Bad News Bearers:
The Negative Tilt of the Financial Press

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Abstract

We show the financial press is more likely to cover firms with deteriorating performance. Our main tests illustrate the nature of the media's story selection process (i.e., what events to cover) and the usefulness of this selection process for forecasting firms' future earnings news and returns. We first show the media is approximately 11-to-19 percent more likely to cover a firm's earnings announcements if they convey poor performance. Similarly, in forecasting tests, greater media coverage predicts subsequently announced declines in firms' profitability and negative analyst-based earnings surprises. A simple long-short strategy betting against firms with high media coverage yields an average return of roughly 40 basis points per month, suggesting media coverage helps forecast future returns because the story selection process is titled toward novel negative events. Together, our findings highlight the usefulness of the media's coverage decisions in estimating expected returns, as well as a potential inference problem when researchers use media coverage to measure the extent of information dissemination and/or whether an information event occurred.

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1. Introduction

The financial press plays a critical role in capital markets by serving as an informational intermediary among market participants. Recognition of this role has given rise to a substantial literature examining the influence of the financial press on various market outcomes including, but not limited to, investor attention, information asymmetries, and the efficiency of market prices (e.g., Solomon et al. (2014)). A central inference from this literature is that the press helps create, validate, and disseminate information to market participants.

Much of the prior research on the financial press takes media coverage as given and instead focuses on its impact on market outcomes. This focus has engendered a relative scarcity of research on the incentives that shape the amount and content of media coverage. As noted in Dougal et al. (2012), media coverage is often treated as stemming from a 'faceless institution,' rather than a byproduct of utility maximizing agents. Perhaps as a result, relatively little attention has been paid to the nature and implications of the financial press' incentives for which events it deems as newsworthy. Our study attempts to fill this void by studying the tilt in the media's selection process (i.e., the prioritization of certain stories) toward negative versus positive events.

Broadly speaking, one of the primary goals of this paper is to refine how researchers and market participants view media coverage. Specifically, we highlight the importance of separately considering two dimensions of media coverage: (1) what events the media chooses to cover, and (2) how events are portrayed when providing coverage. Whereas most prior research focuses on the latter, this study focuses on the former.

For some readers, the idea that the media prefers to cover more sensational stories is intuitive and perhaps even conventional wisdom (e.g., the old adage "If it bleeds, it leads"). However, academic evidence documenting the media's preference for covering negative versus positive events remains elusive, in part, because doing so requires an objective benchmark for what the media's selection process would be like in its absence.

Prior research shows, for example, there is more media coverage of violent crime than property crime relative to their base rates (e.g., Marsh (1991)), and that news outlets are more likely to prioritize stories involving violence, conflict, or suffering (e.g., Johnson (1996)). However, in these contexts researchers lack the ability to observe the distribution of potentially covered events and/or objectively rank the underlying events in terms of their badness, which makes it unclear what media coverage would look like under the counterfactual where coverage is allocated without a directional tilt.

Our study differs from prior research in that we focus on the link between media coverage and the performance of publicly traded firms. This approach allows us to simultaneously observe the distribution of potentially covered firms and objectively rank firms in terms of their fundamentals. Moreover, our approach allows us to empirically disentangle the sign of firms' performance (i.e., good vs. bad) from its intensity (i.e., significant vs. insignificant), which is unavailable in most other research settings. Thus, an important innovation of our paper is in using firms' earnings news to establish and directly estimate the magnitude of the media's tilt toward negative versus positive events.

Our central hypothesis is that the media is more likely to tilt its coverage toward negative events for two primary reasons. The first is that the media relies on readership to sustain its operations and bad events may be viewed as sensational and draw greater attention (e.g., Gieber (1955), Stone and Grusin (1984), Solomon et al. (2014)). This link may help explain why news outlets are drawn toward conflicts and violence (Campbell and Jamieson (2006)). A second reason is that the media competes for the investing public's attention with alternative information sources such as sell-side analysts that are more likely to disseminate positive information (e.g., McNichols and O'Brien (1997), Lee and So (2017)). Thus, we expect that media coverage is titled toward negative events and declining firm performance because they are more likely to be sensational and attract readership.

The tension for our main hypothesis stems from prior evidence that the media may cater to firms' preferences to maintain or strengthen informational and/or economic exchanges

(e.g., Besley and Prat (2006), Dyck and Zingales (2003), Reuter and Zitzewitz (2006)). For example, in the wake of the recent financial crisis, many commentators pointed blame toward both business and personal relationships between banks and the media for what is regarded as insufficient media coverage of the sector's financial distress (Starkman (2014)). Similarly, to the extent that institutional and/or market frictions, such as short-sale costs, reduce the usefulness of negative events for informing trading decisions, the media may focus on positive information to cater to the demands of its target audience.

The construct of interest in our study is the "tilt" of the financial press that captures the likelihood that the media covers firms experiencing deteriorating, compared to improving, fundamental performance, all else equal. Following Fang and Peress (2009), our empirical tests rely on a sample of manually-collected articles from four of the largest national newspapers: the Wall Street Journal, USA Today, New York Times, and Washington Post. We match our news database to a broad cross-section of roughly 4,000 firms each quarter, which spans approximately 264 thousand firm-quarters from 2001 through 2015.

Prior research suggestive of the media's tilt tends to focus on its intensity or impact within a specific context. For example, Miller (2006) focuses on firms' subject to SEC investigations and shows the media tends to provide more coverage of larger and more serious allegations. However, by focusing on SEC investigations, which are inherently bad, the estimated relation between news and outcomes is not informative of the tilt in the news selection process because the intensity and badness of the underlying event are essentially equivalent.

By contrast, we take a broader cross-sectional view by building a large sample of national media stories and measuring their sensitivity to, and predictive power for, firms' performance. In doing so, our tests assess the magnitude of media tilt and establish several important regularities regarding the relation between media coverage and firms' performance.

Our first main tests estimate the magnitude of the media's tilt toward negative events. We do so by examining the media's response to firms' earnings announcements where we can directly quantify the nature of the information release. Using this setting, we first

show earnings announcements conveying negative news, on average, receive greater media coverage. Specifically, our results suggest a firm is 11-to-19 percent more likely to receive media coverage conditional on the sign of the earnings announcement news being negative. These estimates indicate the magnitude of the tilt in the financial press is economically large and thus is relevant for the way academics study media coverage in financial markets.

Our findings are particularly relevant for the way researchers conduct and interpret evidence in settings where media coverage proxies play a first-order role. For example, researchers commonly infer whether an information event occurred based on the existence of a media article (e.g., Hendershott et al. (2015), Foucault et al. (2016)). Similarly, researchers often use the extent of media coverage to infer the quality of firms' information environment (e.g., Bushman and Smith (2003), Blankespoor et al. (2013)). Our evidence of a negative tilt suggests the usefulness of standard media proxies in these settings is limited by the media's incentive to forgo coverage of positive information events in favor of negative ones.

Readers may be initially concerned that our findings stem from earnings announcements conveying more information when reporting poor operating performance. For example, a firm missing an earnings target may asymmetrically affect investors' assessment of its fundamental value compared to meeting the target (e.g., Matsumoto (2002)) and thus trigger demand from readers. To mitigate this concern, we leverage the fact that we can simultaneously observe the sign and magnitude of firms' earnings surprises, as well as the quantity of information as summarized in firms' absolute returns and abnormal trading volumes. These tests show the sign of news explains variation in media coverage incremental to the magnitude of news proxies, price changes, and trading volumes, suggesting our findings are unlikely driven by negative events being more novel and the media simply covering larger information shocks.

Another appealing feature of our setting is that we can also measure the quantity of news using price changes and trading volume over increasingly wider windows surrounding firms' announcements. Using wider windows allows us to quantify the extent of value-relevant information, even if investors impound that information into prices with a lead or lag. Across

both short- and long-window tests, we find that conditioning on price changes and trading volumes have little impact on our findings, suggesting our estimates of tilt are unlikely driven by negative events simply conveying more information.

To the extent the media's selection process is titled toward negative events, we also predict that pre-announcement media coverage foreshadows firms' subsequently announced earnings news. Consistent with our predictions, we show media coverage negatively forecasts firms' seasonally-adjusted changes in earnings and analyst-based earnings surprises, particularly for coverage by the Wall Street Journal and New York Times, which tend to cater toward financially oriented customers. These results reinforce the inference that the media tilts it selection process toward negative events to attract and retain readership.

We also explore the asset pricing implications of the media's negative tilt by showing that media coverage offers strong predictive power for firms' future returns. An investment strategy that bets against firms with high coverage and bets on firms with low coverage produces an average return of approximately 40 basis points per month. In conjunction with our earlier results, these findings raise the bar for alternative explanations for our findings that would need to explain why negative earnings news explains announcement media coverage incremental to absolute returns and trading volumes, and that non-announcement media coverage forecasts changes in firms' earnings, analyst-based surprises, and future returns.

