Underexposed: The effect of declining local newsroom sizes on corporate governance

Abstract

The number of news reporters and correspondents in the United States has fallen by more than a third in the past 20 years. Considering the critical role media plays in the functioning of capital markets, the sharp declines may have implications for firms' monitoring and reputational risk. Using Bureau of Labor Statistics data, I find that a change in the number of reporters and correspondents working in a metropolitan area is associated with increased signs of earnings management and CEO entrenchment at firms headquartered in those areas. Meet-or-just-beat EPS is more likely and discretionary accruals are higher after a reduction in the number of journalists available to cover companies. Meanwhile, CEO turnover is less likely and both CEO pay levels and percentage increases are higher. Although the influence of national and international financial press on firms' information environment is well-documented, this research suggests an important role for local and regional journalists in corporate governance as well.

1.0 INTRODUCTION

Media play an important role in capital markets (Tetlock, 2014), but the number of newspaper and broadcast journalists in the United States has fallen by a third in the past 20 years, according to U.S. Bureau of Labor Statistics estimates. Many of those losses have come from cuts to local and regional news organizations.

The reductions in the number of newsgatherers in the United States raise important questions about the effectiveness of democratic institutions (Schulhofer-Wohl and Garrido, 2013; Drago, Nannicini and Sobbrio, 2019) and monitoring of public officials and governments (Nyhan and Reifler, 2015; Gao, Lee, and Murphy, 2019). I find that media reductions also affect firm governance. Media may play a monitoring role to constrain corporate activity[1], and journalists believe that one of their most important functions is uncovering mismanagement and financial malfeasance (Call *et al.*, 2018). However, few researchers have examined the role of local media specifically. What research does exist suggests that local media may be more important for raising attention than conveying price relevant information about firms (Barber and Odean, 2008; Engelberg and Parsons, 2011) or that local media may serve as marketers more than monitors because of advertising relationships (Gurun and Butler, 2012).

I examine metropolitan areas in the United States that have experienced a reduction in local media employment to explore the effects on corporate governance. Firms headquartered in those geographic areas show an increased propensity to report earnings per share that demonstrate discontinuity, which is consistent with earnings management to meet or beat such benchmarks as consensus analyst estimates, year-ago EPS, and reporting zero or just-positive earnings. I also find

[1] Examples include Dyck and Zingales (2002); Miller (2006); Core, Guay and Larcker (2008); Dyck, Volchkova and Zingales (2008); Joe, Louis and Robinson (2009); Dyck, Morse and Zingales (2010); Kuhnen and Niessen (2012); and Liu and McConnell (2013).

increased abnormal discretionary accruals, which are commonly employed as a measurement for managed earnings (Jones, 1991; Dechow, Sloan and Sweeney, 1995; Ball, 2013), among firms headquartered in areas that experience a reduction in media employment as compared with a matching set of firms without such reductions.

In addition to behavior consistent with earnings management, I find that in the years after a reduction in local media employment, CEOs are less likely to experience turnover and more likely to have higher levels of pay and higher percentage year-over-year increases. The change in pay appears to be driven by profits from stock and options, consistent with managers being better able to use their inside information to profit in an environment of reduced monitoring and reputational risk.

2.0 MOTIVATION

Healy and Palepu (2001) count media among the information intermediaries — which also include financial analysts, rating agencies and auditors — that engage in private information production to uncover managerial misuse of firm resources. This information can mitigate agency problems that arise from the separation of ownership and management (Jensen and Meckling, 1976). Dyck, Morse and Zingales (2010) examine where corporate fraud allegations originate and find that the media is one of the most important actors in detecting fraud, accounting for more eventual investigations than the SEC, auditors, private litigation, or debt and equity holders.

Miller (2006) finds that the press fills a dual role in revealing accounting fraud, both rebroadcasting information from analysts, auditors, and lawsuits and by providing new information and analysis that uncover accounting irregularities. Dai, Parwada, and Zhang (2015) also find media play a role in corporate governance by disseminating news about insider trading profits,

which effectively reduces both overall trading and future profits by corporate insiders. Rogers, Skinner, and Zechman (2016) study insider trading information and find media play an important role in market reactions to information, even when that information is publicly available before being reported by the media. More broadly, Li, Ramesh, and Shen (2011) find that newswires help investors identify news and that investors trade on that information even though SEC reports containing the same information were previously available to the public.

Nyhan and Reifler (2015) find the threat of fact-checking can constrain lawmakers' willingness to engage in potential falsehoods, and several researchers have found a similar willingness among firms to change their behavior to manage their reputational capital in the face of media scrutiny (Dyck, Volchkova and Zingales, 2008; Liu and McConnell, 2013; Baloria and Heese, 2018). Dyck, Volchkova and Zingales (2008) find that media coverage can encourage firms to reverse corporate governance violations. Baloria and Heese (2018) find that firms are willing to delay the release of negative information if they fear the loss of reputational capital from slanted news sources. And Liu and McConnell (2013) find that differences in media tone and attention can affect managers' decision to abandon value-reducing acquisition attempts. Liu and McConnell (2013) conclude that the risk to managers' reputational capital levied by media exposure can help align agent and shareholder interests. Niessner and So (2018) demonstrate that the media prioritizes publicizing negative news about firms, consistent with journalists' priorities as detailed in the Call *et al.* (2018) survey of members of the press.

Collectively, the above research demonstrates that media, considered broadly, can play an important role in constraining financial mismanagement through the threat of exposure. However, most prior research focuses on national or international news sources, such as the *Wall Street Journal* (Farrell and Whidbee, 2002); Dow Jones news releases (Li, Ramesh and Shen, 2011; Dai,

Parwada and Zhang, 2015); or major broadcast networks such as Fox News (Baloria and Heese, 2018). It is unclear whether local media exert similar reputational risks to managers and firms. Local and regional newspapers appear to drive retail investor trading activity (Barber and Odean, 2008; Engelberg and Parsons, 2011); however, little evidence exists that local media serve as effective corporate monitors, even if their geographic proximity to managers and employees provides added opportunities to detect and reveal financial mismanagement (Gurun and Butler, 2012).

Anecdotally, local news sources have sometimes been in a unique position to provide investors information relevant to firm valuation. In January 2005, shortly after being named CEO of RadioShack, David Edmondson was arrested for driving under the influence in Fort Worth, Texas, where the company is headquartered. It was his third drunken driving arrest, and the local newspaper, the *Fort Worth Star-Telegram,* began looking into Edmondson's past. About a year later, Star-Telegram retail reporter Heather Landy revealed that Edmondson had lied about two of the degrees listed on his resume. The story was picked up by national news outlets across the country, including *Bloomberg News Service,* the *Wall Street Journal,* and the *New York Times.* A week after Landy's story was published, RadioShack's board announced his resignation, in February 2006. The day Landy's story first appeared, RadioShack's board issued a statement saying, it was "aware of the matters raised in the Fort Worth Star-Telegram article and has previously given due consideration to them." However, in announcing Edmondson's resignation a week later, RadioShack's executive chairman, Leonard H. Roberts, admitted, the board knew "some, but definitely not all" of the issues raised in Landy's reporting.[2] In the week between

[2] New York Times, Floyd Norris, "RadioShack Chief Resigns After Lying," Feb. 21, 2006.

Landy's story being published and Edmondson's resignation, RadioShack shares fell more than 10 percent.

While some research exists on the aggregate effects of local media reporting on trading, it is unclear that local journalists generally provide information that is valuable to price discovery. Barber and Odean (2008) and Engelberg and Parsons (2011) find that coverage by local media outlets encourages trading activity within their coverage areas and that this increased volume of trading is associated with increased prices. Gurun and Butler (2012) find that local media are subject to "hype" when covering firms headquartered nearby. They determine that local news outlets are more likely to cover local firms with a positive slant and suggest that media outlets are, in a sense, captured because of their advertising relationships. Gurun and Butler (2012) find that security prices increase temporarily as a result of this hype, but that the prices reverse shortly after the positive coverage. In a survey of journalists, which includes several local news outlets, Call *et al.* (2020) find that journalists acknowledge pressure from management to avoid unfavorable stories, but that they consider monitoring companies one of journalism's most important functions. Call *et al.* (2020) also find that journalists have incentives to produce high-quality articles with exclusive content and that negative articles have the most impact.

