Say-on-Pay Votes

Hooghiemstra, Reggy; Kuang, Yu Flora; Qin, B.

Published in:
European Accounting Review

DOI:
10.1080/09638180.2015.1034152

European Accounting Review, 2015
Vol. 24, No. 4, 753–778, http://dx.doi.org/10.1080/09638180.2015.1034152

Say-on-Pay Votes: The Role of the Media

REGGY HOOGHIEMSTRA*, YU FLORA KUANG** and BO QIN†

*Faculty of Economics and Business, Department of Accounting, University of Groningen, Groningen, The Netherlands, **Department of Accounting, VU University Amsterdam, Amsterdam, The Netherlands and †Amsterdam Business School – Accounting Section, University of Amsterdam, Amsterdam, The Netherlands

(Received: July 2013; accepted: March 2015)

ABSTRACT We investigate the association between the media coverage of firms' CEO pay packages and subsequent shareholder voting on say-on-pay resolutions, and find that negative media coverage is able to predict shareholder discontent over say on pay. When we divide media coverage into coverage in the financial and business press versus coverage in the general press, we find that shareholder voting on say-on-pay resolutions is mainly associated with the articles from the financial and business press. This suggests that the media cannot be considered a homogeneous information source that is equally able to predict shareholders' voting behaviors. As such, our findings have important implications for studies on the role of the media in corporate governance.

1. Introduction

Although it seems that 'there are few topics that are more pervasive and produce bigger headlines in the business press than executive compensation' (Core, Guay, & Larcker, 2008, p. 1), only a handful of studies have investigated the role of the media with respect to CEO pay (Bednar, 2012; Core et al., 2008; Kuhnen & Niessen, 2012). In the present study, we examine whether negative media coverage of CEO pay can predict shareholder voting on CEO pay (also known as 'say on pay'). On the one hand, scholars suggest that the media can be considered 'information intermediaries' (Bushee, Core, Guay, & Hamm, 2010; Dai, Parwada, & Zhang, in press; Dyck & Zingales, 2002; Miller, 2006). These scholars emphasize that the media disseminate information on corporate governance that is relevant to shareholders (e.g. board underperformance or CEO pay not linked to performance) and by doing so help to mitigate agency problems. Others, however, suggest that the media mainly want to entertain their audience by 'sensationalizing' coverage (Core et al., 2008; Jensen, 1979). The perspective that negative media coverage is merely 'sensationalism' provides a contrasting viewpoint suggesting that media coverage is not associated with voting outcomes.

Say on pay represents a particularly powerful setting for an investigation into the role of the media, not only because of the public's interest in CEO pay, but also because of the challenges

Correspondence Address: Reggy Hooghiemstra, Faculty of Economics and Business, Department of Accounting, University of Groningen, Duisenberg Building Room 805, PO Box 800, 9700 AV Groningen, The Netherlands. Email: r.b.h.hooghiemstra@rug.nl

Paper accepted by Guest Editors Special Issue on Regulation and disclosure of executive compensation.

shareholders face when they analyze CEO pay packages (Ertimur, Ferri, & Oesch, 2013; Ferri & Maber, 2013). Making judgments about CEO pay packages is complex due to the multifaceted and complicated nature of these packages (Buck, Bruce, Main, & Udueni, 2003). In keeping with social cognition research (Fiske & Taylor, 2008), it is likely that when shareholders assess a CEO pay package, they consider others' assessments in general and those of the media in particular (cf. Pollock, Rindova, & Maggitti, 2008). This creates the possibility that there is an association between the information disseminated through the media, and shareholders' voting on say-on-pay resolutions.

We investigate a sample of major firms listed on the London Stock Exchange during the fiscal years 2002–2009.[1] We measure media coverage by analyzing the text of newspaper articles about CEO compensation that appeared in seven major British newspapers. We use linguistic software to determine the degree of negativity in media coverage of CEO pay (Bednar, 2012; Kuhnen & Niessen, 2012; Loughran & McDonald, 2011). Using a propensity score matching design, we find that negative media coverage of CEO pay shortly before an annual general meeting (AGM) is able to predict the extent of voting dissent on the say-on-pay resolution. We propose there are two, not mutually exclusive, explanations for the relationship between negative media coverage and say-on-pay voting dissent.

One explanation is that the media are singling out the same firms that shareholders have identified as having problematic pay practices – pay practices that are likely to be subject to high or higher levels of voting dissent. We refer this effect as the *capturing explanation*. Another explanation is that news disseminated by the media does affect the voting behavior of some shareholders. This interpretation suggests that negative media coverage *causes* some shareholders to vote against the say-on-pay resolution; hence, we refer to this as the *causing explanation*.

A second important finding relates to the difference in effect between specialized and generic media sources. Specifically, when we divide media coverage into coverage in the financial and business press (i.e. *Financial Times*) versus that in the general press (*Times*, *Guardian*, etc.), we find that the effect of the media coverage on shareholder say-on-pay voting dissent is significant only for the financial and business press. This evidence is consistent with our two possible explanations. Specifically, one is that the *Financial Times* is perceived as a more credible source and, hence, it can be expected that shareholders follow its advice when voting on the say-on-pay resolution. This view favors a causal interpretation. However, the significant effect of the *Financial Times* may equally point to the possibility that this newspaper is better (i.e. more sophisticated) than other media sources at singling out the same firms that voting shareholders have distinguished from others (regardless of any media coverage).

This study makes several contributions to the literature. Firstly, it adds to the nascent literature on the determinants of shareholder voting in general (Hillman, Shropshire, Certo, Dalton, & Dalton, 2011; Iliev, Lins, Miller, & Roth, in press) and say-on-pay voting in particular (Balsam & Yin, 2012; Carter & Zamora, 2009; Conyon & Sadler, 2010; Ertimur, Ferri, & Muslu, 2011; Ertimur et al., 2013; Ferri & Maber, 2013; Gök, 2012; Gök, Imhof, & Kunz, 2014; Hooghiemstra, Kuang, & Qin, 2014; Larcker, McCall, & Ormazabal, 2013). To date, these studies have identified, for instance, firm performance, excessive CEO pay, and recommendations of proxy advisors as predictors of shareholder voting. To the best of our knowledge, we are the first to provide evidence that the outcomes of say-on-pay votes are associated with negative media coverage.

[1]UK-listed firms have had experience with say-on-pay resolutions since 2003. Other countries have followed suit. For example, in the USA, say-on-pay legislation became effective in July 2010, with the passage of the Dodd–Frank Wall Street Reform and Consumer Protection Act.

Secondly, our study adds to literature on the impact of the media on shareholder behavior (Joe, Louis, & Robinson, 2009; Johnson, Ellstrand, Dalton, & Dalton, 2005; Tetlock, 2007; Tetlock, Saar-Tsechansky, & Macskassy, 2008). Prior work in this area has linked media attention to stock trading (Dai et al., in press; Engelberg & Parsons, 2011) and share price reactions (Tetlock, 2007, 2011; Tetlock et al., 2008), thus focusing on shareholders' 'exit' behavior. In contrast, by analyzing the effects of newspaper coverage of CEO pay on shareholder voting, we investigated 'voice' (Hillman et al., 2011; Hirschman, 1970), which is a less studied aspect of shareholder behavior.

We also contribute to the governance literature on the effects of media coverage on firm and shareholder behavior (Bednar, 2012; Bushee et al., 2010; Core et al., 2008; Johnson et al., 2005) by providing preliminary evidence of the differential effect of the financial and business press (i.e. *Financial Times*) versus the general press (e.g. *Times* and *Guardian*). To date, most of the studies consider the media (i.e. newspapers) a homogeneous information source. Our study, however, indicates that the effects on shareholders' reactions of coverage by a newspaper specialized in financial and business news (i.e. *Financial Times*) are stronger than those resulting from the coverage by other newspapers, possibly due to differences in the perceived sophistication and credibility of these sources. As such, our study has important implications for subsequent studies that look at the role of the media in corporate governance.

2. Literature Review and Empirical Prediction

The Directors' Remuneration Report (DRR) regulation, which became effective in the UK on 31 December 2002, introduced say on pay – a mechanism that allows shareholders to influence CEO pay, by giving them an advisory vote regarding the remuneration report.[2] Shareholders have three options when they vote on the say-on-pay resolution at an AGM.[3] They can vote for the resolution, vote against it, or abstain from voting. In general, when shareholders are dissatisfied with, for example, a firm's pay policy and/or practices, they express their dissatisfaction by either voting against the say-on-pay resolution or abstaining from voting on it (Carter & Zamora, 2009; Conyon & Sadler, 2010; Ferri & Maber, 2013; Hillman et al., 2011).

Social cognition research in general, and investigations into how people form impressions in particular, can be used to explain why there is an association between negative media coverage of CEO pay and shareholder voting on say-on-pay resolutions. Impression formation is a cognitive process in which a person analyzes and brings together information (Fiske & Taylor, 2008). In this process, the person evaluates information items in such a way that the importance of each item determines how much emphasis it receives in the formation of the overall impression (Anderson, 1981; Fiske & Neuberg, 1990; Fiske, Lin, & Neuberg, 1999). Social cognition research suggests that, given people's limited cognitive capacities, more salient information items are recalled more easily and thus become more important in the impression formation process (Bazerman & Moore, 2009; Fiske & Taylor, 2008). Various studies have demonstrated that widely available information, such as information disseminated by the media, is more salient and, hence, tends to be more easily remembered and more frequently used (cf. Pollock et al., 2008; see also Kahneman, 2011; Tversky & Kahneman, 1973). Moreover, research has

[2]In June 2012, the UK government changed the non-binding, advisory nature of the say-on-pay vote to a binding resolution, effective October 2013.

[3]At AGMs, shareholders typically vote on approximately 10 resolutions, including the election/re-election of directors, the acquisition or disposal of assets, the appointment/reappointment of auditors, declaration of dividends, approval of the firm's annual report and accounts, and approval of the remuneration report (for detailed information, see Conyon & Sadler, 2010).

shown that people are prone to a 'negativity bias', which means that negative information is more salient and weighted more heavily when people form impressions (Ito, Larsen, Smith, & Cacioppo, 1998; Rozin & Royzman, 2001).

The literature offers two opposing views on the possible effects of the media on shareholders' judgmental processes related to CEO pay. Firstly, the media can serve a monitoring role and help to lower agency costs by reducing information asymmetry between agents and principals. Moreover, negative media coverage imposes reputational costs on executive and non-executive directors who do not act in the shareholders' interests (Bednar, 2012; Dyck, Volchkova, & Zingales, 2008; Dyck & Zingales, 2002; Liu & McConnell, 2013; Miller, 2006). This view, which emphasizes that the media act as 'information intermediaries', suggests that the media speak to, for instance, representatives from Association of British Insurers (ABI), Pensions & Investment Research Consultants (PIRC), and other shareholder groups, and subsequently disseminate information about firm practices, such as CEO pay, that would otherwise be less salient to shareholders. Appendix B.1 contains an example of a newspaper article that may be indicative of this role. The article reports that both ABI and PIRC have serious issues with Next Plc's pay packages, and that both have issued warnings – indicating that these shareholder groups have advised their clients not to support the say-on-pay resolution at the upcoming AGM. According to this view, the media disseminates useful information on CEO pay packages.