Our return results align with evidence in Fang and Peress (2009) that higher coverage lowers firms' expected returns by garnering greater visibility and liquidity. Building upon Fang and Peress (2009), we find that return predictability is concentrated among high momentum firms, suggesting the media is more likely to convey novel negative news when coverage applies to firms that appear to be performing well based on ascending stock prices. By contrast, alternative channels related to greater visibility and liquidity would, if anything, predict that our results should be concentrated among neglected underperforming stocks, where visibility and liquidity are low. Thus, our findings suggest a complementary explanation for why coverage negatively forecasts returns is that the media focuses on covering negative events.

In our final tests, we provide evidence that the media prefers to cover 'representative' bellwether firms that allow them to reach and attract a broader audience, while adhering to space constraints, by conveying information relevant to multiple firms at the same time. Consistent with this view, we show *industry-level* coverage robustly forecasts firms' earnings news and returns and, moreover, this predictive relation is incremental to a given firm's own level of coverage. Thus, our findings highlight externalities in the form of intra-industry information spillovers from the media's tilt toward negative news.

The broader contribution of this paper extends beyond the goal of forecasting firms' performance. In particular, our findings inform the extensive literature using media coverage as a proxy for the presence of an information event or extent of dissemination. Because firms' performance influences which investors choose to hold a stock, how frequently they trade, and the price they pay when trading, the media's tilt toward negative events can create a mechanical correlation between media coverage proxies and various market outcomes. Thus, a key inference from our paper is that researchers may incorrectly attribute this mechanical correlation to the impact of the media's role as intermediary, when the associations are likely confounded by their tendency to cover firms with deteriorating performance.

In sum, this paper provides three main insights. Conceptually, this study contributes to our understanding of the media's production function and role as an informational intermediary by showing the media tends to allocate coverage inversely to firms' operating performance. Practically, this study provides a simple methodology for forecasting firm- and industry-level earnings news and returns using widely observable news coverage data. Finally, methodologically, this study shows the use of media coverage in capital market settings is complicated by the fact that coverage decisions also reflects information about firms' operating performance.

The rest of the paper is organized as follows. Section 2 discusses our data. Sections 3 through 5 discuss our main results. Section 6 concludes.

2. Data

Our main dataset of newspaper articles comes from Factiva.com (a business information tool owned by Dow Jones). To construct our dataset, we first restrict our sample to firms with stock price and quarterly accounting data from CRSP and COMPUSTAT. We then manually match firm names to the corresponding Factiva Data Codes, and use these codes to search for articles about each firm in The Wall Street Journal (WSJ), the New York Times (NYT), USA Today (USAT), and the Washington Post (WP), between 2001 and 2015 (the time period during which Factiva has consistent coverage of these newspapers).

For each article about a given firm, we record its date, title, and location of the article in the paper. The Wall Street Journal, the New York Times, and USA Today are the top three newspapers by weekday circulation, and the Washington Post is the seventh top paper by weekday circulation in the US.[1] Factiva's academic license does not allow us to access articles for the other newspapers on the top circulation list. However, these four newspapers are in line with national newspaper coverage used in the prior literature (e.g., Fang and Peress (2009); Gurun and Butler (2012); and Solomon et al. (2014)).

Our main analyses examine the media's responsiveness to, and predictive power for, firms' quarterly operating performance. To provide initial summary statistics, we measure the extent of media coverage in a given firm-quarter in the 50 trading days ending 5 days before firms' quarterly earnings announcement date (i.e., t-55 to t-5 where t denotes firms' announcement date). In subsequent tests, we also measure media coverage in response to firms' earnings news using the number of articles written in the three-day window surrounding firms' earnings announcement date from t-1 to t+1.

We present the summary statistics for our media dataset in Table 1, Panel A. Overall we have 264,313 firm-quarter observations covering 9,870 unique firms. The first two columns show the distribution of firm-quarter observations by year as well as the percent of those firm-quarters with at least one article in one of the four newspapers.

[1] wikipedia.org/wiki/List_of_newspapers_in_the_United_States#Top_25_newspapers.

Overall, we have 282,996 firm-article observations (if Factiva deems an article as being relevant to two firms, we count the article twice - once for each firm). The third column of Panel A reports the annual number of firm-article observations, and the remaining columns show the breakdown by year and newspaper. The Wall Street Journal has the most articles that cover firms, consistent with it being the most business-oriented newspaper. However, the number of business-related articles in the WSJ has declined in recent years consistent with the paper's move to become a more general-audience newspaper.[2]

In Panel B of Table 1, we examine how the average firm characteristics relate to the amount of media coverage firms receive. Every quarter we sort firms into terciles, based on the number of articles about the firm during the quarter. On average, 3,617 firms receive no coverage during the quarter, 479 firms receive medium amount of coverage (1.3 articles, on average) and 309 firms receive a high amount of coverage (13.3 articles, on average). Firms with the high level of coverage tend to be larger, have slightly higher book to market ratios and slightly lower momentum. Similarly, highly covered firms have higher average share turnover during the quarter, which is consistent with media coverage being associated with higher levels of trading (Barber and Odean (2008)).

In Panel C of Table 1, in the first three rows, we show the distributions of our primary measures of firms' earnings announcement news. SUE is defined as the seasonally-adjusted change in firms' earnings scaled by the standard deviation of their seasonally-adjusted change over the prior eight quarters. Similarly, $SURP$ is defined as the firm's earnings per share minus the consensus median analyst earnings forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price.

The last row of Panel C shows the distribution of the number of articles about the firms per quarter in our sample. Similar to what we observe in Panel B, the distribution of articles at the firm/quarter level is highly skewed - with many firms receiving no media coverage and some firms receiving a lot of media coverage.

[2] http://www.journalism.org/2011/07/20/wall-street-journal-under-rupert-murdoch/.

3. Exploring the Media's Coverage Decisions

In this section, we conduct three sets of tests to examine whether the media is more likely to write stories about negative events relative to positive ones. The common thread among these three tests is that they focus on the sign on firms' earnings news as a key driver of the media's decision to cover some earnings announcements but not others.

A central challenge with estimating media tilt in alternative, non-financial settings is that it is difficult to observe the distribution of potentially covered events and/or objectively rank the underlying events in terms of their badness. By contrast, focusing on media coverage and earnings news of publicly traded firms allows us to simultaneously observe the distribution of potentially covered firms, objectively rank firms in terms of their fundamental performance, and empirically disentangle the sign of firms' reported performance (i.e., good vs. bad) from its intensity (i.e., significant vs. insignificant).

In our first main tests, we examine the general cross-sectional relation between firms' earnings news and media coverage during their earnings announcements. Specifically, we estimate the following regression model:

$$\begin{aligned} Media\ Coverage &= \alpha + \beta_1 EarningsNews_{i,q} + \gamma_1 Size_{i,q} + \gamma_2 LBM_{i,q} \\ &+ \gamma_3 Momentum_{i,q} + \gamma_4 Turnover_{i,q} + \delta Controls_{i,q} + \rho_t + \psi_i + \epsilon_{i,q} \end{aligned} \quad (1)$$

where $Media\ Coverage$ is either $\mathbb{1}_{(Articles_{i,q}>0)}$, which is an indicator variable for whether the firm received coverage, or $\text{Log}(Articles_{i,q}+1)$, which is the log of one plus the number of articles printed about firm i aggregated across the NYT, WP, WSJ, or USAT. In these tests, we measure both media coverage proxies between t-1 and t+1, where t is the announcement date.[3] Throughout, we include calendar year-quarter (i.e., ρ_t) and firm fixed effects (i.e., ψ_i), and cluster standard errors at the firm and quarter level.

[3]We focus on the three-days surrounding firms' earnings announcements to be consistent with a broad literature measuring announcement returns and include articles observed on t-1 because the media often conveys the content of the announcement immediately before its official release. See, for example, https://www.nytimes.com/2016/12/18/business/commerce-dept-to-revise-growth-figures-nike-and-fedex-to-announce-earnings.html.

As in Table 1, we proxy for firms' earnings news using SUE and $SURP$. To control for coverage mechanically driven by firm-level attributes (e.g., larger firms receiving greater coverage), we include controls for $Size_{iq}$, defined as the log of market capitalization and LMB_{iq}, defined as the log of one plus firms' book-to-market ratio. Similarly, $Momentum_{iq}$ is the firm's cumulative market adjusted return and $Turnover_{iq}$ is the ratio of trading volume to shares outstanding, both measured over the fifty trading days ending on $t-10$.

Furthermore, we are mindful that our proxies for earnings news may not fully capture the importance of the news. Even with the same absolute surprise, negative earnings might convey more information than positive earnings (e.g., Kothari et al. (2009)). Therefore, we also present results when controlling for firms' returns and turnover reactions immediately surrounding their announcements, as earnings surprises that carry more information should have a stronger return and turnover reactions. We measure the absolute price reaction as $|CAR(t-1,t+1)|$ defined as the absolute value of the three-day announcement market-adjusted return. Similarly, $AbTurnover(t-1,t+1)$ is the abnormal announcement turnover in the announcement period from $t-1$ to $t+1$ minus the average from $t-5$ to $t-55$.