Overall, prior research has not determined conclusively whether journalists provide value-relevant information or simply encourage noise trading. Furthermore, the explosion of Internet-only outlets and social media sites (Antweiler and Frank, 2004) may have made the possible mechanisms by which local news media produce and disseminate value-relevant information, well, irrelevant. However, the FCC notes that "an abundance of media outlets does not translate into an abundance of reporting" (Waldman, 2011). In fact, studies by the Pew Center for Excellence in Journalism and others suggest that the vast majority, sometimes as much as 95%, of stories

collected and shared by all media originates with what are called "legacy" media, i.e., a newspaper or local broadcast station. Just as investors face attention constraints, national and international news outlets and agencies may also lack resources to uncover many stories at the local and state level and rely on local media outlets to find stories they can aggregate or report more thoroughly. Therefore, despite the increasing number of outlets online, "TV stations and newspapers have emerged as the largest providers of local news online" (Waldman, 2011).

Cage, Herve and Viaud (2019) examine the sources of online news, initially using a "transmedia" approach agnostic to which type of media company originally published new information and then tracking back the original source. They find that almost two-thirds of articles contain at least some copied material, and that original stories are disseminated by other media outlets in under 3 hours on average, and sometimes in as little as 4 minutes. Almost three-quarters of the original content that did not originate with news agencies, such as AFP and Reuters, came from newspapers, while 11.5% was from television news stations. Radio and online-only news sources account for about 10% and 7% of original content, respectively.

Traditional media appear to continue to be relevant to information production, in capital markets as well as elsewhere. Gao, Lee, and Murphy (2019) show that a reduced threat of local media exposure can mean increased borrowing costs for municipal governments. Consistent with Gao, Lee, and Murphy (2019), I find a similar effect among corporate borrowers (Appendix A). I also demonstrate that firms experience increased idiosyncratic risk after reductions in local media employment and increased levels of information asymmetry appear to drive the change rather than reductions in attention or changes to the competitive environment (Appendix B).

3.0 HYPOTHESIS DEVELOPMENT

Despite changes to the media landscape, in which a variety of online and other digital sources may serve as substitutes for traditional journalists, Waldman (2011) and Cage, Herve and Viaud (2019) find the most information still originates with local and regional newspapers and broadcast networks. If even the threat of exposure of evidence of agency conflicts constrains managers' ability or willingness to engage in such activity, then a reduction in local media employment may be associated with increased levels of behavior consistent with financial mismanagement. In the auditor fraud triangle (Creesey, 1973), the risk of fraud is associated with three conditions: perceived financial pressure, rationalizations for engaging in potentially fraudulent activity; and the perceived opportunity to avoid detection. A reduction in the number of local media members available to monitor a firm likely impairs reporters' ability to effectively discover information about a firm and could potentially increase the "perceived opportunity" by managers to engage in behavior that is misaligned with shareholder interests.

3.1 Earnings management

Degeorge, Patel, and Zeckhauser (1999) and Healy (1985) detail many reasons managers may have incentives to manage earnings, including an array of employment opportunities and compensation benefits. Graham, Harvey and Rajgopal (2005) survey executives and find that managers set smooth earnings reports as a high priority. Further, they find that a majority of managers are willing to destroy firm value to achieve favorable earnings reports. Leuz, Nanda, and Wysocki (2003) suggest that managers engage in earnings management to protect their benefits of private control.

If a significant number of managers manipulate earnings to just avoid reporting a loss, then the earnings distribution will be discontinuous at zero, with unusually many few small losses and unusually many small profits. If some managers just avoid year-over-year earnings decreases, then a similar discontinuity arises for earnings changes (Burgstahler and Dichev, 1997). Managers may also avoid just missing a consensus analyst forecast (Degeorge, Patel, and Zeckhauser, 1999).

In the context of the fraud triangle, managers may interpret a reduction in local media employment as an increased opportunity to avoid detection of earnings management.

Hypothesis 1: Discontinuity around standard earnings benchmarks will increase for firms headquartered in areas that experience a reduction in nearby media employment.

3.2 Discretionary accruals

I next explore one of the common mechanisms for managing earnings: the use of accruals to temporarily boost or reduce reported income. Accruals are components of earnings that are not reflected in current cash flows, and a great deal of managerial discretion goes into their construction. Beneish and Vargus (2002) demonstrate that abnormal accruals can predict insider trading activity by managers, and this evidence of earnings management at least partially explains the accrual anomaly documented in Sloan (1996) and Collins and Hribar (2000). Bergstresser and Philippon (2006) provide evidence that abnormal discretionary accruals are more pronounced for firms with CEOs who have greater compensation incentives to meet earnings benchmarks. If a reduction in local media provides executives an increased opportunity to adjust accruals with reduced perceived risk of detection, then increased measurements of abnormal accruals would be

positively correlated with being headquartered in an area that experienced a media employment reduction.

Hypothesis 2: Firms headquartered in areas that experience a reduction in media employment will demonstrate higher relative levels of discretionary accruals.

3.3 Executive turnover

Lowenstein (1996) argues that the presence of potential media coverage can encourage corporate boards to be more effective because of the threat that shareholders might respond to negative press coverage by selling their shares, thereby reducing market value. Negative media coverage of firm performance could also affect director reputations and create incentives for directors to remove the CEO in an effort to salvage their reputations (Farrell and Whidbee, 2002). Miller (2006); Dyck, Volchkova and Zingales (2008); and Dyck, Morse and Zingales (2010) find that media coverage can expose managerial and governance problems at firms. Farrell and Whidbee (2002) find that the volume of negative coverage in the Wall Street Journal is correlated with an increased probability of CEO turnover.

If the threat of media exposure of financial mismanagement and the reputational risks to managers and directors is lower after a reduction in local media employment, then CEOs may face less likelihood of being fired or forced to resign.

Hypothesis 3: The probability of CEO turnover is reduced after a reduction in local media employment in the area where the firm is headquartered.

3.4 Compensation

Kuhnen and Niessen (2012) find that media coverage of executive compensation can affect both compensation levels and structure. They find that negative press coverage focuses especially on stock options, and that reductions in option compensation are more severe when managers and directors face higher levels of reputational risks. Core, Guay and Larcker (2008) find that the press monitors excess compensation, and that it is more likely to focus on large stock and option elements of executive compensation. However, they find that firms do not change compensation in response to press coverage. Dai, Parwada, and Zhang (2015) find that disseminating news about insiders' trading activity can effectively constrain both the volume and the profitability of future trading. If a reduction in local media employment causes a decreased potential channel for disseminating information about levels of compensation and trading activity, then managers of firms headquartered in areas that have experienced a reduction in the number of journalists able to disseminate that information may be able to more effectively increase their compensation levels and profitability of trading. This leads to hypotheses 4 and 5:

Hypothesis 4: CEOs of firms headquartered in areas that have experienced a reduction in media employment will see relatively higher levels of compensation than chief executives of a matching control sample.

Bhojraj *et al.* (2009) find that CEOs of firms that exhibit meet-or-just-beat behavior consistent with earnings management and those with poor-quality accruals are more likely to engage in insider selling of their company's stock and options because they understand the potentially firm-value-destroying nature of their actions. If managers face reduced monitoring and

reputational risk after a reduction in nearby media employment, levels and changes in pay should be driven by sales of stock and options.

Hypothesis 5: Increased executive pay for firms that have experienced a reduction in media employment in their area will be reflected more in calculations of compensation that include actual profits from stock and option sales rather than estimates of value reported by the firms to the SEC.