An alternative perspective is that the media want to entertain their readers by 'sensationalizing' (Core et al., 2008; Jensen, 1979) their coverage of CEO pay packages. In the context of this study, it is possible that the media use colorful language to describe CEO pay packages. Appendix B.2 presents an example of media coverage that may be indicative of the press mainly seeking to entertain its readers. This newspaper article discusses the pay packages offered to QinetiQ Plc's incoming and outgoing CEOs in a way that seems to reflect this journalist's or newspaper's view that the pay packages are inappropriate, given the choice of such words as 'Quinn [the new CEO] *banked* £886,564 in the year to the end of March, despite joining on November 16', '*shelling out*', '*splashed out* £600,000 on a "golden hello" package to new chief Leo Quinn, plus a £517,000 *pay-off* to former boss Graham Love', and 'He [Graham Love] was *controversially* handed shares worth about £21 m' [italics added].

The literature discussed earlier provides two perspectives regarding the ability of the media to predict shareholders' voting decisions at AGMs. According to the 'information intermediaries' view, the media disseminates information that is useful and relevant to shareholders. Following this view, it can be expected that negative media coverage is able to predict shareholder discontent as indicated by shareholders' voting on say-on-pay resolutions at AGMs. A contrasting perspective, however, is the 'entertainment' viewpoint, which suggests that media coverage of CEO pay packages is mainly sensationalistic and, hence, is not able to predict say-on-pay voting outcomes.

3. Research Design

3.1. Sample Selection and Data Sources

Considering the general public's interest in large firms, our initial sample comprises the FTSE 350 non-financials, based on market capitalization at the end of 2006,[4] and all banks and financial institutions. To alleviate the potential bias introduced by exclusively focusing on large firms, we randomly select 40 firms from the FTSE SmallCap and include them in our sample. Our

[4]We refer to firms' capitalization in 2006 to avoid possible contamination effects of executive compensation regulations issued in 2002 (e.g. the implementation of 'say-on-pay' regulation) and the 2007 financial crisis.

investigation period covers the fiscal years 2002 (i.e. the year that say on pay became effective in the UK) to 2009.

We obtain the data for our analysis from several sources, namely LexisNexis Academic (newspaper articles on CEO compensation), Manifest (say-on-pay voting outcomes), BoardEx (information on CEO compensation and corporate governance characteristics), and Compustat Global (accounting information and capital market information). We supplement our data with such information as pay provisions and performance targets manually collected from firms' annual reports. In total, our sample comprises 1700 observations concerning 253 firms.

3.2. Variable Measurement

3.2.1. Media coverage

We determine media coverage regarding a pay package offered to a specific firm's CEO by measuring the tone of newspaper articles published during the calendar years 2001–2010 in seven major British newspapers (for a similar approach, see Bednar, 2012; Bednar, Boivie, & Prince, 2013; Core et al., 2008). Specifically, we electronically search the *Daily Mail*, *Daily Telegraph*, *Financial Times*, *Guardian*, *Mirror*, *Sun*, and *Times* for relevant articles. This sample of newspapers includes the three largest newspapers in terms of circulation (i.e. *Sun, Daily Mail*, and *Mirror*) and those generally considered high-quality British newspapers (i.e. *Daily Telegraph*, *Times*, and *Guardian*).[5] We also include the *Financial Times* because it is generally considered one of the world's leading newspapers specializing in financial and business news. We conjecture that our focus on these leading newspapers resulted in a representative sample of newspaper articles that reflect the general view of the media. Similar to Core et al. (2008), we focus on newspaper articles covering CEO pay at a specific firm. In particular, for each firm included in our sample, we locate newspaper articles written about the CEO's pay package using the following search string:[6]

> (Company name) AND (CEO name) w/20 (compensation OR salary OR bonus OR option OR restricted stock)

We search for newspaper articles in the period starting on the day after the end of fiscal year t until the day of the AGM of fiscal year t.[7]

To determine the tone of newspaper articles, we use Linguistic Inquiry and Word Count (LIWC), a text analysis software program designed by psycholinguists (Pennebaker, Mehl, & Niederhoffer, 2003). This software calculates the degree of use of various categories of words across texts, in line with the approach used in prior textual analyses in accounting, finance, and management (Bednar, 2012; Kuhnen & Niessen, 2012; Loughran & McDonald, 2011; Rogers, Van Biskirk, & Zechman, 2011; Tetlock, 2007; Tetlock et al., 2008). Similar to Core et al. (2008) and Kuhnen and Niessen (2012), and in line with our literature review, we focus on negative media coverage. Prior research shows that media coverage of CEO pay packages tends to be rather negative in tenor (Kuhnen & Niessen, 2012). From the LIWC word list, we obtain the

[5]See the website of the Audit Bureau of Circulations (www.abc.org.uk).

[6]We use this free-text search string to identify all newspaper articles that concern the pay packages offered to the CEO of a specific firm. Similar to Core et al. (2008), we use a restriction ('w/20') that locates words within 20 words of the CEO's name to ensure that only those articles that link compensation to a *specific* CEO and firm are included.

[7]We check the robustness of the results using alternative windows to measure media attention. One is a full window from the day after the AGM of fiscal year $t - 1$ until the day of the AGM of fiscal year t. The other is from the day after the AGM of $t - 1$ until the end of fiscal year t. In both cases, we obtain consistent findings.

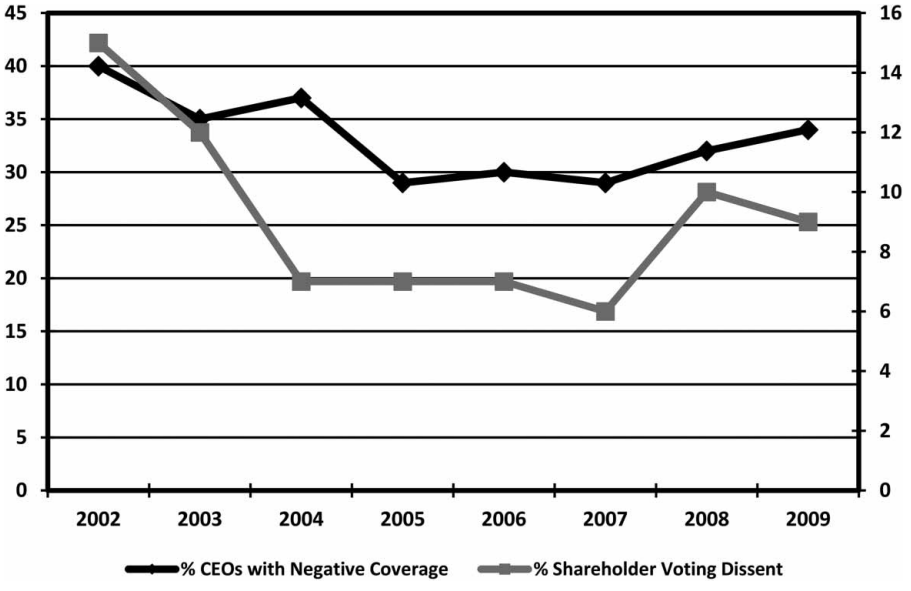

Figure 1. Time trends in compensation-related media coverage and shareholder voting dissent

degree of negative words (NEGLIWC) in media attention to CEO pay.[8] Appendix B gives examples of negative media coverage of CEO pay.

Figure 1 presents the development over time of the media coverage and say-on-pay voting dissent. Two observations emerge from this figure. Firstly, at the beginning of our investigation period, firms tended to receive more intensive media attention, and the coverage increased at the start of the financial crisis and economic downturn. Secondly, voting dissent was at a relatively high level when say-on-pay regulations became effective in 2002, and peaked in the midst of the economic recession (fiscal year 2008). Given the evidence of a temporal relation at an aggregate level, we estimated our regression models with standard errors of coefficients clustered by firm and year simultaneously.

3.2.2. Shareholder discontent with CEO pay

Our measure of shareholder discontent with CEO pay is the untransformed fraction of shareholders abstaining from voting on or voting against a say-on-pay resolution (DISSENT) (Carter & Zamora, 2009; Conyon & Sadler, 2010; Ferri & Maber, 2013; Hooghiemstra et al., 2014).[9] Table 1 provides the descriptive statistics. The mean DISSENT is 0.09, which is consistent with prior evidence (Ferri & Maber, 2013).

3.2.3. Other variables

We measure firm performance using the firm's market return over the fiscal year.[10] We used separate terms for positive returns (POSRET) and negative returns (NEGRET) to test for possible asymmetric effects.

---

[8]We use a number of alternative word lists to quantify negative media coverage. The results are discussed in the robustness checks.

[9]Our findings remain consistent when using only the fraction of voting against a say-on-pay resolution as the dependent variable to proxy for voting dissent. For robustness, we log-transformed DISSENT (i.e. log[DISSENT/(1 − DISSENT)]) and find similar results.

Table 1. Descriptive statistics

Variable	Mean	Std. Dev.	Q1	Median	Q3
DISSENT	0.091	0.104	0.023	0.057	0.120
$DNEGLIWC_{SHORT}$	0.239	0.427	0.000	0.000	0.000
$DNEGLIWC_{LONG}$	0.255	0.436	0.000	0.000	1.000
NEGLIWC	0.243	0.505	0.000	0.000	0.000
CITATION	0.016	0.125	0.000	0.000	0.000
POSRET	0.392	0.352	0.000	0.107	0.382
NEGRET	−0.133	0.222	−0.216	0.000	0.000
TOTCOMP	13.923	0.951	13.308	13.859	14.492
RESTOTCOMP	0.000	0.587	−0.347	0.003	0.391
SEVERANCE	0.065	0.247	0.000	0.000	0.000
OVERINCENTIVE	0.505	0.500	0.000	1.000	1.000
RETEST	0.097	0.296	0.000	0.000	0.000
MULTITARGETS	0.388	0.487	0.000	0.000	1.000
EQUITY	0.455	0.187	0.345	0.455	0.566
POSDRR	0.841	0.305	0.640	0.820	1.010
NEGDRR	0.601	0.226	0.460	0.590	0.730
CONSULTANT	0.806	0.395	1.000	1.000	1.000
MTB	1.171	1.120	0.540	0.869	1.394
SIZE	6.765	1.681	5.612	6.612	7.693
ROA	0.056	0.081	0.029	0.056	0.092
RCSIZE	1.297	0.266	1.099	1.386	1.386
RCMEET	1.613	0.377	1.386	1.609	1.946
INSIDER	0.214	0.268	0.000	0.143	0.333
CEOHOLD	10.676	5.311	11.396	12.832	13.847
BOARDHOLD	0.050	0.146	0.001	0.003	0.025
INSTHOLD	0.230	0.179	0.084	0.200	0.345

Notes: The table provides summary statistics for the variables used in the main analyses. Sample consists of 1700 firm-year observations from fiscal years 2002–2009. All variables are defined in Appendix A.