Additionally, to account for the fact that information may give rise to market trading and price changes with a lead or lag, we also control for returns and turnover at a wider horizon. These tests are motivated by the idea that the quantity of information should eventually manifest in prices and trading volumes, and thus using wider windows of measurement allow us to more cleanly focus on the sign rather than quantity of information. In particular, we include controls for $|CAR(m-1,m+1)|$ and $Turnover(m-1,m+1)$, which capture firm's absolute cumulative stock return and share turnover from $m-1$ to $m+1$ where m is the firm's earnings announcement month.

In Panels A and B of Table 2, we show the β_1 coefficient from estimating Eq. (1) is significantly negative indicating that media coverage is negatively related to firms' earnings announcement news. These hold both when using a binary indicator for coverage in Panel A or a continuous measure of coverage in Panel B. Moreover, these results do not

appear sensitive to measuring earnings news in terms of earnings innovations (i.e., SUE) or analyst-based surprises (i.e., $SURP$). These results suggest the media writes more articles in response to deteriorating and/or disappointing earnings, consistent with the media tilting coverage toward negative news. Having established the general negative relation between media coverage and firms' earnings news, we shift focus toward estimating the economic magnitude of the tilt in the media's selection process.

In Table 3, we provide complementary evidence of the media's tilt by regressing announcement media coverage on a simple binary variable for earnings announcements with negative news. The use of a binary variable facilitates estimating the magnitude of the media's tilt by focusing on the variation in media coverage attributable to the sign of firms' earnings news. We measure the sign of earnings news with an indicator variable $\mathbb{1}_{(\text{Earnings News}_{i,q}<0)}$ equal to 1 if the earnings news are negative, and 0 otherwise.

The coefficients on the indicator variables for negative SUE and $SURP$ in Panels A and B of Table 3 suggest the probability of being covered is between 0.2 and 0.4 percentage points higher when the news is negative. For firms in our sample, the probability of having media coverage in the three days around announcements is 3.59 percent which corresponds to a 11 percent higher probability of being covered if the news is negative, instead of positive.

In Panels C and D of Table 3 we use an third complementary approach for assessing the media's tilt using an interaction term between the sign and the absolute magnitude of firms' earnings news. This interactive approach allows us to measure the difference in likelihood of an announcement being covered, across negative versus positive outcomes, controlling for the absolute value of the earnings news. Specifically, we estimate the following model:

$$\begin{aligned} Media\ Coverage &= \alpha + \beta_1 EarningsNews_{i,q} + \beta_2 \mathbb{1}_{(EarningsNews_{i,q}<0)} \\ &+ \beta_3 EarningsNews_{i,q} \times \mathbb{1}_{(EarningsNews_{i,q}<0)} + \gamma_1 Size_{i,q} + \gamma_2 LBM_{i,q} \\ &+ \gamma_3 Momentum_{i,q} + \gamma_4 Turnover_{i,q} + \delta Controls_{i,q} + \rho_t + \psi_i + \epsilon_{i,q} \end{aligned} \tag{2}$$

where we again express $Earnings\ News_{i,q}$ as either SUE or $SURP$, and $Media\ Coverage$ denotes both a binary and continuous measures of media coverage of the announcement.

Our main coefficient of interest when estimating Eq. (2) is β_3, which measures how much more/less likely a firm is to receive media coverage if its earnings news is negative, conditional on the size of the news. Columns (1) and (2) of Panel C show that the β_3 coefficient from estimating Eq. (2) is consistently negative. More specifically, if a firm's seasonally-adjusted earnings surprise (i.e., SUE) is negative rather than positive, the probability of being covered increases by 0.1 percentage points for a 1 cent increase in earnings surprise.

For firms that have analyst coverage (and thus where we can calculate $SURP$), our results suggest the probability of having media coverage is 4.6 percent, which corresponds to a 19 percent higher probability of being covered if the earnings surprise is negative, relative to a positive surprise, controlling for the absolute value of the surprise. In Panel D, we provide similar evidence of a negative media tilt using the log of media coverage.

Across both Panels C and D, when measuring news as the analyst-based surprise, we find the coefficient on interaction terms is negative, whereas the main effect on Earnings News$_{i,q}$ is positive. These findings suggest an asymmetric treatment in which the media is more likely to cover negative stories independent of the magnitude, whereas the media is likely to cover positive stories only the magnitude is sufficiently large.

Taken together, the results in Tables 2 and 3 indicate that the media is 11-to-19 percent more likely to cover negative compared to positive earnings news. These findings suggest the magnitude of the tilt in the financial press is economically large and thus is relevant for the way academics study news coverage in financial markets. In the next section, we explore the implications of this negative tilt for forecasting firms' earnings news and returns.

4. Media Coverage and Firm Performance

Prior literature shows firms with high levels of media coverage experience negative returns in the future (e.g., Fang and Peress (2009)). A common explanation for this phenomenon is that the media attracts attention from individual investors, which lower expected returns by raising awareness of the stock's existence and improving liquidity. However, an additional,

and non-mutually-exclusive explanation is that the media tilts its coverage toward negative events, and therefore high media coverage may negatively predict returns because prices incorporate signals of a deterioration in firms' fundamental performance with a lag.

Our Table 4 tests reverse the structure of our earlier tests by examining whether firms' pre-announcement media coverage forecasts changes in their subsequently reported earnings and analyst-based earnings surprises. In this regard, our tests examine the ability of coverage to forecast firms' earnings news. Specifically, we estimate the following model:

$$\begin{aligned} Earnings\ News_{i,q} &= \alpha + \beta_1 \log(Articles_{i,q} + 1) + \gamma_1 Size_{i,q} + \gamma_2 LBM_{i,q} \\ &+ \gamma_3 Momentum_{i,q} + \gamma_4 Turnover_{i,q} + \rho_t + \psi_i + \epsilon_{i,q} \end{aligned} \tag{3}$$

We continue to proxy for firms' earnings news using SUE and $SURP$ but now measure pre-announcement media coverage in the 50 trading days ending 5 days before firms' announcements because our primary construct of interest is the ability of media coverage to forecast firms' subsequently announced earnings news.

When estimating Eq. (3), we continue to include firm and quarter fixed effects in our regressions to control for constant firm-specific unobserved characteristics and for contemporaneous shocks to all firms. To the extent the media prefers to cover negative events, we expect media articles to negatively forecast firms' earnings news such that the β_1 coefficient when estimating Eq. (3) is negative.

In columns (1) and (4) of Table 4 we find highly significant negative relations between firms' pre-announcement media coverage and their subsequently announced earnings news as measured by SUE and $SURP$ (t-statistics from -3.17 to -8.51). These findings are consistent with the media being more likely to cover firms experiencing a decline in performance, and therefore the amount of coverage a firm receives forecasts their subsequently announced earnings news. Moreover, the results in Table 4 are unlikely to be driven by the media simply covering negative returns. This is because we control for momentum contemporaneous to the media coverage our regressions, and therefore capture the incremental association between media coverage and performance beyond what is reflected in the firms' returns.

We next examine whether coverage by the four newspapers in our sample varies in its predictive power for firms' performance. In particular, because different newspapers cater to different types of readers, we might expect that more investor-oriented newspapers (such as the Wall Street Journal) are more likely to cover under-performing businesses. To test this hypothesis, we augment Eq. (3) to allow for separate measures for media coverage for each individual newspaper. For example, $log(Articles\ NYT_{iq} + 1)$ is the log of one plus the number of articles published about firm i during quarter q in the New York Times.

Columns (2) and (5) of Table 4 show the negative relationship between media coverage and fundamental firm performance is primarily driven by articles in the Wall Street Journal and the New York Times. Furthermore, the predictive link between Wall Street Journal articles and firm performance is nearly twice as large as the effect of New York Times articles (the difference is statistically significant). This result is consistent with the Wall Street Journal being the most investor-oriented paper, followed by the New York Times.

Our results so far indicate media coverage negatively forecasts subsequently announced performance information. Although newspapers write some articles based on investigative reporting, other articles may be based on firms' regulatory filings with the SEC and/or earnings guidance provided by firms' management. Thus, one potential concern with the results presented so far is that they could reflect the media's tendency to cover firms' disclosures, which tend to increase when a firm is performing poorly, rather than being driven by a conscious decision of the media to tilt its coverage more towards negative news.

To separate these two mechanisms, we repeat the analysis from Eq. (3) when controlling for the number of firms' managerial forecasts as well as the number of firms' 8-K filings with the SEC. The latter reflects a mandatory disclosure of material economic events such as gain or loss of supply contracts (see Noh et al. (2017) for further details). To the extent our estimates of tilt are driven by the media 'blindly' covering regulatory filings or managerial guidance, we would expect the coefficients on media coverage to become insignificant once we control for the extent of firms' filings and guidance.