4.0 DATA AND DESCRIPTIVE STATISTICS

4.1 Bureau of Labor Statistics data

Information on the number of reporters and correspondents in an area is taken from the Bureau of Labor Statistics' Occupational Employment Statistics program. The survey produces annual estimates of employment for 810 specific occupations in more than 580 areas, including metropolitan statistical areas (MSAs) and nonmetropolitan areas throughout the U.S. states, the District of Columbia, and U.S. territories. The statistics are compiled annually after each year's May survey and are released in March of the following year. I use the total numbers of employees in the Reporter and Correspondent categories, which include both the Publishing Industries, such as newspapers and periodicals, and the Radio and Television Broadcasting Industries. I calculate the percentage change to employees in the sum of these two categories across two-year windows to account for the rolling nature of the survey. Years in which the number of employees in the Reporters and Correspondents and Broadcast News Analyst categories falls 25 percent or more from the OES survey released two years prior are identified as negative shocks to coverage.[3]

[3] The 25% cutoff closely approximates the employment reductions explored in Gao, Lee, and Murphy (2019) when newspaper closes in a county. Two of the examples mentioned in Gao, Lee, and Murphy (2019) are the closure of the

Observations of shocks to employment are limited to 2003, as measured by the difference from 2001, and beyond.[4]

The Metropolitan Statistical Areas used by the BLS are designated by the U.S. Census Bureau. I link ZIP codes to MSAs using Census Bureau designations for 2010, and identify the ZIP code of a firm's headquarters using Compustat listings for its mailing address, because many companies incorporate outside of the state where their operational headquarters may be located for tax and governance reasons. To ensure that total changes in overall employment are not affecting the results, I drop observations in which a 25% reduction in the sum of Reporters and Correspondents and Broadcast News Analysts is accompanied by a reduction in overall employment as recorded by the OES. Bhojraj, Lee and Oler (2003) find that GICS classifications explain stock return comovements better than SIC and NAICS industry classification systems, and Levi and Welch (2017) find that a firm market value strongly correlates with a firm's beta and other market model factor similarities when compared with other firms. I find exact matches for each sample firm by year and by 6-digit G industry code, and then match, without replacement, by market value within 15% and within 15% of the beta of the treated firm's calculated beta in the Fama-French Three Factor model regressions. The Fama-French Three Factor model is:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i^M \left(R_t^M - R_{f,t}\right) + \beta_t^{SMB} R_t^{SMB} + \beta_i^{HML} R_t^{HML} + \varepsilon_{i,t}$$

Denver Rocky Mountain News in Colorado and the *Cincinnati Post* in Ohio. Those closures were reflected as 28% and 27%, respectively, losses in media category employment in the BLS data. Testing other cutoff levels of 20% and 30% yield similar results to those reported here.

[4] In 2003 and 2004, the OES was released twice, in May and November. I use the data released for the May survey results in those years for consistency. In 2004, the number of Reporters and Correspondents and Broadcast News Analysts were the same in both surveys.

Where $R_{i,t}$ is the return to the firm *i* at time *t*, $R_{f,t}$ is the risk-free rate, R_t^M is the return to a value-weighted market portfolio, R_t^{SMB} is the difference of the return to small market value stocks minus larger firms, and R_t^{HML} is the difference between the return to high book-to-market stocks and low book-to-market firms. Regressions use daily returns for firms and the value-weighted market portfolio from the CRSP database, and daily returns to the small-minus-big and the high-minus-low portfolios, R_t^{SMB} and R_t^{HML}, are from the factor file on Kenneth French's website.

I eliminate firms with relevant missing control variable data from Compustat or CRSP and firms with common stock share prices that closed the year trading under $2 to mitigate the effects of the smallest value firms affecting results.

The first, and largest number, of firms with negative shocks are recorded in 2003, as shown in Figure 1, with more than 250 firms headquartered in geographic areas that were affected. Reductions in media employment affected more than 100 firms in 2004, 2005, 2007, 2008, and 2009. As Gao, Lee, and Murphy (2019) show, shocks to employment are not uniform across time. In their sample, newspapers closed within counties at different periods, and they use the introduction of Craigslist to a market as an instrument for a newspaper closure, because of the ensuing loss of classified advertising revenue. Craigslist was founded in 1995 in San Francisco and entered the largest metropolitan areas first, which suggests that cities with the headquarters of a relatively larger number of publicly traded firms may have been affected earlier than other areas. The last affected year considered in this analysis is 2015 to allow at least three years of post-shock returns and accounting information. Figure 2 shows where affected firms are located, by state. As is to be expected because of the number of firms headquartered in these states, the heaviest concentrations are in California, New York, and Texas, but the firms included in my analysis span 41 states and Washington, D.C.

My final sample consists of 1,373 firms headquartered in locations that experienced media employment reductions and their 1,373 matching control firms. Summary statistics for the treated firms and the control sample at the year in which the shocks to media employment are recorded are presented in Table 1, Panel A and Panel B, respectively. By design, mean market values and firm beta are nearly identical. Other statistics, including total assets and standard deviation of returns, are also similar at year 0. The firms also appear well matched in respect to the mean and median number of analysts following treated and control firms, and the R^2 values from the Fama-French Three Factor regressions is similar between both groups of firms.

4.2 Earnings

I use three earnings benchmarks to evaluate meet-or-just-beat behavior. The first examines only those firms in the sample that are covered by at least one financial analyst and calculates analyst forecast error as:

$$FERR_{i,t} = EPS_{i,t} - Forecast_{i,t-1}$$

Where $EPS_{i,t}$ is the reported annual earnings per share (EPS) for firm *i* for the year *t,* and $Forecast_{i,t-1}$ is the mean of all analyst forecasts during the three-month period before the end of the fiscal year. When $FERR_{i,t} = \$0$, a firm's reported EPS matched the consensus forecast exactly. The statistical test uses bins set at a width of \$0.0025 (a quarter of a cent) to determine the distribution discontinuity of reported earnings around the benchmark $FERR_{i,t} = \$0$. A large discontinuity around the benchmark is the probability that earnings were managed to meet or just beat the benchmark (Byzalov and Basu, 2019). The statistical test considers a subsample of bins on either side of the benchmark to determine the parameters of the "normal" distribution of

earnings around the benchmark. Observations, as reported in Tables 1 and 2, are not firm-years but the number of firms that reported earnings within the subsample considered.

The second measure is employed for firms that are not covered by financial analysts. It considers the difference in EPS reported in year *t* from year *t-1*.

$$\Delta EPS_{i,t} = EPS_{i,t} - EPS_{i,t-1}$$

The final measurement, used for all treated and control firms, examines the discontinuity distribution around a reported net income of zero and is scaled by market value of the firm, following Burgstahler and Chuk's (2015) recommendations for discontinuity tests.

$$Earnings_{i,t} = \frac{NI_{i,t}}{MV_{i,t}}$$

Where $NI_{i,t}$ is net income for firm *i* at year t and $MV_{i,t}$ is market value (number of common shares outstanding multiplied by share price) of firm *i* at year *t*.

Mean analyst EPS forecasts are taken from the Summary file in the IBES database; actual EPS, net income, and market value are taken from the Compustat database.

4.3 Discretionary accruals

I employ two well-established measures of discretionary accruals, the Jones model (Jones, 1991) and the modified Jones model proposed in Dechow, Sloan and Sweeney (1995). *TA* is defined as the change in non-cash current assets minus the change in current liabilities minus depreciation and amortization, scaled by lagged total assets. The Jones model measures

discretionary accruals using the following regression estimated cross-sectionally each year for all firm-year observations in the same two-digit GICS code:

$$TA_{i,t} = \beta_0 + \beta_1 \left(\frac{1}{Assets_{i,t-1}} \right) + \beta_2 \Delta Sales_{i,t} + \beta_3 PPE_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t}$$

Where $\Delta Sales_{i,t}$ is change in sales and $PPE_{i,t}$ is net property, plant, and equipment. Both values are scaled by lagged total assets ($Assets_{i,t-1}$) to mitigate heteroscedasticity in the residuals. I follow Kothari, Leone, and Wasley (2015) and estimate the regression with the intercept, β_0, to provide an additional control for heteroscedasticity and to mitigate problems stemming from an omitted size variable. Kothari, Leone, and Wasley (2015) also recommend the addition of the performance control $ROA_{i,t}$ because firms experiencing extreme performance may exhibit higher levels of "normal" discretionary accruals. Abnormal discretionary accruals are measured as the absolute value of the residual, $\varepsilon_{i,t}$, from the equation.