In line with prior literature (Carter & Zamora, 2009; Conyon & Sadler, 2010; Ferri & Maber, 2013), we use a variety of control variables. We first control for CEO compensation and pay provisions, including total compensation (TOTCOPM), excess pay (RESTOTCOMP),[11] severance pay (SEVERANCEPAY), an indicator for equity grants exceeding 100% of base

[10]Shareholders may evaluate a firm's performance relative to its peers in the industry (Carter & Zamora, 2009). For robustness, we also use industry-adjusted market return, a return measure equal to the firm's raw return minus the average market return of all firms in the same industry as defined by the Fama–French 12-industry classification. In model 1, we use separate terms for positive returns (ADJPOSRET) and negative returns (ADJNEGRET), and replace POSRET and NEGRET, respectively. We find consistent results (not tabulated). We do not match the performance window with the window of media coverage, because share price may incorporate the tone in the media and thus using a window completely overlapping media coverage would have provided a noisy measure of firm performance. In another robustness check, we include the firm's market return over the period between the end of the fiscal year and the AGM date as a right-hand side variable. Untabulated results show that the short-term market return loads positively and significantly, which is consistent with prior evidence that firms expecting high levels of shareholder discontent choose to release good news before their AGMs and thus receive higher market returns before shareholders cast their votes (Dimitrov & Jain, 2011).

[11]Following Core and Guay (1999), we capture CEO excess pay by using the residual term (unexpected part) from cross-sectional estimation regression of CEO total compensation. More specifically, we regress CEOs' actual pay on a number of determinants of the expected pay level, including the natural logarithm of total assets, earnings per share, return on assets, buy-and-hold return, market-to-book ratio, standard deviation of stock returns over previous 12 months, the natural logarithm of a CEO's age, the natural logarithm of 1 plus the CEO's tenure, the percentage of dependent directors

salary (OVERINCENTIVE),[12] an indicator for allowing retesting on performance-vested equity plans (RETEST), an indicator for the presence of multiple performance targets (MULTITARGETS), and the proportion of equity-linked pay in total compensation (EQUITY). The decision to employ pay-related controls is based on principles of best practices promoted by the UK corporate governance code (e.g. the Combined Code) and by shareholder groups, such as ABI and PIRC. Pay practices that are not in line with best practices are likely to trigger shareholder discontent.

Next, we control for the possible influence of remuneration report writing style on shareholder say-on-pay vote outcomes, as measured by the positive tones (POSDRR) and negative tones (NEGDRR) using Loughran and McDonald's (2011) financial domain-specific word lists.[13] Given the influence of shareholder groups in the UK (Balsam & Yin, 2012), we control for their possible impact on shareholders' voting. Specifically, in our set of newspaper articles covering CEO pay at a specific firm, we search for articles that cited at least one representative of a shareholder group[14] expressing a negative view about pay practices at that firm. We include an indicator variable for such citations (CITATION). We find that about 7% of negative-toned articles explicitly cite the views of influential shareholder groups. We also accounted for the influence of compensation consultants on say-on-pay votes by adding an indicator variable (CONSULTANT) to our model.

Following prior literature, we controlled for the following firm characteristics: the market-to-book ratio at the end of the fiscal year (MTB), firm size (SIZE) measured as the market value at the end of the fiscal year, accounting performance as return on assets (ROA), size of the compensation committee (RCSIZE), the number of meetings held during the fiscal year (RCMEET), the percentage of dependent directors on the board (INSIDER), share holdings of the CEO (CEOHOLD), ownership of all board members (BOARDHOLD), and institutional ownership (INSTHOLD) at the end of the year (Conyon & Sadler, 2010; Core, Holthausen, & Larcker, 1999; Ferri & Maber, 2013; Goh & Gupta, 2010; Rogers et al., 2011). Table 1 provides summary statistics for the variables used in our main analyses, which are in general consistent with prior studies (Ferri & Maber, 2013; Hooghiemstra et al., 2014).[15]

Finally, we include INDUSTRY dummy variables, using the Fama–French 12-industry classification.[16] Appendix A provides definitions of all variables.

3.3. Empirical Model

We use the following ordinary least squares (OLS) model:[17]

$$\text{DISSENT} = c + \alpha\text{NEGLIWC} + \sum \beta_i \text{CONTROL} + \sum \gamma_j \text{INDUSTRY}_j + \varepsilon, \qquad (1)$$

on the board, and the natural logarithm of 1 plus the number of board members, all measured at the end of year *t*. Furthermore, industry and year dummies are included to control for industry- and year-level fixed effects.

[12]Our reading of voting reports for 2009 and 2010 from PIRC is that PIRC generally considered any equity pay in excess of 100% of base salary as excessive and therefore recommended an 'oppose' vote.

[13]We report our results using Loughran and McDonald's (2011) word lists, although using alternative word lists (such as the LIWC word list of negative emotions) does not affect our inferences.

[14]Shareholder groups include the ABI, the National Association of Pension Funds (NAPF), PIRC, UK Shareholders' Association (UKSA), Hermes, and UK Individual Shareholders Society (ShareSoc).

[15]Compared with Ferri and Maber (2013), our observation period also covers later years after the implementation of say on pay. When constraining the investigation window to the early years, we found that firms more often tend to have retesting provision in place (i.e. above 25% in 2002 and 2003).

[16]We report our results using the Fama–French 12-industry categories. Alternatively, using the Fama and French (1997) 48-industry classification or a two-digit standard industrial classification does not affect our inferences.

where we cluster standard errors at both firm and year levels. As discussed in the literature review and empirical prediction section, we expect the level of shareholder discontent with say-on-pay resolutions to increase with the level of negative media coverage of CEO pay. We therefore expect the coefficient on NEGLIWC (i.e. α) to be significant and positive in model 1.

Table 2 gives the Pearson correlation matrix of variables used in our analysis.[18] It shows that a higher level of voting dissent is correlated with a higher level of negative media coverage, which is consistent with our expectation. Furthermore, firms face a higher level of shareholder discontent when there is a shareholder group citation in the media, a notice period longer than 12 months, a possibility to retest the performance conditions, a use of multiple performance targets, an increased level of negative tone in their remuneration reports, smaller growth and investment opportunities (i.e. a lower MTB), poorer performance (i.e. a lower ROA), and/or a smaller proportion of shares held by board members. In addition, firms with higher CEO total pay, a larger proportion of equity-linked compensation in CEO total pay, a higher level of linguistic tone in their remuneration report (either positive or negative), hiring a compensation consultant, a larger firm size, poorer performance, a larger remuneration committee, more frequent remuneration committee meetings, higher CEO shareholding, lower board member shareholding, and/or lower institutional ownership are associated with more negative media coverage of CEO pay.[19]

4. Empirical Results

4.1. Do the Media Predict Voting Outcomes?

We investigate whether the media are able to predict shareholder voting outcomes and, hence, whether negative media coverage of CEO pay is associated with higher levels of subsequent say-on-pay voting dissent. We group firms on the basis of whether they received negative media coverage during a short window (i.e. in the period from the day after the end of fiscal year t until the date of the AGM of year t) as well as a long window (i.e. in the period from the first day after the AGM of year $t-1$ until the end of fiscal year t). In Panel A of Table 3, we compare the results on shareholder voting dissent across the groups.

The univariate statistics on both mean and median comparisons show that firms that received negative media coverage indeed encountered significantly higher levels of shareholder discontent over say-on-pay resolutions ($p < .01$), compared with firms that did not get such coverage. Further, firms with negative media coverage are more likely to encounter more than 20% dissent at AGMs ($p < .10$),[20] which is consistent with the idea that there is an association between negative media coverage and subsequent voting dissent. Notably, the probability of a firm experiencing a high level of say-on-pay dissent is approximately 15% for votes preceded

[17]For robustness, we used the Tobit model. The untabulated results yielded the same inferences.

[18]Pearson correlations and Spearman correlations give consistent results (not tabulated). In our sample, TOTCOMP and RESTOTCOMP are highly correlated (rho = 0.69; $p < .01$). Similar to Core et al. (2008), we use either total pay or excess pay in model 1 and the results remain consistent. For brevity, we report our results using TOTCOMP.

[19]Statistics of variance inflation factor (VIF) values show that our regression results are not subject to bias due to potential multicollinearity between independent variables (all VIF values <3.5).

[20]This identification of high levels of dissent cases is consistent with prior literature. Ferri and Maber (2013) use a 20% voting dissent threshold to identify 'high dissent' firms. The cutoff of 20% is also consistent with anecdotal evidence. For instance, according to feedback from a July 2011 meeting of members of the WorldatWork's Executive Rewards Advisory Board and other executive compensation professionals, any say-on-pay proposal receiving less than 80% support is considered a significant protest vote (see 'A narrow escape: When your say-on-pay vote passes, but by an unacceptably low margin' by Andrea Ozias, World at Work 2011).

Table 2. Pearson correlation matrix of variables used in the main analyses

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
(A) DISSENT	1.00																					
(B) NEGLIWC	**0.11**	1.00																				
(C) CITATION	**0.10**	**0.25**	1.00																			
(D) POSRET	0.00	−0.05	0.00	1.00																		
(E) NEGRET	0.03	0.08	0.01	**−0.53**	1.00																	
(F) TOTCOMP	0.03	**0.29**	**0.18**	0.05	0.01	1.00																
(G) SEVERANCE	**0.24**	0.04	−0.01	−0.01	0.01	**−0.10**	1.00															
(H) OVERINCENTIVE	−0.02	**0.15**	**0.07**	**0.09**	**−0.07**	**0.64**	**−0.11**	1.00														
(I) RETEST	**0.08**	0.03	0.02	0.01	0.00	0.02	**0.10**	0.01	1.00													
(J) MULTITARGETS	**0.08**	−0.01	0.02	0.00	0.03	−0.02	0.03	−0.04	0.04	1.00												
(K) EQUITY	−0.03	**0.16**	**0.10**	**0.08**	−0.04	**0.53**	**−0.07**	**0.66**	−0.04	**−0.08**	1.00											
(L) POSDRR	0.04	**0.09**	**0.09**	0.03	0.01	**0.20**	0.01	**0.13**	**−0.10**	0.03	**0.12**	1.00										
(M) NEGDRR	**0.09**	**0.12**	0.00	0.01	0.00	0.02	0.02	0.04	**0.07**	**0.11**	0.00	0.02	1.00									
(N) CONSULTANT	−0.03	**0.09**	0.03	−0.02	0.01	**0.26**	−0.03	**0.16**	0.06	−0.04	0.06	**0.08**	**0.09**	1.00								
(O) MTB	**−0.07**	−0.04	−0.01	**0.35**	**−0.13**	**0.08**	−0.04	**0.08**	0.00	−0.04	**0.11**	0.03	**−0.08**	−0.02	1.00							
(P) SIZE	0.00	**0.33**	**0.17**	**0.16**	−0.03	**0.71**	**−0.11**	**0.41**	0.03	−0.01	**0.38**	**0.17**	0.01	**0.23**	**0.23**	1.00						
(Q) ROA	**−0.10**	**−0.08**	0.03	0.05	−0.03	**0.11**	−0.04	**0.07**	−0.04	−0.05	0.06	0.00	**−0.11**	0.00	**0.37**	**0.18**	1.00					
(R) RCSIZE	−0.02	**0.12**	0.06	−0.03	0.04	**0.36**	−0.02	**0.22**	0.06	0.00	**0.17**	**0.08**	0.06	**0.26**	−0.04	**0.38**	0.04	1.00				
(S) RCMEET	0.01	**0.15**	**0.09**	−0.01	−0.01	**0.30**	−0.04	**0.16**	0.00	0.04	**0.12**	0.05	0.06	**0.23**	−0.04	**0.27**	**−0.08**	**0.25**	1.00			
(T) INSIDER	−0.04	−0.01	−0.01	−0.01	0.01	−0.02	−0.03	−0.05	−0.02	0.01	−0.03	−0.01	0.00	−0.02	−0.01	−0.03	0.03	**−0.09**	−0.05	1.00		
(U) CEOHOLD	0.02	**0.16**	**0.09**	0.01	0.01	**0.62**	−0.06	**0.61**	0.04	**0.07**	**0.24**	**0.10**	**0.09**	**0.29**	0.01	**0.36**	0.03	**0.26**	**0.21**	−0.03	1.00	
(V) BOARDHOLD	**−0.09**	**−0.11**	−0.05	**−0.06**	0.03	**−0.24**	−0.02	**−0.18**	−0.03	−0.02	−0.03	**−0.07**	**−0.07**	**−0.12**	0.00	**−0.21**	0.04	**−0.17**	**−0.21**	**0.09**	**−0.27**	1.00
(W) INSTHOLD	−0.05	**−0.12**	−0.02	−0.03	0.05	−0.03	**−0.07**	−0.03	**−0.10**	−0.02	−0.05	0.00	−0.04	−0.02	0.00	**−0.21**	**−0.06**	−0.04	−0.01	−0.04	0.01	**−0.15**