A key result in columns (3) and (6) of Table 4 is that the presence of media coverage during the quarter is incrementally negatively associated with firm performance reported at the end of the quarter when controlling for firms' 8Ks and guidance.[4] When comparing columns (1) and (3), as well as (4) and (6), we find the coefficient on media coverage appears relatively stable across specifications, suggesting the negative association between media coverage and firm performance is more likely driven by a preference for negative stories than the extent of value-relevant information events.

4.1. Dow Jones News Wire

One explanation for our evidence of a negative media tilt is that readers are attracted to negative news. Because producing stories is costly (e.g., due to processing costs, space constraints, etc.), we predict that newspapers concentrate on articles that will provide them with the highest amount of readership. Consistent with this view, Umar (2016) uses a randomized experiment to show that increases in a title's negativity significantly raises the probability that investors read the article.

An alternative explanation for our forecasting results is that there is more negative news produced by companies (beyond what is captured by the 8-K filings and managerial forecasts), and if newspapers just cover news almost randomly, we might expect a similar effect. To help adjudicate these explanations, our tests in Table 5 examine the information content of the Dow Jones News Wire (DJNW), where the costs of providing coverage are lower.

Although DJNW publishes articles from the WSJ (as they are both owned by Thomson Reuters), they also often pass through press releases, regulatory filings, etc. To the extent the costs of such 'pass through' articles are lower than writing an original article, and the newswire is less space constrained, we predict there is a weaker predictive link between newswire coverage and firm performance.

[4]Consistent with the evidence in Noh et al. (2017), Table 4 shows that the number of 8K filings is negatively associated with SUE and $SURP$ for that quarter. Furthermore, managerial forecasts are positively related to $SURP$ and negatively related to SUE, suggesting that firms issue guidance to accelerate declining performance (e.g., Skinner (1994)).

Consistent with our predictions, Table 5 documents an insignificant relation between DJNW coverage and SUE as well as a weak negative relation between DJNW coverage and $SURP$. These results provide corroborative evidence that the tilt towards covering more negative information is unlikely driven by higher levels of negative news produced by firms and instead more likely reflects the media responding to space constraints by tilting coverage toward negative events to attract greater readership.

5. Does the Media Uncover New Information?

The tests in this section are designed to address potential concerns that our findings are driven by the media reporting stale information, which Tetlock (2011) suggests is sometimes the case. Specifically, we predict and find that media articles forecast firms' returns, consistent with the media's selection process conveying novel negative information.

Our tests explore whether monthly media coverage in month M predicts firms' future returns in $M+1$. We implement these tests by assigning firms to tercile portfolios of media coverage each month following Fang and Peress (2009), where firms in the lowest tercile have received zero coverage and the remaining observations are sorted based on whether they are above or below the median for that month.

Table 1 shows media coverage can be somewhat bimodal (firms have a lot of coverage or none), and therefore the number of firms can vary substantially across low-, medium-, and high-coverage bins. To mitigate the influence of the bimodal distribution, we also sort firms by the total number of words written about a firm across all articles. Using the number of words provides us with greater cross-sectional variation for our portfolio-based tests.

Panel A of Table 6 presents time-series averages of month $M+1$ raw returns to a strategy that bets on firms without media coverage and against firms with high coverage. The 'Alpha' column reflects the intercept from a time-series regression of the equal-weighted long-short portfolio hedge return on the standard three Fama-French factors (HML, SMB, and MKT-RF) as well as the Carhart momentum factor (UMD).

Panel A shows that a long position in firms without media coverage and simultaneous short position in firms with high media coverage produces a monthly return spread of roughly 40 basis points (t-statistics = -2.36 to -2.85) and a corresponding alpha ranging from 25 to 29 basis points (t-statistics = -1.837 to -2.61). The negative relation between media coverage and future returns is consistent with our findings of the media's tilt toward firms with deteriorating operating performance, but also mirror the findings in Fang and Peress (2009).

To extend the inferences in Fang and Peress (2009), we next examine whether the link varies predictably across subsamples of firms. We predict that strategy returns vary with indicators of firms' past performance because it signals whether negative news is more likely to be novel. To test this prediction, we independently double sort firms into terciles of media coverage as well as terciles of firms' trailing return momentum, where we expect negative news to be most novel among better performing high momentum firms.

In Panels B and C of Table 6, we show the relation between media coverage and future returns is pronounced among high momentum firms. These findings suggest that media coverage decisions reveal new information for firms, particularly those with ascending stock prices over the past year. For high momentum firms, the portfolio of firms with high media coverage significantly underperforms the low-media-coverage group in the following month by 56 basis points (t-statistic = 3.04) on a raw return basis and 42 basis points (t-statistic = 2.44) on a risk-adjusted basis. By contrast, for firms whose returns have been decreasing, high-coverage firms do not appear to underperform low-coverage firms.

The results in Table 6 suggest the media is more likely to convey novel negative information when coverage applies to firms that appear to be performing well based on contemporaneous market prices. By contrast, alternative channels (e.g., that media lowers expected returns by generating greater visibility and liquidity) would, if anything, predict that our results are concentrated among neglected underperforming stocks, where visibility and liquidity are low. Thus, our findings point toward the media's tilt toward negative news as a complementary explanation for why coverage negatively forecasts returns.

6. Intra-Industry Information Spillovers

In this section, we explore whether the media's selection process creates externalities for economically related firms grouped by industry.

6.1. Predictive Power of Industry Coverage

Our Table 5 findings above suggest that printing constraints contribute to the media's tilt toward negative events and firms with deteriorating fundamentals. As a result, we expect the media prefers to cover 'representative' bellwether firms that allow them to reach a broader readership base by conveying information relevant to multiple firms at the same time.

In Table 7, we modify and reestimate Eq. (3) when including $Log(Industry\ Articles+1)$ defined as the number of articles printed in the four major newspapers between $t-55$ and $t-5$ about other firms in the same Fama-French 48 industry. In columns (1) and (4) of Table 7 we only include the level of industry media coverage, in columns (2) and (5) we add the media coverage of the firm itself, and in columns (3) and (6) we further control for the number of 8K filings and the amount of earnings guidance issued by the management.

Our industry based tests in Table 7 yield two main results. First, across all of the columns, the coefficient on the number of articles written about a firm's industry is about as large as the coefficient on the number of articles written about the firm itself. This evidence suggests the extent of media coverage for a given industry, in general, is predictive of deteriorating fundamentals of the industry's constituent firms.

Columns (3) and (6) of Table 7 show the coefficient on the number of firm-specific articles is very similar to those reported in Table 4 after controlling for the number of articles written about the industry. These results indicate the predictive effects of media coverage of the firm itself versus coverage of the general industry are additive. Moreover, these findings suggest that media coverage of bellwether firms creates externalities for industry peers by conveying information abut shared industry trends.

6.2. Industry-based Portfolios and Returns

In our final tests, we extend the asset pricing implications of our findings by examining whether the media tends to convey novel, value-relevant information about industry-wide returns and earnings news. A key appeal of industry-based approach for testing asset pricing implications is that it allows us to more precisely measure 'abnormal' coverage relative to its trailing distribution (i.e., its mean and standard deviation), whereas the same is not true at the firm-level because many firms never receive coverage.

Panel A of Table 8 contains value-weighted average industry returns in month M+1 across tercile portfolios of media coverage in M. We use two measures of media coverage: *Total Article Count*, defined as the (unadjusted) number of media articles in a given industry-month, and *Standardized Abn Article Count*, defined as the *Total Article Count* standardized by the industry's twelve-month trailing average and standard deviation.

Panel A shows that sorting industries based on abnormal media coverage negatively predicts across-industry variation in average returns. Specifically, the 'Alpha' column shows industries with abnormally high media coverage underperform those with abnormally low coverage by approximately 59 basis points per month (t-statistic = -2.56). Panel A also shows significant but slightly weaker results from sorting industries based on total (unadjusted) coverage, suggesting persistent media coverage is less likely than within-industry changes in coverage to signal negative industry-wide news.

In Panel B of Table 8, we also show industry abnormal coverage negatively forecasts future returns among firms that did *not* receive media coverage. These findings reinforce the idea that industry coverage tends to convey novel negative information regarding industry-wide trends. Finally, Panel C confirms industry-level coverage also forecasts subsequently announced earnings news as proxied by the value-weighted average SUE, and Panel D shows this result holds among firms that were not specifically covered. These findings suggest the media tilts its coverage toward firms with deteriorating fundamental performance and, in doing so, identifies value-relevant information for industry peers.

7. Conclusion

One of the primary goals of this paper is to refine how researchers view media coverage. Specifically, there are at least two dimensions to media coverage: (1) the decision of what events to cover, and (2) how events are portrayed when providing coverage. Whereas most prior research focuses on the latter, this study focuses on the former.