The modified Jones model employs the same equation except a firm's change in accounts receivable ($\Delta AR_{i,t}$) is subtracted from $\Delta Sales_{i,t}$ before estimation.

All values are taken from the Compustat database, as are the additional control variables employed in the dynamic difference-in-differences regression, market-to-book and the log-transformed market value of the firm.

4.4 Executive turnover

The dependent variable in the probit model of executive turnover takes a value of 1 if the Execucomp database indicates a CEO left the firm for a reason other than retirement in the three years after the reduction in local media employment is recorded (year $t = 0$) for firms in the treated sample or a matched control firm. Data from Execucomp and Compustat is available for a total of 751 firms, with 362 of them having experienced a reduction in local media employment in the area

where they are headquartered. In addition to firm and return characteristics, I use CEO age and tenure as controls, both of which are taken from the Execucomp database.

4.5 Executive compensation

I use two measures of executive compensation from the Execucomp database, Total SEC and Total compensation — Alternate Method 2. Total SEC is taken from firm filings with the SEC on the overall level of payment to executives and includes salary, bonus, stock awards, option awards, nonequity incentives, pension changes, and other compensation. Alternate Method 2 uses most of the elements of the Total SEC compensation except that stock and option awards are valued using the value realized from option exercise or stock vesting instead of the amount charged to the income statement in filings to the SEC.

5.0 METHODOLOGY

5.1 Earnings

Early research on earnings discontinuity focused on the empirical histogram of the bins around a theorized target (Burgstahler and Dichev, 1997; Degeorge, Patel and Zeckhauser, 1999; Burgstahler and Eames, 2003), which employs standardized difference tests and cannot easily incorporate multiple explanatory variables. To study the determinants of meet-or-just-beat behavior, researchers have generally employed a logit model that assigns a dummy variable of 1 or 0 based on whether an observation occurs at a particular bin (i.e., around zero or at round number such as 1 or 10 cents) of interest (Frankel, Johnson and Nelson, 2002; Matsumoto, 2002; Ashbaugh, LaFond and Mayhew, 2003; Cheng and Warfield, 2005; Jiang, Petroni and Wang, 2010). However, Byzalov and Basu (2019) argue that the logit model can yield erroneous

inferences about the determinants of meet-or-just-beat behavior. They suggest that if a determinant affects the mean or variance of *pre-managed earnings,* then the probability of unmanaged small profits also varies with that determinant. The small- or zero-profit dummy variable employed in the logit model will include both managed and unmanaged earnings. Therefore, the probability that a reported earnings number will be assigned to the bin of interest varies with the determinant, even if the determinant does not affect meet-or-just-beat behavior. Byzalov and Basu (2019) develop a statistical test that allows the distribution shape to vary with multiple explanatory variables, by assuming a smooth distribution of pre-managed earnings and a discontinuous incremental effect at the benchmark of interest. They use local polynomial approximations to model the smooth pre-managed distribution and interact the polynomial terms with explanatory variables to implement the conditioning on determinants. The data outside the small-loss and small-profit intervals identify the pre-managed distribution conditional on the determinants, and the missing small losses or increased small profits identify meet-or-just beat behavior. Employing this method allows distribution discontinuity and its determinants to be identified with OLS regressions in each stage of the estimation. The first stage estimates parameters outside the bins of interest, and the second stage tests observations inside the bins of interest for distribution discontinuity.

Byzalov and Basu (2019) suggest using a third-order (cubic) polynomial[5] and their empirical tests demonstrate the bins from -1 cent to +1 cent are most suitable for examining discontinuity distributions The parameters estimated are an estimated intercept, α_0; a linear trend, α_1; a quadratic trend, α_2; and the cubic trend, α_3. The earnings management probability is calculated as π_0. I employ the Byzalov and Basu (2019) tests for distribution discontinuity using three settings.

[5] According to Byzalov and Basu (2019), cubic terms are often significant and improve approximation quality, while higher order terms are consistently insignificant in their explanatory power for the distribution continuity.

In the first test, I use the portion of the sample that is covered by analysts to assess meet-or-just-beat behavior of mean analyst EPS forecasts. I conduct separate tests on the treated sample of firms before (at year $t < -1$) and after (at year $t \geq -1$) a recorded reduction in local media employment. I also examine the behavior of firms in the control sample. For firms that are not covered by analysts, I create the same subsamples and test the difference between current year reported EPS and prior-year EPS. These tests are unrestricted and do not control for possible determinants of meet-or-just-beat behavior. Following Byzalov and Basu (2019), I set the bin widths at 0.0025 and examine the 16 bins on either side of 0, [-0.04 to 0.04), to establish the first stage parameter estimates, and the 8 bins around 0 [-0.01 to 0.01) for the probability of discontinuity.

In my final test, I examine discontinuities around zero reported earnings[6]. This test uses the full sample of treated and matched control firms and includes a number of controls that prior research finds are associated with meet-or-just-beat behavior. Following Burgstahler and Dichev (1997) I control for current asset (CA) intensity and current liability (CL) intensity as proxies for a firm's ability to manage earnings by manipulating working capital. Burgstahler and Chuk (2017) also suggest intensity of costs of goods sold (COGS) and research and development (RD) are implicit claims that could create contracting incentives for earnings management. CA intensity is the ratio of non-cash current assets to the market value of equity and CL intensity is the ratio of current liabilities to the market value of equity. COGS intensity is the ratio of cost of goods sold to total assets, and RD intensity is the ratio of R&D expense to total assets. I replace missing R&D expenses information in Compustat with a value of zero.

[6] Earnings is net income scaled by market value to control for size differences in the bins, as recommended by Burgstahler and Chuk (2015)

5.2 Discretionary accruals

The change in abnormal discretionary accruals is evaluated using a dynamic difference-in-differences model with abnormal discretionary accruals calculated from the Jones (1991) and the modified Jones model (Dechow, Sloan, and Sweeney, 1995) as the dependent variable:

$$DA_{i,t} = \sum_{k\geq 1} \beta_k \, Reduction\ in\ coverage\ has\ been\ in\ effect\ for\ k\ periods_{s,t} + \sum_{s} State\ fixed\ effects_s + \sum_{t} Time\ fixed\ effects_t + \beta_{i,t} Controls + \varepsilon_{i,s,t} \quad (1)$$

All standard errors, in model (1) and all other regression models employed in this paper, are robust to heteroscedasticity and clustered by OES area number (the level of assignment of treatment) to address possible serial correlation in the error terms (Bertrand, Duflo and Mullainathan, 2004). The model includes state- and year-fixed effects. Additional controls include the market-to-book value of the firm as an additional control for growth opportunities and size as measured by the log-transformed market value of the firm. In separate tests (Table 3, Columns 3 and 4), I include other indicators of the firms information environment, a dummy variable equaling 1 if a firm has at least one analyst covering the firm (*Analyst Coverage*) and a dummy variable equaling 1 if the firm is listed on the S&P 1500 index (*S&P 1500*).

The dynamic difference-in-differences controls also include the original independent variables used to estimate the residuals in the Jones and modified Jones models. Chen, Hribar and Melessa (2018) find that the typical implementation of the Jones and modified Jones models that use residuals as a dependent variable generates biased coefficients and standard errors that can lead to incorrect inferences. Because the magnitude of the bias in coefficients and standard errors is a function of the correlations between model regressors, they find that including the independent variables from the original discretionary accrual estimation can correct the bias. Therefore, I

include $\Delta Sales_{i,t}$ (or $\Delta Sales_{i,t}$ less $\Delta AR_{i,t}$, in the modified Jones tests) and $PPE_{i,t}$, scaled by lagged total assets, as well as the reciprocal of total assets as additional controls. I also include the Kothari, Leone, and Wasley (2015) performance control, $ROA_{i,t}$ used in the original abnormal discretionary accruals estimation.