Notes: Pearson correlations are reported in the matrix. Correlations with *p*-value (two-tailed) less than .01 are in bold. See Appendix A for variable definitions.

Table 3. Comparison between firms with negative media and firms without negative media

Panel A: Prior to propensity score matching, differences in shareholder voting dissent across groups based on media coverage

	$DNEGLIWC_{SHORT} = 1$ ($N = 407$)			$DNEGLIWC_{SHORT} = 0$ ($N = 1293$)			Standardized differences	Differences (1–0)	
Variables	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	(%)	Mean	Median
DISSENT	0.109	0.068	0.116	0.085	0.053	0.100	22.16	0.024***	0.015***
HIGHDISSENT	0.146	0.000	0.352	0.107	0.000	0.310	11.76	0.037**	0.000**
	$DNEGLIWC_{LONG} = 1$ ($N = 433$)			$DNEGLIWC_{LONG} = 0$ ($N = 1267$)			Standardized differences	Differences (1–0)	
Variables	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	(%)	Mean	Median
DISSENT	0.104	0.067	0.110	0.086	0.053	0.101	17.05	0.018***	0.014***
HIGHDISSENT	0.141	0.000	0.348	0.108	0.000	0.311	10.00	0.033*	0.000*

Panel B: Prior to propensity score matching, differences in covariates across groups based on $DNEGLIWC_{SHORT}$

	$DNEGLIWC_{SHORT} = 1$ ($N = 407$)			$DNEGLIWC_{SHORT} = 0$ ($N = 1293$)			Standardized differences	Differences (1–0)	
Variables	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	(%)	Mean	Median
POSRET	0.355	0.049	1.142	0.405	0.125	1.162	−4.34	−0.050	−0.076***
NEGRET	−0.154	0.000	0.234	−0.127	0.000	0.217	−11.96	−0.027**	0.000***
TOTCOMP	14.428	14.363	1.036	13.765	13.722	0.864	69.51	0.663***	0.641***
SEVERANCE	0.084	0.000	0.277	0.060	0.000	0.237	9.31	0.024	0.000*
OVERINCENTIVE	0.634	0.000	0.482	0.464	0.000	0.499	34.65	0.170***	0.000***
RETEST	0.120	0.000	0.326	0.090	0.000	0.286	9.78	0.030*	0.000*
MULTITARGETS	0.391	0.000	0.488	0.387	0.000	0.487	0.82	0.004	0.000
EQUITY	0.505	0.488	0.200	0.439	0.455	0.179	34.78	0.066***	0.033***
POSDRR	0.895	0.860	0.304	0.824	0.800	0.303	23.39	0.071***	0.060***
NEGDRR	0.645	0.640	0.216	0.587	0.580	0.227	26.18	0.058***	0.060***
CONSULTANT	0.860	1.000	0.347	0.790	1.000	0.408	18.48	0.070***	0.000***
MTB	1.101	0.770	1.138	1.193	0.898	1.113	−8.17	−0.092	−0.128***
SIZE	7.843	7.665	1.769	6.426	6.363	1.491	86.62	1.417***	1.302***

(*Continued*)

Table 3. Continued

Panel B: Prior to propensity score matching, differences in covariates across groups based on DNEGLIWC$_{SHORT}$

	DNEGLIWC$_{SHORT}$ = 1 (N = 407)			DNEGLIWC$_{SHORT}$ = 0 (N = 1293)			Standardized differences	Differences (1–0)	
Variables	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	(%)	Mean	Median
ROA	0.047	0.047	0.086	0.060	0.059	0.080	−15.65	−0.013***	−0.012***
RCSIZE	1.357	1.386	0.278	1.278	1.386	0.259	29.40	0.079***	0.000***
RCMEET	1.711	1.792	0.359	1.582	1.609	0.378	35.00	0.129***	0.183***
INSIDER	0.213	0.143	0.267	0.214	0.167	0.268	−0.37	−0.001	−0.024
CEOHOLD	12.090	13.607	4.667	10.231	12.631	5.423	36.75	1.859***	0.976***
BOARDHOLD	0.027	0.001	0.115	0.058	0.005	0.154	−22.81	−0.031***	−0.004***
INSTHOLD	0.193	0.155	0.170	0.242	0.215	0.181	−27.91	−0.049***	−0.006***

Panel C: Logit model estimated for negative publicity from the media

Independent variable	Dependent variable: DNEGLIWC$_{SHORT}$							
	2002	2003	2004	2005	2006	2007	2008	2009
DNEGLIWC$_{LONG}$	1.319***	2.821***	2.337***	2.200***	2.891***	0.875*	2.534***	1.003***
	(2.82)	(3.90)	(4.00)	(4.35)	(3.99)	(1.69)	(4.56)	(2.59)
POSRET	−1.444*	−0.408***	−1.819**	0.081	−0.266	−1.863*	0.729***	0.114
	(−1.77)	(−2.70)	(−2.27)	(0.39)	(−1.29)	(−1.65)	(2.58)	(0.46)
NEGRET	−2.162*	0.691	−2.353*	2.395**	−3.370***	−2.783	1.442	0.755
	(−1.89)	(0.53)	(−1.65)	(2.30)	(−3.26)	(−1.58)	(1.34)	(0.89)
TOTCOMP	1.583	3.221**	2.875**	0.813	−1.229	3.153**	−1.374	0.990
	(1.13)	(1.96)	(2.15)	(0.75)	(−1.13)	(1.97)	(−1.13)	(1.05)
RESTOTCOMP	0.923	3.225*	2.951**	−0.717	0.217	2.803**	−1.068	1.471
	(0.63)	(1.86)	(2.10)	(−0.51)	(0.18)	(2.00)	(−0.89)	(1.40)
SEVERANCE	0.234	4.081***	0.028	–	–	1.498	–	3.994***
	(0.40)	(3.95)	(0.04)	–	–	(1.26)	–	(2.97)
OVERINCENTIVE	−0.274	1.303	−1.863**	1.554**	0.985	1.680**	−0.615	−1.087
	(−0.30)	(1.13)	(−2.01)	(1.97)	(1.12)	(2.01)	(−0.72)	(−1.38)
RETEST	−0.458	−0.748	0.785	−0.865	0.739	2.552***	–	0.323
	(−0.79)	(−1.08)	(1.16)	(−0.92)	(0.40)	(2.90)	–	(0.41)
MULTITARGETS	−0.581	0.929	−0.509	−0.122	−0.013	0.534	0.507	0.467
	(−1.31)	(1.39)	(−1.06)	(−0.25)	(−0.02)	(0.85)	(1.09)	(0.78)

EQUITY	−0.487	−6.201**	2.890	−2.035	2.449	−4.546**	1.373	2.283
	(−0.21)	(−2.28)	(1.45)	(−0.66)	(0.82)	(−2.36)	(0.68)	(1.11)
POSDRR	0.410	0.522	1.363	0.350	0.723	0.317	1.434	−0.509
	(0.58)	(0.51)	(1.57)	(0.38)	(1.27)	(0.50)	(1.27)	(−0.87)
NEGDRR	1.077	−0.617	1.919	−2.345	3.863*	3.487**	−0.016	2.626***
	(1.14)	(−0.42)	(1.60)	(−1.41)	(1.90)	(2.25)	(−0.01)	(2.61)
CONSULTANT	−0.679	1.192	0.083	2.018	0.709	0.330	−1.209**	0.963
	(−1.10)	(1.18)	(0.08)	(1.36)	(0.71)	(0.38)	(−2.05)	(1.45)
MTB	−0.147	0.392*	0.164	−0.485	−0.111	−0.274	−1.686***	0.238
	(−0.38)	(1.76)	(0.39)	(−1.16)	(−0.44)	(−1.03)	(−3.20)	(0.65)
SIZE	0.220	0.391	−0.438	0.468	1.510***	−0.297	0.878	0.168
	(0.39)	(0.58)	(−0.83)	(1.15)	(3.55)	(−0.46)	(1.60)	(0.37)
ROA	−0.085	−4.508	−8.725***	5.230	−8.159**	1.759	−1.983	−9.474***
	(−0.03)	(−1.41)	(−3.18)	(1.07)	(−2.41)	(0.43)	(−0.81)	(−2.90)
RCSIZE	−0.874	−1.555	−2.699*	−0.799	−2.867***	−0.257	0.023	0.923
	(−0.93)	(−0.77)	(−1.88)	(−0.66)	(−3.04)	(−0.24)	(0.02)	(0.89)
RCMEET	0.217	−0.315	−1.016	0.209	2.493***	0.861	1.065	−0.638
	(0.39)	(−0.40)	(−1.59)	(0.24)	(3.15)	(1.17)	(1.51)	(−0.75)
INSIDER	3.105***	1.610	−2.410***	−0.583	−1.897*	0.176	−0.213	−0.823
	(4.02)	(1.45)	(−3.23)	(−0.47)	(−1.75)	(0.21)	(−0.23)	(−0.46)
CEOHOLD	−0.050	−1.162**	0.111*	−0.124	0.062	−0.137	0.136	0.072
	(−0.78)	(−2.00)	(1.88)	(−1.08)	(0.75)	(−1.40)	(1.53)	(1.09)
BOARDHOLD	−3.932**	−11.171*	−15.047***	0.414	6.037***	−3.466***	0.086	−4.017
	(−2.44)	(−1.84)	(−2.69)	(0.10)	(3.10)	(−2.76)	(0.08)	(−0.99)
INSTHOLD	0.034	0.084	−4.072***	−0.674	1.845	−1.471	0.177	−1.315
	(0.02)	(0.04)	(−2.74)	(−0.37)	(0.93)	(−0.92)	(0.11)	(−0.60)
INDUSTRY	YES	YES	YES	YES	YES	YES	YES	YES
N	181	188	205	210	215	230	199	212
Pseudo-R^2	0.40	0.57	0.49	0.50	0.56	0.44	0.42	0.37
Wald chi-square	76.25***	63.07***	67.35***	78.37***	99.30***	81.04***	52.42***	64.24***