Our main tests show the financial press is significantly more likely to cover firms with poor operating performance and forgo covering firms with strong operating performance. These findings are thus relevant for the way researchers conduct and interpret evidence in settings where media coverage proxies play a first-order role. For example, researchers commonly infer whether an information event occurred based on the existence of a media article and/or use the extent of media coverage to infer the quality of firms' information environment. Our evidence of a negative tilt suggest these inferences are likely confounded by the possibility that the media simply forgoes covering positive information events.

Additionally, in forecasting tests, we show greater media coverage foreshadows declines in firms' subsequently announced profits, analyst-based surprises, and risk-adjusted returns. Taken together, our findings highlight the usefulness of the media's coverage decisions in estimating expected returns and forecasting firms' performance, suggesting that the financial press tilts its coverage toward the reporting of novel negative events.

References

Barber, B. M. and T. Odean (2008). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *Review of Financial Studies 21*(2), 785–818.

Besley, T. and A. Prat (2006). Handcuffs for the grabbing hand? media capture and government accountability. *The American Economic Review 96*(3), 720–736.

Blankespoor, E., G. S. Miller, and H. D. White (2013). The role of dissemination in market liquidity: Evidence from firms' use of twitterâĎć. *The Accounting Review 89*(1), 79–112.

Bushman, R. M. and A. Smith (2003). Transparency, financial accounting information, and corporate governance. *Economic Policy Review* (Apr), 65–87.

Campbell, K. K. and K. H. Jamieson (2006). *The interplay of influence: News, advertising, politics, and the Internet.* 6th edition Belmont, CA: Thomson Wadsworth, c2006. xx, 384 p.: illustrations; 25 cm.

Dougal, C., J. Engelberg, D. Garcia, and C. A. Parsons (2012). Journalists and the stock market. *Review of Financial Studies 25*(3), 639–679.

Dyck, A. and L. Zingales (2003). The media and asset prices. Technical report, Working Paper, Harvard Business School.

Fang, L. and J. Peress (2009). Media coverage and the cross-section of stock returns. *The Journal of Finance 64*(5), 2023–2052.

Foucault, T., J. Hombert, and I. Roşu (2016). News trading and speed. *The Journal of Finance 71*(1), 335–382.

Gieber, W. (1955). Do newspapers overplay 'negative' news? *Journalism & Mass Communication Quarterly 32*(3), 311–318.

Gurun, U. G. and A. W. Butler (2012). Don't believe the hype: Local media slant, local advertising, and firm value. *The Journal of Finance 67*(2), 561–598.

Hendershott, T., D. Livdan, and N. Schürhoff (2015). Are institutions informed about news? *Journal of Financial Economics 117*(2), 249–287.

Johnson, R. N. (1996). Bad news revisited: The portrayal of violence, conflict, and suffering on television news. *Peace and Conflict: Journal of Peace Psychology 2*(3), 201.

Kothari, S. P., S. Shu, and P. D. Wysocki (2009). Do managers withhold bad news? *Journal of Accounting Research 47*(1), 241–276.

Lee, C. M. and E. C. So (2017). Uncovering expected returns: Information in analyst coverage proxies. *Journal of Financial Economics 124*(2), 331–348.

Marsh, H. L. (1991). A comparative analysis of crime coverage in newspapers in the united states and other countries from 1960–1989: A review of the literature. *Journal of Criminal Justice 19*(1), 67–79.

Matsumoto, D. A. (2002). Management's incentives to avoid negative earnings surprises. *The Accounting Review 77*(3), 483–514.

McNichols, M. and P. C. O'Brien (1997). Self-selection and analyst coverage. *Journal of Accounting Research 35*, 167–199.

Miller, G. S. (2006). The press as a watchdog for accounting fraud. *Journal of Accounting Research 44*(5), 1001–1033.

Noh, S., E. C. So, and J. Weber (2017). Switching from voluntary to mandatory disclosure: Do managers view them as substitutes? *Working Paper*.

Reuter, J. and E. Zitzewitz (2006). Do ads influence editors? advertising and bias in the financial media. *The Quarterly Journal of Economics 121*(1), 197–227.

Skinner, D. J. (1994). Why firms voluntarily disclose bad news. *Journal of accounting research 32*(1), 38–60.

Solomon, D. H., E. Soltes, and D. Sosyura (2014). Winners in the spotlight: Media coverage of fund holdings as a driver of flows. *Journal of Financial Economics 113*(1), 53–72.

Starkman, D. (2014). *The Watchdog That Didn't Bark: The Financial Crisis and the Disappearance of Investigative Journalism*. Columbia University Press.

Stone, G. C. and E. Grusin (1984). Network tv as the bad news bearer. *Journalism and Mass Communication Quarterly 61*(3), 517.

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.

Umar, T. (2016). Attention grabbers when seeking alpha. *Working Paper*.

Table 1. Summary Statistics

Panel A presents the summary statistics of our main dataset of media coverage. The second column displays how many firm-quarters are in our sample per year. The third column displays what percent of those quarters have at least one article written about the firm in one of the four nationalf news papers: the New York Times (NYT), USA Today (USAT), Washington Post (WP), and the Wall Street Journal (WSJ). Column four shows the total number of firm-article observations (if an article is relevant to three firms, it will be counted three times towards this number), and columns five through eight show the breakdown of those firm-article observations by individual papers. Panel B displays average firm characteristics after sorting firms into terciles each quarter according the number of articles during the quarter written about the firms. Panel C displays summary statistics of our main outcome variables. SUE is the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarters, and $SURP$ is defined as the firm's earnings per share minus the consensus median forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price.

Panel A: Summary Statistics of Media Coverage by Year

Year	Firm-quarters	News %	All	NYT	USAT	WP	WSJ
2001	19,521	17.87%	17,038	5,385	939	2,077	8,637
2002	19,872	28.60%	34,349	7,458	1,133	5,016	20,742
2003	19,486	24.10%	27,735	4,967	916	5,856	15,996
2004	19,506	17.39%	21,194	7,063	1,306	4,042	8,783
2005	18,617	15.75%	18,347	5,053	1,043	3,711	8,540
2006	18,556	17.95%	20,397	4,003	1,092	3,516	11,786
2007	18,337	15.39%	17,059	4,410	1,317	2,341	8,991
2008	17,286	16.92%	19,915	4,129	1,163	2,073	12,550
2009	16,389	16.19%	16,898	3,636	1,031	1,289	10,942
2010	16,893	18.30%	17,551	3,099	971	1,229	12,252
2011	16,396	15.80%	17,035	3,105	880	1,386	11,664
2012	15,856	17.08%	15,356	3,358	914	1,806	9,278
2013	15,868	15.43%	14,565	3,338	1,204	1,709	8,314
2014	15,963	14.33%	13,324	3,446	1,214	1,675	6,989
2015	15,767	14.13%	12,233	3,507	1,352	1,372	6,002

Panel B: Mean Statistics by News Tercile

	Firms	Articles	Size	LBM	Momentum	Turnover
Low News	3,617	0.000	12.521	0.552	0.000	0.071
Mid News	479	1.264	14.305	0.530	0.002	0.136
High News	309	13.276	15.913	0.597	-0.006	0.124
High-Low		13.276	3.392	0.045	-0.006	0.054
(t-stat)		(83.93)	(206.73)	(3.72)	(-1.97)	(12.16)

Panel C: Summary Statistics of Main Variables

	Mean	P5	P25	P50	P75	P95	STD
SUE	0.014	-2.677	-0.570	0.042	0.659	2.401	1.217
$SURP$	-0.021	-1.867	-0.124	0.035	0.215	1.222	0.651
Articles	1.059	0.000	0.000	0.000	0.117	3.783	6.595

Table 2. Media Tilt around Earnings Announcements

In this table we regress media coverage on earnings news. In Panel A, media coverage is an indicator variable equal to one if there was at least one article about the firm in the four newspapers (WSJ, NYT, WP, USAT) between $t-1$ and $t+1$, where t is the earnings announcement day. In Panel B, media coverage is the log of one plus the number of articles about the firm during that time period. SUE is the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarters. $SURP$ is the firm's earnings per share minus the consensus median forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price. $Size$ is the log of market capitalization measured on day $t-10$, LMB is the log of one plus the firm's book-to-market ratio using market capitalization on $t-10$, and the firms' most recent book value from Compustat quarterly, $Momentum$ is the firm's cumulative marketed adjusted return over the fifty trading days ending on $t-10$, and $Turnover$ is the average ratio of trading volume to shares outstanding over the fifty trading days ending on $t-10$. $|CAR(m-1,m+1)|$ is the absolute value of firm's cumulative stock return from $m-1$ to $m+1$ where m is the firm's earnings announcement month. $Turnover(m-1,m+1)$ is the firm's share turnover (volume/shares outstanding) from $m-1$ to $m+1$ where m is the firm's earnings announcement month. $|CAR(t-1,t+1)|$ is the absolute value of the three-day earnings announcement market-adjusted return. $AbTurnover(t-1,t+1)$ is the abnormal announcement turnover in the announcement period from $t-1$ to $t+1$ minus the average from $t-5$ to $t-55$. Standard errors are clustered at the firm and quarter level.