5.3 Executive Turnover

I estimate a probit model for treated and control firms at year t = 0, where the dependent variable, *Turn*, takes a value of 1 if the CEO is replaced for any reason other than retirement in the following three years, according to the Execucomp database.

$$Turn_{i,t=1-3} = \beta_0 + \beta_1 Treat_i + \beta_2 Analyst\ Coverage_i + \beta_3 S\&PIndex_i + \beta_4 BTM_i + \beta_5 Annual\ Returns_i + \beta_6 Leverage_i + \beta_7 ROA_i + \beta_8 TA_i + \beta_9 CEO\ age_i + \beta_{10} CEO\ tenure_i + \varepsilon_{i,t}$$

Where the independent variable of interest *Treat* is a dummy variable equal to 1 if a firm recorded a reduction in local media employment at year t = 0. *Analyst Coverage* is a dummy variable equal to 1 if a firm has at least one analyst following it, and *S&P Index* is a dummy variable equal to 1 if the firm is listed in the S&P 1500 index. Both variables are intended to capture some of the other information environment around the firm and are likely related to board and managerial reputational risk. *Annual Returns* are the realized returns for the firm at year *t* = 0 minus the value-weighted return to the market portfolio recorded in CRSP (Weisbach, 2001). *ROA* is net income divided by total assets. Both variables are intended to control for past performance. Book-to-market (*BTM*) also controls for performance, as well as size, and total assets (*TA*) controls for size as measured by book value of the firm. *Leverage* is total debt over total assets and can be indicative of the bankruptcy risk of the firm; Strebulaev and Yang (2013) also find that firm debt

levels are correlated with CEO characteristics. *CEO age* and *CEO tenure* control for CEO characteristics that may be associated with turnover and are calculated as described previously.

5.4 Executive compensation

My final test examines CEO compensation between treated and control firms in the period after a reduction in local media employment is recorded for the treated sample.

$$Comp_{i,t} = \beta_0 + \beta_1 Treat_{i,t} + \beta_2 Market\ Value_{i,t} + \beta_3 Annual\ Returns_{i,t-1} + \beta_4 Annual\ Returns_{i,t-2} + \beta_5 S.D.of\ Returns_{i,t-1} + \beta_6 Leverage_i + \beta_7 ROA_i + \beta_{10} CEO\ tenure_i + \varepsilon_{i,t}$$

Where *Treat* is a dummy variable equal to 1 if the firm has experienced a reduction in local media employment. Control variables follow Hwang and Kim (2009) and include market value of the firm, as a control for size; lagged annual returns for two years prior ($Annual\ Returns_{i,t-1}$ and $Annual\ Returns_{i,t-2}$) and the lagged standard deviation of returns ($S.D.of\ Returns_{i,t-1}$), which may affect evaluation of the CEO's performance. *Leverage, ROA,* and *CEO tenure* are as described previously.

6.0 RESULTS

6.1 Earnings

Table 2 shows the results for the unrestricted tests of discontinuity for actual EPS and consensus analyst forecast (Columns 1, 2, and 3) and actual EPS to year-ago EPS (Columns 4, 5, and 6). The firms that experienced a reduction in media employment show significant probability

($p < 0.01$) of having managed earnings to meet analyst mean forecasts (Column 1)[7]. Significantly, the same firms do not show a significant probability of having managed earnings before the reduction in local media employment (Column 2). Control firms with analyst coverage (Column 3) also show significant probability of having managed earnings but with a lower probability ($p < 0.05$) than post-treatment firms. The tests of meet-or-just-beat behavior against year-ago EPS of firms without analyst coverage indicate significant probability of post-treatment firms' managing their earnings, while the discontinuity distribution is not significant for the same firms before the recorded reduction in media employment, nor for the sample of control firms. However, the relatively low number of observations in the meet-or-beat year-ago EPS test may indicate that year-ago EPS is not a particularly relevant benchmark for firms as fewer than 200 firms in each category reported differences within the -4 cent to +4 cent range. Still, all six columns considered collectively are consistent with firms changing their behavior around reported earnings after a reduction in local media employment.

I use the zero net income benchmark in a full sample analysis with control variables, allowed by the Byzalov and Basu (2019) method. The dummy variable *Treat* is a dummy variable equaling 1 if a firm has experienced a reduction in local media and is in the period year $t = -1$ to +6 from the time the reduction was recorded at year $t = 0$. The results, in Table 3, show that a reduction in nearby local media employment (*Treat*) is significant ($p < 0.1$) and positively associated with earnings management. Control variables that prior theory and research have suggested may be significant influences on evidence of earnings management are insignificant, except for *R&D Intensity* ($p < 0.01$). Notably in the context of the information environment of

[7] Results in Columns 1, 2, and 3 are nearly identical when using median analyst forecast as the benchmark rather than mean analyst forecast.

firms, *Analyst Coverage* is also insignificant, despite analysts' theorized role in corporate governance and monitoring.

6.2 Discretionary accruals

The measures of abnormal discretionary accruals (Table 4) are highly significant ($p < 0.01$) in all specifications of the dynamic difference-in-differences model for years $t = -1$ to $+1$[8]. In the Jones model without the information environment controls (Column 1), year $t = +6$ is significantly positively correlated with a reduction in media employment ($p < 0.05$), and for the modified Jones model without information environment controls, the year $t = +3$ is significant ($p < 0.1$). With the information environment controls, *Analyst Coverage* and *S&P 1500*, the effect on discretionary accruals appear even more persistent, with years t = +3, +5, and +6 showing statistically significant variations in abnormal accruals in the years after a reduction in local media employment. Being included in the S&P 1500 index appears to have a negative correlation with abnormal discretionary accruals, consistent with increased attention to a firm dissuading managers from employing accrual management. However, *Analyst Coverage* is not significant for either measure of discretionary accruals.

6.3 CEO turnover

Being headquartered in an area where local media employment has fallen is significantly correlated ($p < 0.1$) with a decrease in the probability that a CEO will be replaced within the next three years (Table 5). The marginal effect of being headquartered in an area with fewer journalists

[8] Although the media employment reduction is recorded in year t = 0, the actual reduction may have occurred as much as two years earlier, so the difference occurring in year t = -1 is consistent with the effect being driven by employment shock. In unreported tests of parallel trends, I allow variables for each year t = -6 to +6 and no significant effects are detected before year t = -1.

is 3.3% reduced chance of turnover. The other information environment controls do not appear to play a significant role in the probability of turnover. Only the control for firm size, log of total assets, demonstrates a significant relationship to the probability of CEO turnover. The limited sample size may restrict the power of the test, but the test provides some evidence consistent with managers and members of the board of directors suffering less reputational risk when firms are headquartered in an area with fewer journalists.

6.4 CEO compensation

I test both overall levels of compensation (Table 6, Columns 1 and 2) and year-over-year change in compensation (Table 6, Columns 3 and 4) for treated and control firms in the years after a reduction in media employment (i.e., years t = -1 to +6). The dummy variable is significantly positively correlated with overall levels of both measures of compensation ($p < 0.01$); however, in considering the changes in compensation, only the measure of overall compensation that includes actual value of stock and option sales is significantly correlated with a reduction in local media employment. Collectively, the findings are consistent both with firms being less constrained in their compensation levels and with managers being less constrained in their exercise and trading of shares and options after a reduction in media employment. This does not necessarily demonstrate agency problems, and in fact Jensen and Murphy (1990) argue that executive compensation is suboptimal *because* of sensational media coverage. However, these findings are consistent with media attention, even local media attention, putting constraints on executive compensation.

7.0 CONCLUSION

An extensive literature has examined the role of the financial press at the national and international level as an information intermediary in capital markets and in asset pricing. The number of headlines about a firm contribute to momentum effects on asset prices (Chan, 2003). A lack of news stories in major national outlets can mean investors require a higher return from a company (Fang and Peress, 2009). Financial journalism and sell-side financial analysts play complementary roles as information intermediaries (Ahn et al., 2019; Guest and Kim, 2019). Media coverage can help investors interpret information (Huberman and Regev, 2001; Demers and Lewellen, 2003; Bushee et al., 2010; Twedt, 2016; Guest, 2017), but investors can also overreact to "stale" news simply because it is repeated prominently (Carvalho, Klagge and Moench, 2011; Fedyk and Hodson, 2014; Marshall, Visaltanachoti and Cooper, 2014; Tetlock, 2014).