(*Continued*)

Table 3. Continued

Panel D: Subsequent to propensity score matching, differences in covariates across groups based on $DNEGLIWC_{SHORT}$

	$DNEGLIWC_{SHORT} = 1$ ($N = 309$)			$DNEGLIWC_{SHORT} = 0$ ($N = 309$)			Standardized differences	Differences (1−0)	
Variables	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	(%)	Mean	Median
POSRET	0.285	0.042	0.838	0.234	0.066	0.882	5.93	0.051	−0.024
NEGRET	−0.159	0.000	0.239	−0.169	0.000	0.257	4.03	0.010	0.000
TOTCOMP	14.293	14.192	1.011	14.357	14.248	0.878	−6.76	−0.064	−0.056
SEVERANCE	0.087	0.000	0.283	0.081	0.000	0.273	2.16	0.006	0.000
OVERINCENTIVE	0.592	1.000	0.492	0.634	1.000	0.482	−8.62	−0.042	0.000
RETEST	0.126	0.000	0.333	0.152	0.000	0.360	−7.50	−0.026	0.000
MULTITARGETS	0.408	0.000	0.492	0.417	0.000	0.494	−1.83	−0.009	0.000
EQUITY	0.486	0.468	0.203	0.508	0.494	0.206	−10.76	−0.022	−0.026
POSDRR	0.887	0.850	0.293	0.887	0.870	0.289	0.00	0.000	−0.020
NEGDRR	0.626	0.620	0.214	0.609	0.610	0.185	8.50	0.017	0.010
CONSULTANT	0.848	1.000	0.360	0.854	1.000	0.353	−1.68	−0.006	0.000
MTB	1.001	0.803	0.871	1.050	0.762	1.117	−4.89	−0.049	0.041
SIZE	7.563	7.479	1.621	7.729	7.622	1.815	−9.65	−0.166	−0.143
ROA	0.052	0.047	0.075	0.054	0.054	0.061	−2.93	−0.002	−0.007
RCSIZE	1.350	1.386	0.280	1.364	1.386	0.276	−5.04	−0.014	0.000
RCMEET	1.677	1.609	0.369	1.693	1.609	0.339	−4.52	−0.016	0.000
INSIDER	0.223	0.167	0.272	0.229	0.143	0.285	−2.15	−0.006	0.024
CEOHOLD	11.741	13.372	4.784	12.274	13.674	4.437	−11.55	−0.533	−0.302
BOARDHOLD	0.032	0.002	0.129	0.020	0.001	0.090	10.79	0.012	0.001
INSTHOLD	0.204	0.167	0.175	0.213	0.172	0.164	−5.31	−0.009	−0.005

Panel E: Subsequent to propensity score matching, differences in shareholder voting dissent across groups based on DNEGLIWC$_{SHORT}$

	DNEGLIWC$_{SHORT}$ = 1 (N = 309)			DNEGLIWC$_{SHORT}$ = 0 (N = 309)			Standardized differences	Difference (1–0)	
Variables	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	(%)	Mean	Median
DISSENT	0.108	0.066	0.116	0.090	0.052	0.110	15.92	0.017**	0.014**
HIGHDISSENT	0.152	0.000	0.360	0.084	0.000	0.278	21.14	0.068***	0.000***

Notes: *Panel A*. The standardized difference in percent is $100(\bar{x}_{gr1} - \bar{x}_{gr0})/\sqrt{(s^2_{gr1} + s^2_{gr0})/2}$, where $\bar{x}_{gr1}$ and $\bar{x}_{gr0}$ ($s^2_{gr1}$and s^2_{gr0}) are the sample mean (variance) in the DNEGLIWC = 1 and DNEGLIWC = 0 groups. Standardized differences >20 or <−20 suggest large differences (Ferri & Maber, 2013; Rosenbaum & Rubin, 1983). Two-sample *t*-tests are used to test the differences in means, and Wilcoxon two-sample rank-sum tests are used to test differences in medians. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. See Appendix A for variable definitions. *Panel B*. The standardized difference in percent is $100(\bar{x}_{gr1} - \bar{x}_{gr0})/\sqrt{(s^2_{gr1} + s^2_{gr0})/2}$, where $\bar{x}_{gr1}$ and $\bar{x}_{gr0}$ (s^2_{gr1} and s^2_{gr0}) are the sample mean (variance) in the DNEGLIWC$_{SHORT}$ = 1 and DNEGLIWC$_{SHORT}$ = 0 groups. Standardized differences >20 or <−20 suggest large differences (Ferri & Maber, 2013; Rosenbaum & Rubin, 1983). Two-sample *t*-tests are used to test the differences in means, and Wilcoxon two-sample rank-sum tests are used to test differences in medians. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. See Appendix A for variable definitions. Panel C reports the results of logit estimation of cross-sectional determinants of negative publicity. The *z*-statistics in parentheses are based on standard errors adjusted for autocorrelation and heteroskedasticity. ***, **, and * indicate significance at the 1%, 5%, and 10% levels (two-tailed), respectively. See Appendix A for variable definitions. *Panel D*. The standardized difference in percent is $100(\bar{x}_{gr1} - \bar{x}_{gr0})/\sqrt{(s^2_{gr1} + s^2_{gr0})/2}$, where $\bar{x}_{gr1}$ and $\bar{x}_{gr0}$ (s^2_{gr1} and s^2_{gr0}) are the sample mean (variance) in the DNEGLIWC$_{SHORT}$ = 1 and DNEGLIWC$_{SHORT}$ = 0 groups. Standardized differences in covariates between treated and control groups in the range of [−20, 20] indicate a good match (Ferri & Maber, 2013; Rosenbaum & Rubin, 1983). Paired *t*-tests to test the differences in means and Wilcoxon matched pairs signed-rank tests to test differences in medians. See Appendix A for variable definitions. *Panel E*. The standardized difference in percent is $100(\bar{x}_{gr1} - \bar{x}_{gr0})/\sqrt{(s^2_{gr1} + s^2_{gr0})/2}$, where $\bar{x}_{gr1}$ and $\bar{x}_{gr0}$ (s^2_{gr1} and s^2_{gr0}) are the sample mean (variance) in the DNEGLIWC$_{SHORT}$ = 1 and DNEGLIWC$_{SHORT}$ = 0 groups. Standardized differences >20 or <−20 suggest large differences (Ferri & Maber, 2013; Rosenbaum & Rubin, 1983). Paired *t*-tests to test the differences in means and Wilcoxon matched pairs signed-rank tests to test differences in medians. *** and ** indicate significance at the 1% and 5% levels, respectively. See Appendix A for variable definitions.

by a negative-toned article, while the average voting dissent is 11% for the same firm in the absence of such an article.

While our tests suggest that the media have predictive ability regarding say-on-pay voting outcomes, it seems there are two, not mutually exclusive, explanations for the relationship. On the one hand, it is possible that the media are singling out the same firms that shareholders have identified as having problematic pay practices. This explanation suggests that the media capture shareholders' views on CEO pay packages. Another explanation is that news disseminated by the media does affect the voting decisions of some shareholders. This interpretation suggests that negative media coverage causes some shareholders to vote against say-on-pay resolutions.

In addition, it is not unlikely that the positive association between negative media coverage and voting dissent merely reflects some confounding factors that determine both media coverage and say on pay. Panel B of Table 3 presents the multidimensional comparison results when firms are grouped into 'with' versus 'without' negative media coverage during the short window ($DNEGLIWC_{SHORT}$, an indicator variable equal to 1 if a firm received negative media coverage during the short window, and zero otherwise). As we speculated, factors other than dissent differ significantly across the subsamples, including size, performance, growth opportunities, compensation design, corporate governance, ownership structure, etc. Therefore, the incidence of negative media coverage is not random. The existence of potential confounding factors and the endogeneity problem would have biased our estimations in the absence of an appropriate remedy.

Following Armstrong, Jagolinzer, and Larcker (2010), we employed a propensity score-matched pairs research design. The idea of propensity matching is to correct the estimation of the treatment effect (i.e. negative media coverage) for omitted variable bias, by constructing matched pairs that are as similar as possible on the basis of observable CEO and firm-level characteristics. Such a full-dimensional matching approach can relax assumptions in OLS regression estimations and is therefore more robust (Armstrong et al., 2010).[21]

To implement this approach, we first fit a logit model in which the dependent variable was $DNEGLIWC_{SHORT}$.[22] The regressors include $DNEGLIWC_{LONG}$ (an indicator for negative media coverage during a period from last AGM until the end of fiscal year t), POSRET, NEGRET, TOTCOMP, RESTOTCOMP, SEVERANCEPAY, OVERINCENTIVE, RETEST, MULTITARGETS, EQUITY, POSDRR, NEGDRR, CONSULTANT, MTB, SIZE, ROA, RCSIZE, RCMEET, INSIDER, CEOHOLD, BOARDHOLD, INSTHOLD, and INDUSTRY. Given that the prominence of CEO compensation issues (i.e. the 'hot-button' issues) differs across the years, we estimate the regression by year. Panel C of Table 3 gives the results of the logistic regression. It shows that a firm's propensity to receive greater negative media coverage in the short window is higher if the firm has negative media coverage in the long window prior to the fiscal year end. Cross-year differences are observed in the coefficients of other variables.

[21]Propensity score matching is 'a superior econometric approach to matching on the outcome variable and relying on a linear or some other assumed functional form to control for confounding variables' (Armstrong et al., 2010, p. 228). Nevertheless, the effectiveness of this method depends on the quality of the matching process and the selection of controls in estimating propensity scores.

[22]We focus on negative media coverage observed in the short window preceding the say-on-pay votes and its determinants for two reasons. First, the (untabulated) results show that when we include media coverage in both short and long windows in model 1, our findings are driven by negative media coverage in the short window. Second, by doing so, the right-hand side variables are lagged (i.e. the outcome variable is observed in fiscal year $t + 1$, whereas all regressors are measured in year t) so as to enhance causal inference.

We then derive the propensity scores based on the aforementioned CEO and firm-level characteristics and use a nearest-neighbor matching approach with a caliper constraint to construct matched pairs. More specifically, for each year, we match firms that have negative media coverage with firms that have the closest propensity[23] to receive negative media coverage, but did not actually receive it. The final sample includes 309 matched pairs. Panel D in Table 3 presents the covariate differences using the matched sample. We no longer find significant differences across the 'with' and 'without' (negative media coverage) subsamples in any of the covariates.

Next, we compare shareholder voting dissent between the matched firms (see Panel E of Table 3). Both paired t tests and Wilcoxon matched pairs signed-rank tests show that firms with negative media coverage received significantly more unfavorable say-on-pay votes than their peers without such coverage ($p < .05$), after controlling for *ex ante* negative media predictive characteristics. The results are consistent with our expectation about receiving less favorable shareholder say-on-pay voting outcomes following negative media coverage.