Panel A: Regressions of Indicator for News Coverage

	1(Article >0)					
Earnings News Proxy:	*SUE*			*SURP*		
	(1)	(2)	(3)	(4)	(5)	(6)
Earnings News	-0.001***	-0.001***	-0.001***	-0.002***	-0.001***	-0.001***
	(-2.80)	(-3.17)	(-2.85)	(-2.73)	(-2.67)	(-2.73)
Size	0.007***	0.007***	0.007***	0.009***	0.009***	0.008***
	(5.33)	(5.47)	(5.51)	(4.03)	(3.78)	(3.77)
LBM	0.012***	0.012***	0.012***	0.016***	0.017***	0.016***
	(5.12)	(4.90)	(5.06)	(3.91)	(4.04)	(3.88)
Momentum	-0.003**	-0.002**	-0.004***	-0.005***	-0.004**	-0.007***
	(-2.22)	(-2.11)	(-3.02)	(-2.60)	(-2.08)	(-3.13)
Turnover	0.000	0.001	-0.001	0.046***	0.046***	-0.019**
	(0.47)	(1.29)	(-0.99)	(2.87)	(4.63)	(-2.25)
|CAR(t-1,t+1)|	–	0.008**	–	–	0.041***	–
	–	(2.30)	–	–	(2.90)	–
ABTO(t-1,t+1)	–	0.057***	–	–	0.043***	–
	–	(6.25)	–	–	(5.90)	–
|CAR(m-1,m+1)|	–	–	0.009***	–	–	0.006
	–	–	(3.10)	–	–	(1.64)
ABTO(m-1,m+1)	–	–	0.000	–	–	0.005***
	–	–	(0.93)	–	–	(7.37)
R^2	0.515	0.515	0.515	0.523	0.525	0.524
Obs	264,313	264,313	264,228	158,244	158,244	158,212
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Regressions of Log of News Coverage

	Log(1+Articles)					
Earnings News Proxy:	*SUE*			*SURP*		
	(1)	(2)	(3)	(4)	(5)	(6)
Earnings News	-0.002***	-0.002***	-0.002***	-0.003***	-0.003***	-0.003***
	(-5.24)	(-5.60)	(-5.29)	(-3.44)	(-3.19)	(-3.36)
Size	0.017***	0.018***	0.018***	0.024***	0.023***	0.023***
	(7.65)	(7.85)	(7.84)	(6.51)	(6.19)	(6.15)
LBM	0.030***	0.029***	0.030***	0.047***	0.048***	0.047***
	(7.55)	(7.23)	(7.45)	(7.23)	(7.39)	(7.17)
Momentum	-0.005**	-0.005**	-0.008***	-0.006	-0.004	-0.009**
	(-2.51)	(-2.47)	(-3.48)	(-1.63)	(-1.06)	(-2.44)
Turnover	0.002**	0.004**	-0.001	0.086***	0.086***	-0.061***
	(2.23)	(2.24)	(-0.70)	(2.64)	(4.39)	(-3.84)
|CAR(t-1,t+1)|	–	0.148***	–	–	0.113***	–
	–	(7.30)	–	–	(3.95)	–
ABTO(t-1,t+1)	–	0.017**	–	–	0.096***	–
	–	(2.11)	–	–	(6.82)	–
|CAR(m-1,m+1)|	–	–	0.021***	–	–	0.013**
	–	–	(3.52)	–	–	(2.17)
ABTO(m-1,m+1)	–	–	0.000*	–	–	0.012***
	–	–	(1.67)	–	–	(8.40)
R^2	0.66	0.662	0.660	0.675	0.675	0.673
Obs	264,313	264,313	264,228	158,244	158,244	158,212
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Table 3. Size of Media Tilt

In this table we regress media coverage on earnings news separately for positive and negative news. $1_{(Article>0)}$ is an indicator variable equal to one if there was at least one article about the firm in the four newspapers (WSJ, NYT, WP, USAT) between $t-1$ and $t+1$, where t is the earnings announcement day. $Log(Articles+1)$ is the log of one plus the number of articles about the firm during that time period. SUE is the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarters. $SURP$ is the firm's earnings per share minus the consensus median forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price. $1_{(Earnings\ News<0)}$ is an indicator variable equal to one if the earnings news is negative. $Size$ is the log of market capitalization measured on day $t-10$, LMB is the log of one plus the firm's book-to-market ratio using market capitalization on $t-10$, and the firms' most recent book value from Compustat quarterly, $Momentum$ is the firm's cumulative marketed adjusted return over the fifty trading days ending on $t-10$, and $Turnover$ is the average ratio of trading volume to shares outstanding over the fifty trading days ending on $t-10$. $|CAR(m-1,m+1)|$ is the absolute value of firm's cumulative stock return from $m-1$ to $m+1$ where m is the firm's earnings announcement month. $Turnover(m-1,m+1)$ is the firm's share turnover (volume/shares outstanding) from $m-1$ to $m+1$ where m is the firm's earnings announcement month. $|CAR(t-1,t+1)|$ is the absolute value of the three-day earnings announcement market-adjusted return. $AbTurnover(t-1,t+1)$ is the abnormal announcement turnover in the announcement period from $t-1$ to $t+1$ minus the average from $t-5$ to $t-55$. Standard errors are clustered at the firm and quarter level.

Panel A: Binary Media Coverage Regressed on Negative News Indicator

	1(Article >0)					
Earnings News Proxy:	*SUE*			*SURP*		
	(1)	(2)	(3)	(4)	(5)	(6)
$1_{(Earnings\ News<0)}$	0.002**	0.002***	0.002**	0.004***	0.004***	0.004***
	(2.37)	(2.71)	(2.44)	(4.22)	(4.07)	(4.17)
Size	0.007***	0.007***	0.007***	0.007***	0.008***	0.008***
	(5.34)	(5.47)	(5.52)	(5.49)	(5.62)	(5.66)
LBM	0.012***	0.012***	0.012***	0.013***	0.012***	0.013***
	(5.23)	(5.02)	(5.16)	(5.39)	(5.21)	(5.33)
Momentum	-0.003**	-0.002**	-0.004***	-0.003**	-0.003**	-0.004***
	(-2.26)	(-2.15)	(-3.05)	(-2.33)	(-2.25)	(-3.12)
Turnover	0.000	0.001	-0.001	0.000	0.001	-0.001
	(0.45)	(1.28)	(-0.98)	(0.45)	(1.27)	(-0.95)
/CAR(t-1,t+1)/	–	0.057***	–	–	0.056***	–
	–	(6.26)	–	–	(6.23)	–
ABTO(t-1,t+1)	–	0.008**	–	–	0.008**	–
	–	(2.30)	–	–	(2.29)	–
/CAR(m-1,m+1)/	–	–	0.009***	–	–	0.009***
	–	–	(3.09)	–	–	(3.08)
ABTO(m-1,m+1)	–	–	0.000	–	–	0.000
	–	–	(0.92)	–	–	(0.90)
R^2	0.515	0.515	0.515	0.515	0.515	0.515
Obs	264,313	264,313	264,228	158,244	158,244	158,212
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Log Media Coverage Regressed on Negative News Indicator

	Log(1+Articles)					
Earnings News Proxy:	*SUE*			*SURP*		
	(1)	(2)	(3)	(4)	(5)	(6)
$1_{(Earnings\ News<0)}$	0.004***	0.004***	0.004***	0.008***	0.008***	0.008***
	(3.88)	(4.42)	(4.01)	(5.39)	(5.20)	(5.34)
Size	0.017***	0.018***	0.018***	0.018***	0.019***	0.019***
	(7.65)	(7.86)	(7.85)	(7.83)	(8.03)	(8.02)
LBM	0.031***	0.029***	0.030***	0.031***	0.030***	0.031***
	(7.72)	(7.42)	(7.63)	(7.98)	(7.72)	(7.90)
Momentum	-0.005**	-0.005**	-0.008***	-0.006***	-0.005***	-0.009***
	(-2.55)	(-2.51)	(-3.51)	(-2.71)	(-2.72)	(-3.65)
Turnover	0.002**	0.004**	-0.001	0.002**	0.004**	-0.001
	(2.21)	(2.22)	(-0.69)	(2.21)	(2.22)	(-0.65)
|CAR(t-1,t+1)|	–	0.148***	–	–	0.147***	–
	–	(7.31)	–	–	(7.29)	–
ABTO(t-1,t+1)	–	0.017**	–	–	0.017**	–
	–	(2.10)	–	–	(2.10)	–
|CAR(m-1,m+1)|	–	–	0.021***	–	–	0.021***
	–	–	(3.51)	–	–	(3.51)
ABTO(m-1,m+1)	–	–	0.000*	–	–	0.000*
	–	–	(1.67)	–	–	(1.66)
R^2	0.660	0.661	0.660		0.662	0.660
Obs	264,313	264,313	264,228	158,244	158,244	158,212
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Panel C: Interaction Term Regressions of Binary Media Coverage