While some research exists on the aggregate effects of local media reporting on trading, it has been unclear whether local journalists generally provide information that is valuable to price discovery or corporate governance. Barber and Odean (2008) and Engelberg and Parsons (2011) find that coverage by local media outlets encourages trading activity within their coverage areas and that this increased volume of trading is associated with increased prices. Gurun and Butler (2012) find that local media are subject to "hype" when covering firms headquartered nearby. They determine that local news outlets are more likely to cover local firms with a positive slant and suggest that media outlets are, in a sense, captured because of their advertising relationships. Gurun and Butler (2012) find that security prices increase temporarily as a result of this hype, but that the prices reverse shortly after the positive coverage. In a survey of journalists, which includes several local news outlets, Call *et al.* (2018) find that journalists acknowledge pressure from management

to avoid unfavorable stories, but that they consider monitoring companies one of journalism's most important functions. Call *et al.* (2018) also find that journalists have incentives to produce high-quality articles with exclusive content and that negative articles have the most impact.

Overall, prior research has not determined conclusively whether journalists provide value-relevant information or simply encourage noise trading. Furthermore, the explosion of Internet-only outlets and social media sites (Antweiler and Frank, 2004) may have made the possible mechanisms by which local news media produce and disseminate value-relevant information, well, irrelevant. However, the FCC notes that "an abundance of media outlets does not translate into an abundance of reporting" (Waldman, 2011). In fact, studies by the Pew Center for Excellence in Journalism and others suggest that the vast majority, sometimes as much as 95%, of stories collected and shared by all media originates with what are called "legacy" media, i.e., a newspaper or local broadcast station. Just as investors face attention constraints, national and international news outlets and agencies may also lack resources to uncover many stories at the local and state level and rely on local media outlets to find stories they can aggregate or report more thoroughly. Therefore, despite the increasing number of outlets online, "TV stations and newspapers have emerged as the largest providers of local news online" (Waldman, 2011).

Cage, Herve and Viaud (2019) also examine the sources of online news, initially using a "transmedia" approach agnostic to which type of media company originally published new information and then tracking back the original source. They find that almost two-thirds of articles contain at least some copied material, and that original stories are disseminated by other media outlets in under 3 hours on average, and sometimes in as little as 4 minutes. Almost three-quarters of the original content that did not originate with news agencies, such as AFP and Reuters, came

from newspapers, while 11.5% was from television news stations. Radio and online-only news sources account for about 10% and 7% of original content, respectively.

My findings provide further evidence that local media members provide value-relevant information for investors and a monitoring role important to effective corporate governance, consistent with that documented among members of the national and financial press in a variety of settings in prior research.

Managers appear to exhibit behavior consistent with a perceived increased opportunity to engage in potentially value-destroying behavior. The probability of behavior consistent with meet-or-just-beat earnings management is significant after a reduction in media employment, and is higher for firms that have less coverage than for firms that their matching control sample that do not. Managers also appear to engage in increased levels of discretionary accruals after a reduction in local media employment. Despite this evidence for increased levels of earnings management, chief executives appear less likely to face the threat of turnover. And their compensation levels, specifically changes in profitable exercises of stock and options, are consistent with boards and managers facing less reputational risk for increases in executive compensation. Taken together, these findings suggest an important role not just for the national and international press but the local members of the news media who are closest to the firms they cover.

8.0 REFERENCES

Abdoh, H. and Varela, O. (2017) "Product market competition, idiosyncratic and systematic volatility," Journal of Corporate Finance. Elsevier B.V., 43, pp. 500–513.

Ahn, M., Drake, M., Kyung, H., & Stice, H. (2019). "The role of the business press in the pricing of analysts' recommendation revisions," Review of Accounting Studies, 24(1), 341-392.

Akerlof, G. A. (1970) "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," Quarterly Journal of Economics, 84(3), pp. 488–500.

Angrist, J. D., Imbens, G. W. and Rubin, D. B. (1996) "Identification of Causal Effects Using Instrumental Variables," Journal of the American Statistical Association, 91(434), pp. 444–455.

Antweiler, W. and Frank, M. Z. (2004) "Is all that talk just noise? The information content of Internet stock message boards," Journal of Finance, 59(3), pp. 1259–1294.

Antweiler, W. and Frank, M. Z. (2011) "Do US Stock Markets Typically Overreact to Corporate News Stories?" SSRN Electronic Journal, (1998), pp. 1–22.

Ashbaugh, H., LaFond, R. and Mayhew, B. W. (2003) "Do nonaudit services compromise auditor independence? Further evidence," Accounting Review, 78(3), pp. 611–639.

Ashbaugh-Skaife, H., Collins, D. W., Kinney Jr, W. R., & LaFond, R. (2008). "The effect of SOX internal control deficiencies and their remediation on accrual quality," The Accounting Review, 83(1), 217-250.

Ball, R. (2013) "Accounting informs investors and earnings management is rife: Two questionable beliefs," Accounting Horizons, 27(4), pp. 847–853.

Ball, R., Bushman, R. M. and Vasvari, F. P. (2008) "The debt-contracting value of accounting information and loan syndicate structure," Journal of Accounting Research, 46(2), pp. 247–287.

Baloria, V. P. and Heese, J. (2018) "The effects of media slant on firm behavior," Journal of Financial Economics. Elsevier B.V., 129(1), pp. 184–202.

Barber, B. M. and Odean, T. (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), pp. 785–818.

Beneish, M. D. and Vargus, M. E. (2002) "Insider trading, earnings quality and accrual mispricing," Accounting Review, 77(4), pp. 755–791.

Benston, G. J. and Hagerman, R. L. (1974) "Determinants of bid-asked spreads in the over-the-counter market," Journal of Financial Economics, 1(4), pp. 353–364.

Bertrand, M., Duflo, E. and Mullainathan, S. (2004) "How much should we trust differrences-in-differences estimates?," Quarterly Journal of Economics, 119(1), pp. 249–275.

Bharath, S. T., Sunder, J. and Sunder, S. V. (2008) "Accounting Quality and Debt Contracting," Accounting Review, The, 83(1), pp. 1–28.

Bhojraj, S., Hribar, P., Picconi, M., & McInnis, J. (2009). "Making sense of cents: An examination of firms that marginally miss or beat analyst forecasts," The Journal of Finance, 64(5), 2361-2388.

Bhojraj, S., Lee, C. M. C. and Oler, D. K. (2003) "What's My Line? A Comparison of Industry Classification Schemes for Capital Market Research," Journal of Accounting Research, 41(5), pp. 745–774.

Blankespoor, E., DeHaan, E. and Zhu, C. (2018) "Capital market effects of media synthesis and dissemination: evidence from robo-journalism," Review of Accounting Studies, 23(1).

Blundell, R. and Costa Dias, M. (2009) "Alternative approaches to evaluation in empirical microeconomics," Journal of Human Resources, 44(3), pp. 565–641.

Botosan, C. A. and Plumlee, M. A. (2002) "A Re-examination of Disclosure Level and the Expected Cost of Equity Capital," Journal of Accounting Research, 40(1), pp. 21–40.

Burgstahler, D. C. and Eames, M. J. (2003) "Earnings Management to Avoid Losses and Earnings Decreases: Are Analysts Fooled?" Contemporary Accounting Research, 20(2), pp. 253–294.

Burgstahler, D. C., Hail, L. and Leuz, C. (2006) "The importance of reporting incentives: Earnings management in European private and public firms," Accounting Review, 81(5), pp. 983–1016.

Burgstahler, D. and Chuk, E. (2015) "Do scaling and selection explain earnings discontinuities?," Journal of Accounting and Economics. Elsevier, 60(1), pp. 168–186.

Burgstahler, D. and Chuk, E. (2017) "What Have We Learned About Earnings Management? Integrating Discontinuity Evidence," Contemporary Accounting Research, 34(2), pp. 726–749.

Burgstahler, D. and Dichev, I. D. (1997) "Earnings Management to Avoid Earnings Decreases and Losses," Journal of Accounting and Economics, 24(3), pp. 99–126.

Bushee, B. J., Core, J. E., Guay, W., & Hamm, S. J. (2010). "The role of the business press as an information intermediary," Journal of Accounting Research, 48(1), 1-19.