Furthermore, column 1 of Table 4 presents the regression results of model 1, where negative media coverage was measured by NEGLIWC. Consistent with our expectation, the significant and positive coefficient on NEGLIWC in column 1 ($p < .05$) suggests that the negative media coverage can predict voting dissent at the subsequent AGM. Table 4 also contains the results of the control variables. In general, they are in line with prior literature: shareholder voting dissent increases when a CEO receives higher total pay ($p < .05$), has a notice period longer than 12 months ($p < .01$), is allowed retesting on performance-vested equity plans ($p < .05$), and/or when a firm's remuneration report is more negatively toned ($p < .05$). In contrast, voting dissent decreases with an increase in growth and investment opportunities ($p < .05$) and/or board member shareholdings ($p < .01$).

4.2. Influential Shareholder Groups

While institutional investors in the USA appear to rely on proxy advisors (e.g. Institutional Shareholder Services (ISS) and Glass Lewis), the interests of institutional shareholders in the UK are frequently promoted by specific groups (ABI, PIRC, etc.) (Balsam & Yin, 2012). In the context of say-on-pay voting, the media may include the views of the representatives from those institutional shareholder groups in their coverage. To account for the influence of institutional shareholder groups on say-on-pay voting, we include the dummy variable CITATION, which indicates that newspaper articles on CEO pay contain quotations from a representative of an influential shareholder group. Examples of reporting are presented in Appendix B.1. In Table 4, CITATION loads significantly and positively ($p < .10$) in both column 2 and column 3. Furthermore, from an economic significance perspective, the coefficient of CITATION is 0.061 in column 2, indicating that when a newspaper article refers to a shareholder group's opinion when criticizing a firm's compensation practices, the level of shareholders' voting dissent increases by approximately 6%, which is a considerable effect given the baseline levels.

Again, the results are in line with both the 'capturing' and the 'causing' effects of the media. On the one hand, the media are singling out firms in which certain shareholders (or their representatives) have already identified problematic pay practices and decided to vote against them. On the other hand, news of concerns held by important shareholder groups (disseminated by the media) may affect the voting decisions of other shareholders, who basically freeride on the information costs incurred by the influential shareholders. Under this interpretation, the influence of

[23]Following Erkens and Bonner (2012), we require matches to have a maximum caliper difference of 0.01 and, in turn, we remove the dissimilar matched pairs to achieve better control for potentially confounding factors.

Table 4. OLS models estimated for shareholder discontent following negative publicity

	Dependent variable: DISSENT		
Independent variable	(1)	(2)	(3)
NEGLIWC	0.021**	0.017*	
	(2.36)	(1.80)	
FTNEGLIWC			0.022**
			(2.53)
NONFTNEGLIWC			−0.001
			(−0.01)
CITATION		0.061**	0.056*
		(2.04)	(1.82)
POSRET	0.002	0.002	0.002
	(1.11)	(1.07)	(1.10)
NEGRET	0.008	0.008	0.008
	(0.81)	(0.86)	(0.88)
TOTCOMP	0.014**	0.013**	0.013**
	(2.42)	(2.23)	(2.27)
SEVERANCE	0.094***	0.095***	0.097***
	(6.18)	(6.13)	(6.32)
OVERINCENTIVE	−0.009	−0.007	−0.007
	(−0.86)	(−0.72)	(−0.74)
RETEST	0.018**	0.017***	0.018***
	(2.52)	(2.58)	(2.78)
MULTITARGETS	0.009	0.009	0.009
	(1.60)	(1.60)	(1.59)
EQUITY	−0.021	−0.023	−0.024
	(−0.92)	(−0.98)	(−1.05)
POSDRR	0.009	0.008	0.008
	(1.09)	(0.94)	(0.97)
NEGDRR	0.023**	0.024**	0.025**
	(1.99)	(1.99)	(1.96)
CONSULTANT	−0.009	−0.009	−0.009
	(−1.33)	(−1.32)	(−1.36)
MTB	−0.004**	−0.003*	−0.003*
	(−1.98)	(−1.78)	(−1.71)
SIZE	−0.002	−0.003	−0.002
	(−0.75)	(−0.82)	(−0.77)
ROA	−0.067	−0.072*	−0.073*
	(−1.56)	(−1.72)	(−1.73)
RCSIZE	−0.016	−0.016	−0.015
	(−1.42)	(−1.39)	(−1.39)
RCMEET	−0.002	−0.003	−0.003
	(−0.23)	(−0.28)	(−0.27)
INSIDER	−0.010	−0.010	−0.010
	(−0.90)	(−0.93)	(−0.88)
CEOHOLD	−0.001	−0.001	−0.001
	(−0.67)	(−0.70)	(−0.76)
BOARDHOLD	−0.086***	−0.086***	−0.087***
	(−3.70)	(−3.71)	(−3.71)
INSTHOLD	−0.030	−0.030	−0.032
	(−1.47)	(−1.50)	(−1.61)
INDUSTRY	YES	YES	YES
N	1700	1700	1700
R^2	0.12	0.12	0.13
F-statistics	6.01***	5.91***	5.84***

Notes: The table provides OLS estimates. The *t*-statistics in parentheses are based on standard errors clustered at both firm and year levels. See Appendix A for variable definitions.
*Significance at the 10% level (two-tailed).
**Significance at the 5% level (two-tailed).
***Significance at the 1% level (two-tailed).

the media is causal, but not necessarily in the sense that the media 'discover' problematic pay practices and thus affect shareholder votes.[24]

Furthermore, as the results in Table 4 (column 2) show, the negative media coverage variable (i.e. NEGLIWC) ($p < .10$), after controlling for citing influential shareholder groups, remains significant, suggesting that articles that do not cite a shareholder group are also associated with say-on-pay voting dissent and that the media indeed have the power to predict subsequent voting outcomes.

4.3. Different News Sources

Research in communication suggests that the use of information depends not only on the availability and salience of information, but also on the perceived credibility of the communication channel (Benabou & Laroque, 1992; Johnson & Kaye, 1998; Meyer, 1988; Wanta & Hu, 1994). Logically, the higher the perceived credibility of a channel, the greater the audience's reliance on information from that channel (Benabou & Laroque, 1992; Wanta & Hu, 1994). This suggests that the extent to which negative media coverage is associated with say-on-pay voting dissent may also depend on the extent to which shareholders consider the media a credible source of information. It is possible that shareholders use the information disseminated by the media because the media 'are believed to have superior ability to access and disseminate information by virtue of their [. . .] positions (Rao, 1998, 2005) and are closely followed because of their perceived superiority in accessing and evaluating firms (Fanelli & Misangyi, 2006)' (Aerts & Cormier, 2009, p. 3). In this case, shareholders believe the media to be a credible source of information and are therefore likely to incorporate media coverage in their judgments.

However, it is also possible that shareholders believe the media merely aim to entertain their readers by sensationalizing stories about CEO pay (Core et al., 2008). To the extent that shareholders are able to see through this type of CEO pay coverage, they might discard the information when making their assessment, because they do not consider the information accurate and reliable (Bushee et al., 2010; Zingales, 2000). This called for an investigation of the differential effects of information from the financial and business press (i.e. *Financial Times*) versus information from the general newspapers (e.g. *Times* and *Guardian*), given their distinct constituent audiences and varying relevance to financial and business decision-making.

We group newspaper articles by source into the *Financial Times* articles and other newspaper articles, and construct two NEGLIWC variables to capture the negative tone (i.e. FTNEGLIWC and NONFTNEGLIWC). Column 3 in Table 4 reports the results. When adding two NEGLIWC variables simultaneously, the coverage in the general press is not significantly associated with say-on-pay voting dissent, which suggests that our earlier findings are driven mainly by the articles in the financial and business press. The results are in line with both explanations of the predictive power of the media. On the one hand, the results suggest that the *Financial Times* articles provide a more credible source because of the superior specialization, sophistication, and reputation of the newspaper compared with other media sources. As a result, it is more capable of singling out the firms that voting shareholders have also singled out. On the other hand, our findings also imply a causal interpretation that voting shareholders follow the opinions and advice of the *Financial Times* because of the credibility of the newspaper and the organization behind it.

[24]It might be that the media disseminate the positions of key shareholders and those positions (once public) affect other shareholders. In other words, even an information intermediary role of the media could result in an indirect causal effect on votes.

4.4. Robustness and Supplemental Tests

4.4.1. Alternative measures for the negative tenor in media coverage

Prior research has used various general and context-specific dictionaries to quantify the tenor in content analyses (Kuhnen & Niessen, 2012; Rogers et al., 2011). In the main analyses, we measure negative media coverage and use the LIWC default negative emotion category, which is largely a general purpose word list. We examine the robustness of our findings by using three alternative word lists to detect the degree of negative publicity about CEO compensation. More specifically, we use (1) a general purpose dictionary, namely the Harvard Psychosociological Dictionary developed by the General Inquirer group (Kothari, Xu, & Short, 2009; Tetlock, 2007), (2) a financial domain-specific word list developed by Loughran and McDonald (2011), and (3) an executive compensation-specific word list developed by Kuhnen and Niessen (2012).[25] We find qualitatively similar results when using these alternative word lists.

4.4.2. Voting dissent on other resolutions

It is possible that the media broadly capture shareholders' sentiments on corporate policies and practices. One might expect that a negative tone in newspaper articles is correlated with shareholders' overall perceptions of the firm, and hence influences shareholders' general voting behavior. If so, we would observe that negative media coverage of CEO pay is associated not only with say-on-pay voting dissent, but also with shareholder voting dissent on other resolutions. To test this alternative explanation, we replicate model 1 using the average voting dissent of all resolutions at an AGM other than say on pay as the dependent variable. Untabulated results show no significant effects of negative media coverage of CEO pay-on-voting dissent on other resolutions. The negative tone in newspaper articles on CEO pay appears to be confined to influencing shareholders' discontent with say on pay. We would not find such results if negative media coverage merely reflected the shareholders' general negative perceptions of the firm. Furthermore, in another robustness test, we included average voting dissent on other resolutions as an additional control variable in model 1 and obtained consistent results.

5. Conclusions

In this research, we examine whether negative media coverage of the pay package offered to a CEO of a specific firm can predict subsequent shareholder voting on say-on-pay resolutions. Using a sample of UK-listed firms for the period 2002–2009, we find that negative media coverage is associated with a larger percentage of shareholders voting against or abstaining from voting on the say-on-pay resolution. Our tests allow us to conclude that the media do have predictive power as regards say-on-pay voting outcomes. However, the tests do not allow us to pinpoint one specific explanation. Rather, the results can be interpreted as the media both 'capturing' and 'causing' shareholders' views on CEO pay packages. Moreover, we provide preliminary evidence of a differential effect of two types of media: we find that shareholder voting dissent is significantly associated with negative coverage in the financial and business press (i.e. *Financial Times*), whereas the association with negative coverage in the general press (e.g. *Guardian* and *Times*) is less prominent.