	1(Article >0)					
Earnings News Proxy:	*SUE*			*SURP*		
	(1)	(2)	(3)	(4)	(5)	(6)
Earnings News x $1_{(Earnings\ News<0)}$	-0.002***	-0.001**	-0.002***	-0.012***	-0.009***	-0.011***
	(-3.06)	(-2.22)	(-2.73)	(-5.31)	(-4.31)	(-4.98)
Earnings News	0.000	0.000	0.000	0.008***	0.006***	0.008***
	(0.72)	(0.09)	(0.54)	(5.06)	(3.87)	(4.60)
$1_{(Earnings\ News<0)}$	0.001	0.001	0.001	0.005***	0.004***	0.004***
	(0.70)	(0.86)	(0.75)	(4.61)	(3.49)	(4.35)
Size	0.007***	0.007***	0.007***	0.011***	0.010***	0.010***
	(5.28)	(5.42)	(5.46)	(4.52)	(4.13)	(4.21)
LBM	0.012***	0.011***	0.012***	0.015***	0.016***	0.015***
	(5.05)	(4.84)	(4.99)	(3.58)	(3.81)	(3.60)
Momentum	-0.003**	-0.002**	-0.004***	-0.005***	-0.004**	-0.007***
	(-2.18)	(-2.07)	(-2.97)	(-2.70)	(-2.18)	(-3.12)
Turnover	0.000	0.001	-0.001	0.045***	0.046***	-0.019**
	(0.47)	(1.29)	(-1.00)	(2.88)	(4.63)	(-2.27)
|CAR(t-1,t+1)|	–	0.008**	–	–	0.042***	–
	–	(2.30)	–	–	(5.88)	–
ABTO(t-1,t+1)	–	0.056***	–	–	0.036***	–
	–	(6.20)	–	–	(2.62)	–
|CAR(m-1,m+1)|	–	–	0.009***	–	–	0.004
	–	–	(3.07)	–	–	(1.16)
ABTO(m-1,m+1)	–	–	0.000	–	–	0.005***
	–	–	(0.93)	–	–	(7.36)
R^2	0.515	0.515	0.515	0.523	0.525	0.524
Obs	264,313	264,313	264,228	158,244	158,244	158,212
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Panel D: Interaction Term Regressions of Log Media Coverage

	Log(1+Articles)					
Earnings News Proxy:	*SUE*			*SURP*		
	(1)	(2)	(3)	(4)	(5)	(6)
Earnings News x $1_{(Earnings\ News<0)}$	-0.003***	-0.002*	-0.003**	-0.026***	-0.019***	-0.023***
	(-2.78)	(-1.66)	(-2.42)	(-5.30)	(-4.51)	(-5.10)
Earnings News	-0.000	-0.001	-0.000	0.019***	0.013***	0.017***
	(-0.02)	(-1.12)	(-0.32)	(7.03)	(5.56)	(6.55)
$1_{(Earnings\ News<0)}$	0.001	0.001	0.001	0.012***	0.009***	0.011***
	(0.72)	(0.97)	(0.80)	(6.51)	(5.07)	(6.28)
Size	0.017***	0.018***	0.018***	0.028***	0.026***	0.026***
	(7.59)	(7.81)	(7.78)	(7.11)	(6.58)	(6.67)
LBM	0.030***	0.029***	0.030***	0.043***	0.046***	0.044***
	(7.46)	(7.17)	(7.38)	(6.88)	(7.16)	(6.86)
Momentum	-0.005**	-0.005**	-0.008***	-0.006*	-0.004	-0.009**
	(-2.47)	(-2.43)	(-3.42)	(-1.74)	(-1.14)	(-2.44)
Turnover	0.002**	0.004**	-0.001	0.085***	0.086***	-0.061***
	(2.25)	(2.24)	(-0.71)	(2.64)	(4.39)	(-3.89)
|CAR(t-1,t+1)|	–	0.017**	–	–	0.095***	–
	–	(2.11)	–	–	(6.81)	–
ABTO(t-1,t+1)	–	0.147***	–	–	0.105***	–
	–	(7.27)	–	–	(3.68)	–
|CAR(m-1,m+1)|	–	–	0.021***	–	–	0.009
	–	–	(3.51)	–	–	(1.57)
ABTO(m-1,m+1)	–	–	0.000*	–	–	0.012***
	–	–	(1.68)	–	–	(8.43)
R^2	0.66	0.662	0.660	0.675	0.675	0.673
Obs	264,313	264,313	264,228	158,244	158,244	158,212
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Table 4. Media Coverage and Firm Fundamentals

In this table we regress firm performance on the log of one plus the number of articles printed in the four national newspapers (NYT, WSJ, WP, and USAT) between $t-55$ and $t-5$, where t is the earnings announcement date. In the first three columns performance is proxied for by SUE, which is the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarters, and in columns (4) through (6) it is proxied for by $SURP$, which is the firm's earnings per share minus the consensus median forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price, $8K$ is the number of 8-K forms filed by the firm during the quarter, and $Guidance$ is the number of managerial guidances issued by the firm during the quarter. We control for firm-size, book-to-market ratio, momentum during the quarter, and turnover. Firm-size is the log of market capitalization measured on day $t-10$, LMB is the log of one plus the firm's book-to-market ratio using market capitalization on $t-10$, and the firms' most recent book value from Compustat quarterly, $Momentum$ is the firm's cumulative marketed adjusted return over the fifty trading days ending on $t-10$, and $Turnover$ is the average ratio of trading volume to shares outstanding over the fifty trading days ending on $t-10$. We include firm and quarter fixed effects. Standard errors are clustered at the firm and quarter level.

	SUE			$SURP$		
	(1)	(2)	(3)	(4)	(5)	(6)
$Log(Articles+1)$	-0.096***		-0.080***	-0.028***		-0.024***
	(-8.51)		(-7.72)	(-3.66)		(-3.17)
$Log(ArticlesNYT+1)$		-0.045***			-0.018**	
		(-2.80)			(-2.66)	
$Log(ArticlesWP+1)$		-0.002			-0.010	
		(-0.11)			(-0.89)	
$Log(ArticlesWSJ+1)$		-0.097***			-0.027***	
		(-7.58)			(-3.23)	
$Log(ArticlesUSAT+1)$		-0.001			0.007	
		(-0.04)			(0.52)	
$Log(8K+1)$			-0.098***			-0.028***
			(-8.05)			(-4.63)
$Log(Guidance+1)$			-0.107***			0.011
			(-4.80)			(1.05)
$Size$	-0.040***	-0.040***	-0.039***	-0.014	-0.014	-0.015
	(-2.96)	(-2.96)	(-2.92)	(-1.26)	(-1.24)	(-1.35)
LBM	-0.742***	-0.742***	-0.739***	-0.461***	-0.461***	-0.461***
	(-6.85)	(-6.85)	(-6.84)	(-3.44)	(-3.44)	(-3.43)
$Momentum$	0.309***	0.309***	0.308***	0.194***	0.193***	0.195***
	(9.38)	(9.38)	(9.51)	(9.32)	(9.33)	(9.44)
$Turnover$	0.015***	0.015***	0.016***	-0.110**	-0.109**	-0.106**
	(3.18)	(3.20)	(3.55)	(-2.61)	(-2.60)	(-2.57)
R^2	0.097	0.097	0.098	0.138	0.138	0.139
Observations	264,313	264,313	264,313	158,244	158,244	158,244
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Table 5. The Role of Space Constraints

In this table, we examine whether the tilt in media coverage is driven by a tilt in information production. $DJNW$ is the number of articles about the firm on the Dow Jones News Wire between $t-55$ and $t-5$, where t is the earnings announcement date. *Articles* is the number of articles printed in the four major newspapers (WSJ, NYT, WP, USAT) between $t-55$ and $t-5$, about the given firm. In the first three columns performance is proxied for by SUE, which is the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarters, and in the last three columns it is proxied for by $SURP$, which is the firm's earnings per share minus the consensus median forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price. We control for firm-size, book-to-market ratio, momentum during the quarter, and turnover. Firm-size is the log of market capitalization measured on day $t-10$, LMB is the log of one plus the firm's book-to-market ratio using market capitalization on $t-10$, and the firms' most recent book value from Compustat quarterly, $Momentum$ is the firm's cumulative marketed adjusted return over the fifty trading days ending on $t-10$, and $Turnover$ is the average ratio of trading volume to shares outstanding over the fifty trading days ending on $t-10$. We include firm and quarter fixed effects. Standard errors are clustered at the firm and quarter level.

