)	(-3.98)	(-3.72)	(-3.46)	(-3.47)	(-0.30)	(-0.36)	(-0.02)	(-0.08)
Institutional Ownership	0.285**	0.217*	0.010	-0.001	-0.005	-0.004	0.034	0.017	-0.003	-0.004
	(2.32)	(1.68)	(0.87)	(-0.12)	(-0.47)	(-0.33)	(1.62)	(0.81)	(-0.17)	(-0.20)
Illiquidity	8.637	92.962	16.367	21.907**	17.286	19.917*	6.710	9.631	9.159	11.038
	(0.04)	(0.41)	(1.51)	(2.13)	(1.59)	(1.88)	(0.43)	(0.60)	(0.57)	(0.69)
Stock Return	-0.144***	-0.148***	-0.012***	-0.013***	-0.013***	-0.013***	-0.006	-0.007	-0.006	-0.007
	(-2.79)	(-2.83)	(-3.28)	(-3.42)	(-3.17)	(-3.19)	(-1.24)	(-1.40)	(-1.21)	(-1.25)
Trading Volume	0.157***	0.150***	0.014***	0.013***	0.010***	0.011***	0.030***	0.022***	0.019***	0.020***
	(4.63)	(4.38)	(4.24)	(4.11)	(3.01)	(3.19)	(4.81)	(3.51)	(2.64)	(2.75)
Stock Volatility	-0.357***	-0.340**	-0.021	-0.017	-0.002	-0.003	-0.054***	-0.050**	-0.028	-0.028
	(-2.58)	(-2.44)	(-1.44)	(-1.15)	(-0.16)	(-0.20)	(-2.65)	(-2.46)	(-1.26)	(-1.24)
E-Index	0.028	0.012	0.001	-0.000	0.001	0.001	0.002	0.000	0.003	0.003
	(1.54)	(0.67)	(0.90)	(-0.31)	(0.67)	(0.70)	(0.88)	(0.14)	(0.74)	(0.77)
Constant	-3.459***	-4.140***	-0.095***	-0.163***	-0.087***	-0.176***	-0.352***	-0.292***	-0.155	-0.223**
	(-10.67)	(-12.86)	(-3.25)	(-5.54)	(-2.75)	(-5.83)	(-4.58)	(-3.67)	(-1.58)	(-2.18)
Year Fixed Effects	N	N	N	N	Y	Y	N	N	Y	Y
Firm Fixed Effects	N	N	N	N	N	N	Y	Y	Y	Y
Cluster by firm	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Firm-Year	12,937	12,937	12,937	12,937	12,937	12,937	12,937	12,937	12,937	12,937
# Firms	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927	1,927
Adjusted R^2			0.027	0.026	0.030	0.030	0.099	0.099	0.103	0.102

Appendix C.1: Media Coverage and Activism – Instrumental Variable (Investor Relation Consultants) – Two-Stage Least Square (2SLS)

The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted, where media coverage is instrumented by a firm's use of external investor relation consultants. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media coverage: log of one plus the number of news articles used in Model 1; log of one plus AEV (aggregate event volume) provided by RavenPack used in Model 2. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. Columns 1 and 3 report the instrumental variable (IV) estimates. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	(1)		(2)	
	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism
Investor Relation	0.262***		0.252***	
	(10.85)		(11.62)	
Media Coverage (No. Articles) - instrumented by IR		0.128***		
		(5.74)		
Media Coverage (AEV) - instrumented by IR				0.133***
				(5.72)
Market Value	0.212***	-0.038***	0.176***	-0.034***
	(22.16)	(-7.35)	(21.47)	(-7.56)
Market-to-Book	-0.001***	0.000***	-0.001***	0.000**
	(-3.39)	(2.73)	(-2.71)	(2.35)
Sales Growth	-0.005***	0.009***	-0.003*	0.009***
	(-2.59)	(20.27)	(-1.76)	(21.86)
Return on Assets	-0.003**	0.000	-0.003	0.000
	(-2.24)	(0.32)	(-1.64)	(0.01)
Book Leverage	0.144***	-0.007	0.192***	-0.014
	(4.18)	(-0.76)	(5.70)	(-1.42)
Dividend Yield	-0.226*	0.052	-0.549***	0.096*
	(-1.92)	(1.10)	(-4.28)	(1.94)
Research & Development	0.174***	-0.048***	0.122***	-0.042***
	(3.21)	(-3.50)	(2.67)	(-3.33)
Analyst Following	0.082***	-0.022***	0.069***	-0.020***
	(5.89)	(-6.07)	(5.72)	(-6.07)
Institutional Ownership	-0.192***	0.050***	-0.225***	0.056***
	(-3.88)	(6.43)	(-4.79)	(6.71)
Illiquidity	0.047***	0.002	0.017	0.005
	(3.00)	(0.11)	(0.80)	(0.35)
Stock Return	-0.055***	0.002	-0.053***	0.002
	(-9.10)	(0.75)	(-9.67)	(0.75)
Trading Volume	0.167***	-0.009**	0.142***	-0.007*
	(20.61)	(-2.27)	(20.22)	(-1.86)
Stock Volatility	0.158***	-0.045***	0.139***	-0.044***
	(7.07)	(-6.29)	(7.08)	(-6.38)
Constant	0.896***	0.762***	-0.639***	0.962***
	(10.34)	(29.13)	(-8.44)	(41.77)
Year Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	Y	Y	Y
Cluster by firm	Y	Y	Y	Y
Firm-Year	32,003	32,003	32,003	32,003
# Firms	4,732	4,732	4,732	4,732
p-value (F-test)	0.000		0.000	