As with any study, there are limitations that should be acknowledged. Firstly, this study concerned the UK, where during our investigation period say on pay involved an advisory, non-binding vote, and where the freedom of the press is relatively high. It would be worthwhile to examine whether the association between media attention and voting dissent depends on the

[25]We thank Camelia Kuhnen and Alexandra Niessen for providing their word list.

heterogeneity of the institutional setting in which firms operate. Secondly, our study focused on a relatively new item on the ballot – executive pay – an item that, compared with other items, is both complex and challenging for shareholders to analyze (Ertimur et al., 2013). Hence, it is possible that our findings are not necessarily generalizable to other items on which shareholders can vote. Finally, we could not control for how directors responded to (or evaded) questions about executive pay packages during the AGM, just before the vote took place. This limitation could be important, given that Tversky and Kahneman (1974) found that people tend to weight recent information more heavily in their judgment compared with older information.

Despite these limitations, our study offers initial evidence that negative media coverage is associated with say-on-pay voting dissent. We also show that shareholder voting dissent is mainly associated with information from a newspaper specialized in financial and business news, rather than with information from more general newspapers. As such, our study has important implications for subsequent studies that look at the role of the media in corporate governance.

Acknowledgements

We thank the guest editors, Fabrizio Ferri and Robert Göx, and two anonymous reviewers for the constructive feedback and guidance throughout the review process. We thankfully acknowledge the insightful comments from Bob Scapens and Abe de Jong.

References

Aerts, W., & Cormier, D. (2009). Media legitimacy and corporate environmental communication. *Accounting, Organizations and Society*, *34*(1), 1–27. doi:10.1016/j.aos.2008.02.005

Anderson, N. H. (1981). *Foundations of information integration theory*. New York, NY: Academic Press.

Armstrong, C. S., Jagolinzer, A. D., & Larcker, D. F. (2010). Chief executive officer equity incentives and accounting irregularities. *Journal of Accounting Research*, *48*(2), 225–271. doi:10.1111/j.1475-679X.2009.00361.x

Balsam, S., & Yin, J. (2012). *The impact of say-on-pay on executive compensation*. Working paper, Temple University and University of Texas at San Antonio. Retrieved from SSRN. doi:10.2139/ssrn.2026121

Bazerman, M. H., & Moore, D. A. (2009). *Judgment in managerial decision making*. Hoboken, NJ: John Wiley & Sons.

Bednar, M. K. (2012). Watchdog or lapdog? A behavioral view of the media as a corporate governance mechanism. *The Academy of Management Journal*, *55*(1), 131–150. doi:10.5465/amj.2009.0862

Bednar, M. K., Boivie, S., & Prince, N. R. (2013). Burr under the saddle: How media coverage influences strategic change. *Organization Science*, *24*(3), 910–925. doi:10.1287/orsc.1120.0770

Benabou, R., & Laroque, G. (1992). Using privileged information to manipulate markets: Insiders, gurus, and credibility. *The Quarterly Journal of Economics*, *107*(3), 921–958. doi:10.2307/2118369

Buck, T., Bruce, A., Main, B. G. M., & Udueni, H. (2003). Long term incentive plans, executive pay and UK company performance. *Journal of Management Studies*, *40*(7), 1709–1727. doi:10.1111/1467-6486.00397

Bushee, B. J., Core, J. E., Guay, W., & Hamm, S. J. W. (2010). The role of the business press as an information intermediary. *Journal of Accounting Research*, *48*(1), 1–19. doi:10.1111/j.1475-679X.2009.00357.x

Carter, M. E., & Zamora, V. L. (2009). *Shareholder remuneration votes and CEO compensation design*. Working paper, Boston College and Seattle University. Retrieved from SSRN. doi:10.2139/ssrn.1004061

Conyon, M. J., & Sadler, G. V. (2010). Shareholder voting and directors' remuneration report legislation: Say on pay in the UK. *Corporate Governance: An International Review*, *18*(4), 296–312. doi:10.1111/j.1467-8683.2010.00802.x

Core, J. E., & Guay, W. R. (1999). The use of equity grants to manage optimal equity incentive levels. *Journal of Accounting and Economics*, *28*(2), 151–184. doi:10.1016/S0165-4101(99)00019-1

Core, J. E., Guay, W., & Larcker, D. F. (2008). The power of the pen and executive compensation. *Journal of Financial Economics*, *88*(1), 1–25. doi:10.1016/j.jfineco.2007.05.001

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, *51*(3), 371–406. doi:10.1016/S0304-405X(98)00058-0

Dai, L., Parwada, J. T., & Zhang, B. (in press). The governance effect of the media's news dissemination role: Evidence from insider trading. *Journal of Accounting Research*. doi:10.1111/1475-679X.12073

Dimitrov, V., & Jain, P. C. (2011). It's showtime: Do managers report better news before annual shareholder meetings? *Journal of Accounting Research*, *49*(5), 1193–1221. doi:10.1111/j.1475-679X.2011.00419.x

Dyck, A., Volchkova, N., & Zingales, L. (2008). The corporate governance role of the media: Evidence from Russia. *The Journal of Finance*, *63*(3), 1093–1135. doi:10.1111/j.1540-6261.2008

Dyck, A., & Zingales, L. (2002). The corporate governance role of the media. In R. Islam (Ed.), *The right to tell: The role of mass media in economic development* (pp. 107–141). Washington, DC: World Bank.

Engelberg, J. E., & Parsons, C. A. (2011). The causal impact of media in financial markets. *Journal of Finance*, *66*(1), 67–97. doi:10.1111/j.1540-6261.2010.01626.x

Erkens, D. H., & Bonner, S. E. (2012). The role of firm status in appointments of accounting financial experts to audit committees. *The Accounting Review*, *88*(1), 107–136. doi:10.2308/accr-50261

Ertimur, Y., Ferri, F., & Muslu, V. (2011). Shareholder activism and CEO pay. *The Review of Financial Studies*, *24*(2), 535–592. doi:10.1093/rfs/hhq113

Ertimur, Y., Ferri, F., & Oesch, D. (2013). Shareholder votes and proxy advisors: Evidence from say on pay. *Journal of Accounting Research*, *51*(5), 951–996. doi:10.1111/1475-679X.12024

Fama, E. F., & French, K. R. (1997). Industry costs of equity. *Journal of Financial Economics*, *43*(2), 153–193. doi:10.1016/S0304-405X(96)00896-3

Fanelli, A., & Misangyi, V. F. (2006). Bringing out charisma: CEO charisma and external stakeholders. *The Academy of Management Review*, *31*(4), 1049–1061. doi:10.5465/AMR.2006.22528170

Ferri, F., & Maber, D. A. (2013). Say on pay votes and CEO compensation: Evidence from the UK. *Review of Finance*, *17*(2), 527–563. doi:10.1093/rof/rfs003

Fiske, S. T., Lin, M., & Neuberg, S. L. (1999). The continuum model: Ten years later. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 231–254). New York, NY: Guilford Press.

Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1–74). San Diego: Academic Press.

Fiske, S. T., & Taylor, S. E. (2008). *Social cognition: From brains to culture*. Boston: McGraw-Hill Higher Education.

Goh, L., & Gupta, A. (2010). Executive compensation, compensation consultants, and shopping for opinion: Evidence from the United Kingdom. *Journal of Accounting, Auditing & Finance*, *25*(4), 607–643. doi:10.1177/0148558X1002500407

Göx, R. F. (2012). *Say on pay design, executive pay, and board dependence*. Working paper, University of Zurich. Retrieved from SSRN. doi:10.2139/ssrn.1908592

Göx, R. F., Imhof, F., & Kunz, A. H. (2014). *The enforcement of say on pay votes and CEOs' investment incentives*. Working paper, University of Zurich, University of Lausanne, and University of Bern. Retrieved from SSRN. doi:10.2139/ssrn.1588682

Hillman, A. J., Shropshire, C., Certo, S. T., Dalton, D. R., & Dalton, C. M. (2011). What I like about you: A multilevel study of shareholder discontent with director monitoring. *Organization Science*, *22*(3), 675–687. doi:10.1287/orsc.1100.0542

Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*. Cambridge, MA: Harvard University Press.

Hooghiemstra, R. B. H., Kuang, Y. F., & Qin, B. (2014). *Does obfuscating excessive CEO pay work? The effects of remuneration report readability on say-on-pay votes* (Unpublished working paper). University of Groningen, VU University Amsterdam, and University of Amsterdam.

Iliev, P., Lins, K. V., Miller, D. P., & Roth, L. (in press). Shareholder voting and corporate governance around the world. *Review of Financial Studies*. doi:10.1093/rfs/hhv008

Ito, T. A., Larsen, J. T., Smith, N. K., & Cacioppo, J. T. (1998). Negative information weighs more heavily on the brain: The negativity bias in evaluative categorizations. *Journal of Personality and Social Psychology*, *75*(4), 887–900. doi:10.1037/0022-3514.75.4.887

Jensen, M. C. (1979). Toward a theory of the press. In K. Brunner (Ed.), *Economics and social institutions*. Boston: Martinus Nijhoff Publishers. Retrieved from SSRN. doi:10.2139/ssrn.94038

Joe, J. R., Louis, H., & Robinson, D. (2009). Managers' and investors' responses to media exposure of board ineffectiveness. *The Journal of Financial and Quantitative Analysis*, *44*(3), 579–605. doi:10.1017/S0022109009990044

Johnson, J. L., Ellstrand, A. E., Dalton, D. R., & Dalton, C. M. (2005). The influence of the financial press on stockholder wealth: The case of corporate governance. *Strategic Management Journal*, *26*(5), 461–471. doi:10.1002/smj.457

Johnson, T. J., & Kaye, B. K. (1998). Cruising is believing? Comparing internet and traditional sources on media credibility measures. *Journalism and Mass Communication Quarterly*, *75*(2), 325–340. doi:10.1177/107769909807500208

Kahneman, D. (2011). *Thinking, fast and slow*. New York, NY: Farrar, Straus and Giroux.

Kothari, S. P., Xu, L., & Short, J. E. (2009). The effect of disclosures by management, analysts, and business press on cost of capital, return volatility, and analyst forecasts: A study using content analysis. *The Accounting Review*, *84*(5), 1639–1670. doi:10.2308/accr.2009.84.5.1639

Kuhnen, C. M., & Niessen, A. (2012). Public opinion and executive compensation. *Management Science*, *58*(7), 1249–1272. doi:10.1287/mnsc.1110.1490

Larcker, D. F., McCall, A. L., & Ormazabal, G. (2013). *Outsourcing shareholder voting to proxy advisory firms*. Working paper, Stanford University and University of Navarra. Retrieved from SSRN: doi:10.2139/ssrn.2101453

Liu, B., & McConnell, J. J. (2013). The role of the media in corporate governance: Do the media influence managers' capital allocation decisions? *Journal of Financial Economics*, *110*(1), 1–17. doi:10.1016/j.jfineco.2013.06.003

Loughran, T. I. M., & McDonald, B. (2011). When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *The Journal of Finance*, *66*(1), 35–65. doi:10.1111/j.1540-6261.2010.01625.x

Meyer, P. (1988). Defining and measuring credibility of newspapers: Developing an index. *Journalism and Mass Communication Quarterly*, *65*(3), 567–574. doi:10.1177/107769908806500301

Miller, G. S. (2006). The press as a watchdog for accounting fraud. *Journal of Accounting Research*, *44*(5), 1001–1033. doi:10.1111/j.1475-679X.2006.00224.x

Pennebaker, J. W., Mehl, M. R., & Niederhoffer, K. G. (2003). Psychological aspects of natural language use: Our words, our selves. *Annual Review of Psychology*, *54*(1), 547–577. doi:10.1146/annurev.psych.54.101601.145041

Pollock, T. G., Rindova, V. P., & Maggitti, P. G. (2008). Market watch: Information and availability cascades among the media and investors in the U.S. IPO market. *Academy of Management Journal*, *51*(2), 335–358. doi:10.5465/AMJ.2008.31767275

Rao, H. (1998). Caveat emptor: The construction of nonprofit consumer watchdog organizations. *American Journal of Sociology*, *103*(4), 912–961. doi:10.1086/231293

Rao, H. (2005). Interorganizational ecology. In J. A. C. Baum (Ed.), *The Blackwell companion to organizations* (pp. 541–556). London: Wiley-Blackwell.