	SUE			$SURP$		
	(1)	(2)	(3)	(4)	(5)	(6)
$Log(DJNW+1)$	-0.002		0.002	-0.012**		-0.011**
	(-0.29)		(0.40)	(-2.25)		(-2.11)
$Log(Articles+1)$		-0.080***	-0.080***		-0.024***	-0.022***
		(-7.72)	(-7.73)		(-3.17)	(-3.13)
$Log(8K+1)$	-0.103***	-0.098***	-0.098***	-0.026***	-0.028***	-0.025***
	(-8.02)	(-8.05)	(-7.82)	(-4.27)	(-4.63)	(-3.97)
$Log(Guidance+1)$	-0.110***	-0.107***	-0.107***	0.013	0.011	0.014
	(-4.80)	(-4.80)	(-4.75)	(1.29)	(1.05)	(1.34)
$Size$	-0.043***	-0.039***	-0.039***	-0.014	-0.015	-0.013
	(-3.17)	(-2.92)	(-2.90)	(-1.24)	(-1.35)	(-1.11)
LBM	-0.744***	-0.739***	-0.739***	-0.463***	-0.461***	-0.461***
	(-6.85)	(-6.84)	(-6.83)	(-3.44)	(-3.43)	(-3.43)
$Momentum$	0.308***	0.308***	0.308***	0.196***	0.195***	0.195***
	(9.50)	(9.51)	(9.52)	(9.47)	(9.44)	(9.46)
$Turnover$	0.015***	0.016***	0.016***	-0.108**	-0.106**	-0.101**
	(3.29)	(3.55)	(3.54)	(-2.63)	(-2.57)	(-2.54)
R^2	0.098	0.098	0.099	0.139	0.139	0.139
Observations	264,313	264,313	264313	158,244	158,244	158,244
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Table 6. Does Media Provide New Information?

This table contains firms' raw and factor-adjusted monthly returns in month M+1 sorted by portfolios of media articles in month M. We assign firms to tercile portfolios based on the amount of media coverage, where firms in the lowest tercile have received zero coverage and the remaining observations are sorted based on whether they are above or below the median for that month. These tests condition on the number of articles as well as the number of words written about a firm in month M to predict returns in month M+1. In Panel A, we examine the returns to a strategy that bets on firms without media coverage and against firms with high coverage. The 'Alpha' column reflects the intercept from a time-series regression of the long-short portfolio hedge return on the standard three Fama-French factors (HML, SMB, and MKT-RF) as well as the Carhart momentum factor (UMD). In Panels B and C, we independently double-sort firms into portfolios based on media coverage as well as return momentum measured over the twelve months ending in month M-1. Each panel also reports t-statistics based on the monthly time-series average of returns.

Panel A: Monthly Returns Sorted by Articles and Word Count

	T1 (Low)	T2	T3 (High)	High-Low	t-stat	Alpha	t-stat
Articles	1.013	0.906	0.631	-0.382**	-2.364	-0.251**	-1.837
WordCount	1.014	0.997	0.612	-0.402***	-2.846	-0.294***	-2.613

Panel B: Monthly Returns Sorted by Articles and Momentum

	T1 (Low)	T2	T3 (High)	High-Low	t-stat	Alpha	t-stat
Low *Momentum*	0.663	0.615	0.341	-0.322	-1.449	-0.232	-1.227
Mid	1.058	0.917	0.696	-0.362**	-2.250	-0.218	-1.591
High *Momentum*	1.083	0.890	0.527	-0.556***	-3.044	-0.418**	-2.439

Panel C: Monthly Returns Sorted by Word Count and Momentum

	T1 (Low)	T2	T3 (High)	High-Low	t-stat	Alpha	t-stat
Low *Momentum*	0.669	0.821	0.296	-0.457**	-2.279	-0.365**	-2.090
Mid	1.056	0.999	0.698	-0.386**	-2.445	-0.220*	-1.738
High *Momentum*	1.079	0.998	0.616	-0.504***	-3.178	-0.420***	-2.690

Table 7. Industry Level Coverage

In this table, we examine whether the tilt in media coverage is driven by a tilt in information production. *Articles* is the number of articles printed in the four major newspapers (WSJ, NYT, WP, USAT) between $t-55$ and $t-5$ about the given firm. *IndustryArticles* is the number of articles printed in the four major newspapers between $t-55$ and $t-5$ about other firms in the industry, excluding the firm itself. We use Fama-French 48 industry classification. In the first three columns performance is proxied for by SUE, which is the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarters, and in the last three columns it is proxied for by $SURP$, which is the firm's earnings per share minus the consensus median forecast measured five days before the firm's earnings announcement scaled by beginning of quarter price. $8K$ is the number of 8-K forms filed by the firm during the quarter, and *Guidance* is the number of managerial guidances issued by the firm during the quarter. We control for firm-size, book-to-market ratio, momentum during the quarter, and turnover. Firm-size is the log of market capitalization measured on day $t-10$, LMB is the log of one plus the firm's book-to-market ratio using market capitalization on $t-10$, and the firms' most recent book value from Compustat quarterly, $Momentum$ is the firm's cumulative marketed adjusted return over the fifty trading days ending on $t-10$, and $Turnover$ is the average ratio of trading volume to shares outstanding over the fifty trading days ending on $t-10$. We include firm and quarter fixed effects. Standard errors are clustered at the firm and quarter level.

	SUE			$SURP$		
	(1)	(2)	(3)	(4)	(5)	(6)
$Log(Articles+1)$		-0.091***	-0.075***		-0.026***	-0.023***
		(-8.38)	(-7.42)		(-3.69)	(-3.14)
$Log(IndustryArticles+1)$	-0.094***	-0.091***	-0.091***	-0.040**	-0.039**	-0.039**
	(-3.45)	(-3.35)	(-3.39)	(-2.36)	(-2.33)	(-2.33)
$Log(8K+1)$			-0.097***			-0.028***
			(-8.16)			(-4.64)
$Log(Guidance+1)$			-0.108***			0.010
			(-4.86)			(0.99)
$Size$	-0.045***	-0.039***	-0.038***	-0.015	-0.014	-0.014
	(-3.35)	(-2.98)	(-2.92)	(-1.41)	(-1.23)	(-1.31)
LBM	-0.743***	-0.736***	-0.733***	-0.461***	-0.458***	-0.457***
	(-6.86)	(-6.83)	(-6.81)	(-3.45)	(-3.44)	(-3.44)
$Momentum$	0.309***	0.309***	0.308***	0.194***	0.194***	0.195***
	(9.57)	(9.60)	(9.74)	(9.49)	(9.48)	(9.60)
$Turnover$	0.015***	0.015***	0.016***	-0.115***	-0.105**	-0.101**
	(2.91)	(3.22)	(3.59)	(-2.72)	(-2.61)	(-2.57)
R^2	0.097	0.097	0.098	0.139	0.139	0.139
Observations	264,313	264,313	264313	158,244	158,244	158,244
Firm & Quarter FEs?	Yes	Yes	Yes	Yes	Yes	Yes

Table 8. Industry Return Tests

Panel A contains value-weighted average industry returns in month M across tercile portfolios of monthly media coverage in month M-1. Industries are defined using Fama-French 48 industry classifications. *Total Article Count* is defined as the total number of media articles in a given industry-month and *Standardized Abn Article Count* equals *Total Article Count* standardized by the industry's twelve-month moving average and standard deviation. The 'Alpha' column reflects the intercept from a time-series regression of the long-short portfolio hedge return on the standard three Fama-French factors (HML, SMB, and MKT-RF) as well as the Carhart momentum factor (UMD). Panel B contains analogous tests after removing firms that received at least one article in month m. Panels C and D report industry average of firm-level SUEs, defined as the seasonally-adjusted change in earnings scaled by standard deviation of seasonally-adjusted change over the prior eight quarter. Each panel also reports t-statistics based on the monthly time-series average of returns.

Panel A: Monthly Industry Returns Sorted by Industry Coverage

	T1 (Low)	T2	T3 (High)	High-Low	t-stat	Alpha	t-stat
Standardized Abn Article Count	1.004	0.534	0.441	-0.563**	-2.490	-0.**	-2.560
Total Article Count	0.942	0.674	0.491	-0.451**	-2.108	-0.324*	-1.750

Panel B: Monthly Returns of Non-Covered Peer Firms by Industry Coverage

	T1 (Low)	T2	T3 (High)	High-Low	t-stat	Alpha	t-stat
Standardized Abn Article Count	1.045	0.728	0.597	-0.447**	-2.040	-0.437**	-1.976
Total Article Count	0.946	0.919	0.605	-0.340	-1.797	-0.218	-1.363

Panel C: Monthly SUEs Sorted by Industry Coverage

	T1 (Low)	T2	T3 (High)	High-Low	t-stat
Standardized Abn Article Count	-0.980*	-1.757	-1.433	-0.454*	-1.900
Total Article Count	-0.839	-0.905*	-1.708	-0.869***	-4.155

Panel D: Monthly SUEs of Non-Covered Peer Firms by Industry Coverage

	T1 (Low)	T2	T3 (High)	High-Low	t-stat
Standardized Abn Article Count	-0.403	-0.717	-0.974	-0.571***	-2.618
Total Article Count	-0.382	-0.363	-0.939	-0.558***	-3.633