Appendix C.2: Media Coverage and Activism – Instrumental Variable (Name Fluency) – Two-Stage Least Square (2SLS)

The table presents the results on the relationship between media coverage of a firm and its likelihood of being targeted, where media coverage is instrumented by a firm's name fluency. The dependent variable is a dummy indicating whether a firm is targeted by shareholder activists in year t+1. The main variables of interest are measures of media coverage: log of one plus the number of news articles used in Model 1; log of one plus AEV (aggregate event volume) provided by RavenPack used in Model 2. Control variables include size (Market Value), Market-to-Book ratio, Sales Growth, Return on Assets, Book Leverage, Dividend Yield, Research & Development, Number of Analyst following, Institutional Ownership, Amihud's measure of illiquidity, Stock Return, Trading Volume, and Stock Volatility. Appendix A provides the variable definitions. The unit of analysis is firm-year. Columns 1 and 3 report the instrumental variable (IV) estimates. Standard errors are clustered at the firm level, and t statistics are reported in parentheses (* $p<0.10$, ** $p<0.05$, *** $p<0.010$).

	(1)		(2)	
	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism	First-Stage Estimation DV: Media Coverage	Instrumental Variable DV: Targeted by Activism
Company Name Fluency	0.097***		0.096***	
	(8.67)		(9.20)	
Media Coverage (No. Articles) - instrumented by Name Fluency		0.039*		
		(1.86)		
Media Coverage (AEV) - instrumented by Name Fluency				0.039*
				(1.85)
Market Value	0.198***	-0.018***	0.158***	-0.017***
	(19.63)	(-4.09)	(18.10)	(-4.46)
Market-to-Book	-0.001***	-0.000	-0.001**	0.000
	(-3.14)	(-0.05)	(-2.42)	(0.07)
Sales Growth	-0.005***	0.009***	-0.004**	0.009***
	(-2.85)	(22.28)	(-2.40)	(23.12)
Return on Assets	-0.003*	-0.000	-0.001	-0.000
	(-1.96)	(-0.31)	(-1.03)	(-0.59)
Book Leverage	0.108***	0.015*	0.127***	0.014*
	(3.21)	(1.94)	(4.02)	(1.80)
Dividend Yield	-0.340***	0.032	-0.725***	0.047
	(-2.58)	(0.71)	(-4.61)	(0.98)
Research & Development	0.168***	-0.036***	0.141***	-0.035***
	(3.35)	(-3.23)	(3.19)	(-3.24)
Analyst Following	0.084***	-0.013***	0.068***	-0.013***
	(5.83)	(-4.38)	(5.22)	(-4.44)
Institutional Ownership	-0.140***	0.031***	-0.136***	0.031***
	(-3.46)	(4.22)	(-3.91)	(4.14)
Illiquidity	0.050***	0.006	0.019	0.007
	(3.74)	(0.43)	(0.94)	(0.51)
Stock Return	-0.052***	-0.003	-0.048***	-0.003
	(-8.37)	(-1.42)	(-8.67)	(-1.48)
Trading Volume	0.189***	0.006	0.167***	0.006
	(23.54)	(1.29)	(23.17)	(1.62)
Stock Volatility	0.177***	-0.030***	0.168***	-0.029***
	(7.48)	(-4.17)	(7.98)	(-4.18)
Constant	0.513***	-0.097***	-1.227***	-0.028
	(7.01)	(-5.14)	(-18.47)	(-1.09)
Year Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	N	N	N	N
Cluster by firm	Y	Y	Y	Y
Firm-Year	32,004	32,004	32,004	32,004
# Firms	4,732	4,732	4,732	4,732
p-value (F-test)	0.000		0.000	