Rogers, J. L., Van Buskirk, A., & Zechman, S. L. C. (2011). Disclosure tone and shareholder litigation. *The Accounting Review*, *86*(6), 2155–2183. doi:10.2308/accr-10137

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, *70*(1), 41–55. doi:10.1093/biomet/70.1.41

Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, *5*(4), 296–320. doi:10.1207/S15327957PSPR0504_2

Tetlock, P. C. (2007). Giving content to investor sentiment: The role of media in the stock market. *Journal of Finance*, *62*(3), 1139–1168. doi:10.1111/j.1540-6261.2007.01232.x

Tetlock, P. C. (2011). All the news that's fit to reprint: Do investors react to stale information? *Review of Financial Studies*, *24*(5), 1481–1512. doi:10.1093/rfs/hhq141

Tetlock, P. C., Saar-Tsechansky, M., & Macskassy, S. (2008). More than words: Quantifying language to measure firms' fundamentals. *The Journal of Finance*, *63*(3), 1437–1467. doi:10.1111/j.1540-6261.2008.01362.x

Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, *5*(2), 207–232. doi:10.1016/0010-0285(73)90033-9

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*(4157), 1124–1131. doi:10.1126/science.185.4157.1124

Wanta, W., & Hu, Y-W. (1994). The effects of credibility, reliance, and exposure on media agenda-setting: A path analysis model. *Journalism and Mass Communication Quarterly*, *71*(1), 90–98. doi:10.1177/107769909407100109

Zingales, L. (2000). In search of new foundations. *The Journal of Finance*, *55*(4), 1623–1653. doi:10.1111/0022-1082.00262

Appendix A. Variable definitions

Variable	Description
DISSENT	The percent of votes against plus votes abstained from the say-on-pay resolution at the AGM of the fiscal year *t*
HIGHDISSENT	An indicator variable equal to one if the firm's voting dissent rate at the AGM of the fiscal year *t* is greater than or equal to 20%, and zero otherwise
$DNEGLIWC_{SHORT}$	An indicator variable equal to one if the firm has negative media coverage over the period from the day after the end of fiscal year *t* until the day of the AGM for fiscal year *t*, and zero otherwise
$DNEGLIWC_{LONG}$	An indicator variable equal to one if the firm has negative media coverage over the period from starting after the AGM for fiscal year $t - 1$ to the end of the fiscal year *t*, and zero otherwise
NEGLIWC	A count of words, as defined by the LIWC negative emotion word list, as a percent of total words in all articles about the CEO of interest, multiplied by 100; the observation window begins on the day after the end of the fiscal year *t* until the day of the AGM of fiscal year *t*
FTNEGLIWC	A count of words, as defined by the LIWC negative emotion word list, as a percent of total words in all articles published in *The Financial Times*, multiplied by 100; the observation window begins on the day after the end of the fiscal year *t* until the day of the AGM of fiscal year *t*
NONFTNEGLIWC	A count of words, as defined by the LIWC negative emotion word list, as a percent of total words in all articles published in six newspapers other than *The Financial Times*, multiplied by 100; the observation window begins on the day after the end of the fiscal year *t* until the day of the AGM of fiscal year *t*
CITATION	An indicator variable equal to one if a newspaper article cited a representative of a shareholder group expressing a negative view about remuneration practices at a specific firm over the period from the day after the end of fiscal year *t* until the day of the AGM for fiscal year *t*, and zero otherwise; shareholder groups include ABI, National Association of Pension Funds (NAPF), PIRC, UKSA, Hermes, and UK Individual Shareholders Society (ShareSoc)
POSRET	Equal to the firms' market return for the fiscal year *t* if the market return is positive, and zero otherwise
NEGRET	Equal to the firms' market return for the fiscal year *t* if the market return is negative, and zero otherwise
TOTCOMP	The natural logarithm of one plus CEO total compensation of the fiscal year *t*; total compensation is the sum of salary, bonus, equity-linked pay, and any other pay; equity-linked pay is the sum of long-term incentive plan payouts, value of restricted stock grants, and value of option grants during the year
RESTOTCOMP	The residual from the annual cross-sectional regression in which the natural logarithm of total compensation in the fiscal year *t* is regressed on standard economic determinants, based on Core and Guay (1999)
SEVERANCE	An indicator variable equal to one if the notice period for a CEO is longer than 12 months, and zero otherwise
OVERINCENTIVE	An indicator variable equal to one if the ratio of equity-linked pay to salary is higher than one during the fiscal year *t*, and zero otherwise
RETEST	An indicator variable equal to one if the vesting of performance-vested equity plans granted or to be vested during the fiscal year *t* is allowed to retest, and zero otherwise. In the absence of performance-vested equity plans, the variable equals zero
MULTITARGETS	An indicator variable equal to one if the vesting of performance-vested equity plans is conditional on more than one performance target during the fiscal year *t*, and zero otherwise. In the absence of performance-vested equity plans, the variable equals zero
EQUITY	The proportion of equity-linked pay in CEO total compensation of fiscal year *t*

(*Continued*)

Appendix A. Continued

Variable	Description
POSDRR	A count of words, as defined by Loughran and McDonald's (2011) positive word list, as a percent of total words in DRR of the fiscal year *t*, multiplied by 100
NEGDRR	A count of words, as defined by Loughran and McDonald's (2011) negative word list, as a percent of total words in DRR of the fiscal year *t*, multiplied by 100
CONSULTANT	An indicator variable equal to one if the firm employs at least one compensation consultant during fiscal year *t*, and zero otherwise
MTB	The market value of the firm divided by its book value measured at the end of fiscal year *t*
SIZE	The natural logarithm of one plus the market value of the firm at the end of the fiscal year *t*
ROA	Return on assets measured at the end of fiscal year *t*
RCSIZE	The natural logarithm of one plus the number of compensation committee members as reported in the audited annual report of the fiscal year *t*
RCMEET	The natural logarithm of one plus the number of meetings held by the compensation committee as reported in the audited annual report of the fiscal year *t*
INSIDER	The proportion of dependent directors among all board members as reported in the audited annual report of the fiscal year *t*
CEOHOLD	The natural logarithm of one plus the value of shares held by the CEO at the end of fiscal year *t*
BOARDHOLD	The percent of shares held by board members at the end of fiscal year *t*, multiplied by 100
INSTHOLD	The percent of shares held by institutional owners at the end of fiscal year *t*
INDUSTRY	Industry dummies identified on the basis of Fama–French 12-industry classification

Appendix B. Examples of negative media coverage

B.1

DAILY MAIL (London)
May 8, 2009 Friday
ABI WEIGHS INTO PAY ROW AT NEXT
The Association of British Insurers has joined the condemnation of clothing retailer Next over its efforts to boost directors' pay by rewriting the company's boardroom bonus scheme.
The ABI, whose members control more than £1.5 trillion of stock market investments, yesterday issued a damning 'red top' report on changes in the way that directors' entitlement to bonuses are calculated.
The investors' body says Next has flouted good corporate governance practice by changing the rule on bonuses part way through the retailer's financial year.
The changes meant that Next's directors £ already earning big six-figure salaries were able to scoop an extra £351,000. If the rules had remained unchanged, they would have received nothing.
The ABI issues red-top reports only where it thinks there has been a severe breach of corporate governance rules.
Next started its 2008–2009 financial year last February with an executive bonus scheme that specified earnings per share had to increase at least 5pc for directors to receive a bonus. But last summer, that rule was abandoned.
The company's remuneration committee, chaired by Jonathan Dawson a former Lazards investment banker who also spent eight years working for the Ministry of Defence said instead that directors could receive bonuses as long as pre-tax earnings reached 215p a share.
In fact, Next crept over the threshold, with earnings of 221.2p a share.
That meant that Next's executive directors, headed by Simon Wolfson, were entitled to 18.2pc on top of their salaries.

The ABI's attack on Next's bonus scheme change effectively moving the goalposts half way through its financial year to make it easier for directors to reap rewards is likely to be raised at the company's annual meeting next week.
But chief executive Simon Wolfson insisted last night that major shareholders were consulted about the bonus scheme change last summer.
And no shareholder seen by Next in the past few weeks has objected. 'We have not had any shareholders being angered by this', he said. 'All the shareholders I have spoken to think it's okay'.
Shareholders can lodge their protest by voting against the company's remuneration report, censuring the board for its behaviour.
But even if the remuneration report is rejected, the company is not obliged to claw back payments already made.
A second investor group, Pirc, which advises on corporate governance issues, has already slammed Next for 'excessive' awards to directors.
On Wednesday, Next said sales at its retail chain are still sliding § but not as fast as had been feared.
The company's shares closed down 108p at 1532p last night and have fallen more than 9pc since Tuesday.

This example has a score on the negative emotion word list of 1.95 (or 3.38 standard deviations higher than the average). At Next Plc's AGM, the say-on-pay resolution received experienced high dissent (i.e. 24.41% voted against or abstained from voting). This example is also representative of an example with CITATION coded 1.

B.2

DAILY MAIL (London)
June 26, 2010 Saturday
STRUGGLING QINETIQ'S £1M BOSS SWAP BILL
Regime change can be an expensive business, as hi-tech defence company QinetiQ has ably demonstrated after shelling out more than £1.1m to swap chief executives.
The struggling group, formerly the government's defence research laboratory, splashed out £600,000 on a 'golden hello' package to new chief Leo Quinn, plus a £517,000 pay-off to former boss Graham Love.
QinetiQ's latest annual report reveals Quinn banked £886,564 in the year to the end of March, despite joining on November 16.
This included his salary for those four and a half months of £217,872, 'other compensation' of £600,000, and benefits of £68,692.
Love has also done very well out of the company. He was controversially handed shares worth about £21m when QinetiQ (up 0.5p at 117p) floated in 2006 at 200p.
Love left the company with a £948,805 payment last year.
This comprised his £517,700 payment for loss of office, £64,438 in benefits, and salary of £366,667, which included £200,000 in consultancy fees for a six-month period after he was ousted.

This example has a score on the negative emotion word list of 2.63 (or 4.73 standard deviations higher than the average). Despite the negative coverage of CEO pay at Qinetiq Plc's, the say-on-pay resolution received average dissent (i.e. 9.27% voted against or abstained from voting).