Bushee, B. J., Gow, I. D. and Taylor, D. J. (2018) "Linguistic Complexity in Firm Disclosures: Obfuscation or Information?," Journal of Accounting Research, 56(1).

Bushman, R. M. and Smith, A. J. (2001) "Financial accounting information and corporate governance," Journal of Accounting and Economics, 32, pp. 237–333.

Busse, J. A. and Green, T. C. (2002) "Market efficiency in real time," Journal of Financial Economics, 65(3), pp. 415–437.

Byzalov, D. and Basu, S. (2019) "Modeling the determinants of meet-or-just-beat behavior in distribution discontinuity tests," Journal of Accounting and Economics, 68(1–29).

Cage, J., Herve, N. and Viaud, M.-L. (2019) "The Production of Information in an Online World," The Review of Economic Studies, (December 2019).

Call, A. C., Emett, S. A., Maksymov, E., & Sharp, N. Y. (2020) "Meet the press: Survey evidence on financial journalists as information intermediaries." Working paper.

Carhart, M. M. (1997) “On persistence in mutual fund performance,” Journal of Finance, 52(1), pp. 57–82.

Carlin, B. I., Longstaff, F. A. and Matoba, K. (2014) “Disagreement and asset prices,” Journal of Financial Economics. Elsevier, 114(2), pp. 226–238.

Carvalho, C., Klagge, N. and Moench, E. (2011) “The persistent effects of a false news shock,” Journal of Empirical Finance. Elsevier B.V., 18(4), pp. 597–615.

Chan, K. C., Christie, W. G. and Schultz, P. H. (1995) “Market Structure and the Intraday Pattern of Bid-Ask Spreads for NASDAQ Securities,” Journal of Business, 68(1), pp. 35–60.

Chan, L. K. C. and Lakonishok, J. (2004) “Value and growth investing: Review and update,” Financial Analysts Journal, 60(1), pp. 71–86.

Chan, W. C. (2003) “Stock price reaction to news and no-news: drift and reversal after headlines,” Journal of Financial Economics, 70(2), pp. 223–260.

Chapman, K. (2018) “Earnings notifications, investor attention, and the earnings announcement premium,” Journal of Accounting and Economics. Elsevier B.V., 66(1), pp. 222–243.

Cheng, Q. and Warfield, T. D. (2005) “Equity incentives and earnings management,” Accounting Review, 80(2), pp. 441–476.

Chen, W., Hribar, P. and Melessa, S. (2018) “Incorrect Inferences When Using Residuals as Dependent Variables,” Journal of Accounting Research, 56(3), pp. 751–796.

Chung, K. H. and Jo, H. (2016) “The Impact of Security Analysts ’ Monitoring and Marketing Functions on the Market Value of Firms,” Journal of Financial and Quantitative Analysis, 31(4), pp. 493–512.

Collins, D. W. and Hribar, P. (2000) “Earnings-based and accrual-based market anomalies: One effect or two?,” Journal of Accounting and Economics, 29(1), pp. 101–123.

Copeland, T. E. and Galai, D. (1983) “Information Effects on the Bid-Ask Spread,” The Journal of Finance, 38(5), pp. 1457–1469.

Core, J. E., Guay, W. R. and Verdi, R. (2008) “Is accruals quality a priced risk factor?,” Journal of Accounting and Economics, 46(1), pp. 2–22.

Cressey, D.R., 1973. Other People’s Money, Patterson Smith: Montclair.

Da, Z., Engelberg, J. and Gao, P. (2011) “In Search of Attention,” Journal of Finance, 50(2).

Dechow, P. M. and Dichev, I. D. (2002) “The quality of accruals and earnings: The role of accrual estimation errors,” Accounting Review, The, 77 (Supplement: Quality of Earnings Conference), pp. 35–59.

Dechow, P. M., Ge, W. and Schrand, C. (2010) “Understanding earnings quality: A review of the proxies, their determinants and their consequences,” Journal of Accounting and Economics.

Dechow, P. M., Sloan, R. G. and Sweeney, A. P. (1995) “Detecting Earnings Management,” Accounting Review, The, 70(2), pp. 193–225.

Degeorge, F., Patel, J. and Zeckhauser, R. (1999) “Earnings management to exceed thresholds,” Journal of Business, 72(1), pp. 633–666.

Demers, E. and Lewellen, K. (2003) "The marketing role of IPOs: Evidence from internet stocks," Journal of Financial Economics, 68(3), pp. 413–437.

Demsetz, H. (1968) "The cost of transacting," Quarterly Journal of Economics, 82(1), pp. 33–53.

Desai, H., Rajgopal, S. and Venkatachalam, M. (2004) "Value-glamour and accruals mispricing: One anomaly or two?" Accounting Review, The, 79(2), pp. 355–385.

Dichev, I. D. and Skinner, D. J. (2002) "Large-sample evidence on the debt covenant hypothesis," Journal of Accounting Research, 40(4), pp. 1091–1123.

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

Drago, F., Nannicini, T. and Sobbrio, F. (2019) "Meet the Press : How Voters and Politicians Respond to Newspaper Entry and Exit," Applied Economics, 6(3), pp. 159–188.

Drake, M. S., Guest, N. M. and Twedt, B. J. (2014) "The Media and Mispricing: The Role of the Business Press in the Pricing of Accounting Information," Accounting Review, 89(5), pp. 1673–1701.

Drake, M. S., Thornock, J. R. and Twedt, B. J. (2017) "The internet as an information intermediary," Review of Accounting Studies, 22(2).

Dyck, A., Morse, A. and Zingales, L. (2010) "Who blows the whistle on corporate fraud?," Journal of Finance, 65(6), pp. 2213–2253.

Dyck, A., Volchkova, N. and Zingales, L. (2008) "The Corporate Governance Role of the Media: Evidence from Russia," Journal of Finance, 63(3), pp. 1093–1135.

Dyck, A. and Zingales, L. (2002) "The Corporate Governance Role of the Media," NBER Working Paper, 9309.

Easley, D. and O'Hara, M. (2004) "Information and the cost of capital," Journal of Finance, 59(4), pp. 1553–1583.

Engelberg, J. (2008) "Costly Information Processing: Evidence from Earnings Announcements," AFA 2009 San Francisco meetings paper.

Engelberg, J. E. and Parsons, C. A. (2011) "The Causal Impact of Media in Financial Markets," Journal of Finance, 66(1), pp. 67–97.

Engelberg, J., Sasseville, C. and Williams, J. (2012) "Market madness? the case of Mad Money," Management Science, 58(2), pp. 351–364.

Fama, E. F. and French, K. R. (1993) "Common risk factors in the returns on stocks and bonds," Journal of Financial Economics, 33, pp. 3–56.

Fama, E. F. and French, K. R. (1997) "Industry costs of equity," Journal of Financial Economics, 43(2), pp. 153–193.

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

Farrell, K. A. and Whidbee, D. A. (2002) "Monitoring by the financial press and forced CEO turnover," Journal of Banking and Finance, 26(12), pp. 2249–2276.

Fedyk, A. (2018) "Front Page News: The Effect of News Positioning on Financial Markets for their invaluable guidance and advice. I am also grateful to," Working Paper.

Fedyk, A. and Hodson, J. (2014) "When Can the Market Identify Stale News?" Working Paper, pp. 1–53.

Flannery, M. J. and Rangan, K. P. (2006) "Partial adjustment toward target capital structures," Journal of Financial Economics, 79(3), pp. 469–506.

Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005) "The market pricing of accruals quality," Journal of Accounting and Economics, 39(2), pp. 295–327.

Frankel, R. M., Johnson, M. F. and Nelson, K. K. (2002) "The relation between auditors' fees for nonaudit services and earnings management," Accounting Review, The, 77(SUPPL.), pp. 71–105.

Gao, P., Lee, C. and Murphy, D. (2019) "Financing dies in darkness? The impact of newspaper closures on public finance," Journal of Financial Economics, (312).

Gaspar, J. M. and Massa, M. (2006) "Idiosyncratic volatility and product market competition," Journal of Business, 79(6), pp. 3125–3152.

Gelb, D. S. and Zarowin, P. (2002) "Corporate disclosure policy and the informativeness of stock prices," Review of Accounting Studies, 7(1), pp. 33–52.

Gerig, A. (2015) "High-Frequency Trading Synchronizes Prices in Financial Markets," U.S. Securities and Exchange Commission, Division of Economic and Risk Analysis Working Paper.

Giroud, X. and Mueller, H. M. (2011) "Corporate Governance, Product Market Competition, and Equity Prices," Journal of Finance, 66(2), pp. 563–600.

Glosten, L. R. and Milgrom, P. R. (1985) "Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders," Journal of Financial Economics, 14, pp. 71–100.

Gompers, P. A. and Metrick, A. (2001) "Institutional investors and equity prices," Quarterly Journal of Economics, 116(1), pp. 229–259.

Gong, S. X., Gul, F. A. and Shan, L. (2018) "Do auditors respond to media coverage? Evidence from China," Accounting Horizons, 32(3).

Graham, J. R., Harvey, C. R. and Rajgopal, S. (2005) "The economic implications of corporate financial reporting," Journal of Accounting and Economics, 40(1–3), pp. 3–73.

Graham, J. R., Li, S. and Qiu, J. (2012) "Managerial attributes and executive compensation," Review of Financial Studies, 25(1), pp. 144–186.

Grossman, S. J. and Stiglitz, J. E. (1976) "Information and Competitive Price Systems," The American Economic Review, 66(2), pp. 249–253.

Grossman, S. J. and Stiglitz, J. E. (1980) "On the Impossibility of Informationally Efficient Markets," American Economic Review, The, 70(3), pp. 393–408.

Grullon, G., Kanatas, G. and Weston, J. P. (2004) "Advertising, breadth of ownership, and liquidity," Review of Financial Studies, 17(2), pp. 439–461.

Guest, N. M. (2017a) “Do Journalists Help Investors Analyze Firms’ Earnings News?” Working Paper.

Guest, N. M. (2017b) “Do Journalists Help Investors Analyze Firms’ Earnings News?” Working Paper.

Guest, N. M. and Kim, J. (2019) “On the Interplay among Information Intermediaries: How Does Analyst Coverage Affect Media Coverage?” Working Paper.

Gurun, U. G. and Butler, A. W. (2012) “Don’t Believe the Hype: Local Media Slant, Local Advertising, and Firm Value,” Journal of Finance, 67(2), pp. 561–598.

Healy, P. M. (1985) “The effect of bonus schemes on accounting decisions,” Journal of Accounting and Economics, 7(1–3), pp. 85–107.

Healy, P. M., Hutton, A. P. and Palepu, K. G. (1999) “Stock Performance and Intermediation Changes Surrounding Sustained Increases in Disclosure,” Contemporary Accounting Research, 16(3), pp. 485–520.

Healy, P. M. and Palepu, K. G. (2001) “Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature,” Journal of Accounting and Economics, 31(1–3), pp. 405–440.

Heckman, J. J., Lochner, L. and Taber, C. (1998) “Explaining Rising Wage Inequality: Explorations with a Dynamic General Equilibrium Model of Labor Earnings with Heterogeneous Agents,” Review of Economic Dynamics, 1(1), pp. 1–58.

Hoberg, G., Phillips, G. and Prabhala, N. (2014) “Product Market Threats, Payouts, and Financial Flexibility,” Journal of Finance, 69(1), pp. 293–324.

Hong, H. and Stein, J. C. (2005) “A unified theory of underreaction, momentum trading, and overreaction in asset markets,” Advances in Behavioral Finance, 2(6), pp. 502–540.

Hovakimian, A., Opler, T. and Titman, S. (2001) “The Debt-Equity Choice,” The Journal of Financial and Quantitative Analysis, 36(1), pp. 1–24.

Huang, R. and Ritter, J. R. (2009) “Testing theories of capital structure and estimating the speed of adjustment,” Journal of Financial and Quantitative Analysis, 44(2), pp. 237–271.

Huberman, G. (2001) “Familiarity breeds investment,” Review of Financial Studies, 14(3), pp. 659–680.

Huberman, G. and Regev, T. (2001) “Contagious speculation and a cure for cancer,” The Journal of Finance, 56(1), pp. 387–396.

Hughes, J. S., Liu, Jing and Liu, Jun (2007) “Information asymmetry, diversification, and cost of capital,” Accounting Review, 82(3), pp. 705–729.

Irvine, P. J. and Pontiff, J. (2009) “Idiosyncratic return volatility, cash flows, and product market competition,” Review of Financial Studies, 22(3), pp. 1149–1177.

Jegadeesh, N. and Titman, S. (1993) “Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency,” The Journal of Finance, 48(1), pp. 65–91.

Jegadeesh, N. and Titman, S. (2002) “Cross-Sectional and Time-Series Determinants of Momentum Returns,” Review of Financial Studies, 15(1), pp. 143–157.

Jegadeesh, N. and Titman, S. (2011) “Momentum,” The Annual Review of Financial Economics, 3, pp. 493–509.

Jensen, M. C. and Meckling, W. H. (1976) “Theory of the firm: Managerial behavior, agency costs, and ownership structure,” Journal of Financial Economics, 3, pp. 305–360.

Jensen, M. C. and Murphy, K. J. (1990) “Performance Pay and Top-Management Incentives,” Journal of Political Economy, 98(2), pp. 225–264.

Jiang, J. (Xuefeng), Petroni, K. R. and Wang, I. Y. (2010) “CFOs and CEOs: Who have the most influence on earnings management?,” Journal of Financial Economics. Elsevier, 96(3), pp. 513–526.

Joe, J. R. (2003) “Why press coverage of a client influences the audit opinion,” Journal of Accounting Research, 41(1), pp. 109–133.

Joe, J. R., Louis, H. and Robinson, D. (2009) “Managers and investors responses to media exposure of board ineffectiveness,” Journal of Financial and Quantitative Analysis, 44(3), pp. 579–605.

Jones, J. J. (1991) “Earnings Management During Import Relief Investigations,” Journal of Accounting Research, 29(2), p. 193.

Kahneman, D. and Tversky, A. (1973) “On the psychology of prediction,” Psychological Review, 80(4), pp. 237–251.

Kim, J. B., Song, B. Y. and Zhang, L. (2011) “Internal control weakness and bank loan contracting: Evidence from SOX section 404 disclosures,” Accounting Review, 86(4), pp. 1157–1188.

Klein, R. W. and Bawa, V. S. (1977) “The effect of limited information and estimation risk on optimal portfolio diversification,” Journal of Financial Economics, 5(1), pp. 89–111.

Kothari, S. P., Leone, A. J. and Wasley, C. E. (2005) “Performance matched discretionary accrual measures,” Journal of Accounting and Economics, 39(1), pp. 163–197.

Kothari, S. P., Shu, S. and Wysocki, P. D. (2009) “Do Managers Withhold Bad News ?” Journal of Accounting Research, 47(1), pp. 241–276.

Kyle, A. S. (1985) “Continuous Auctions and Insider Trading,” Econometrica, 53(6), pp. 1315–1335.

Lafond, R. (2005) “Is the Accrual Anomaly a Global Anomaly?” Working Paper

Lambert, R., Leuz, C. and Verrecchia, R. E. (2007) “Accounting information, disclosure, and the cost of capital,” Journal of Accounting Research, 45(2), pp. 385–420.

Lee, C. M. C., Mucklow, B. and Ready, M. J. (1993) “Spreads, Depths, and the Impact of Earnings Information: An Intraday Analysis,” Review of Economic Studies, 6(2), pp. 345–374.

Lehavy, R. and Sloan, R. G. (2008) “Investor recognition and stock returns,” Review of Accounting Studies, 13(2–3), pp. 327–361.

Leland, H. E. and Pyle, D. H. (1977) “Informational Asymmetries, Financial Structure, and Financial Intermediation,” Journal of Finance, XXXII(2), pp. 371–387.

Leuz, C., Nanda, D. and Wysocki, P. D. (2003) “Earnings management and investor protection: An international comparison,” Journal of Financial Economics, 69(3), pp. 505–527.

Leuz, C. and Verrecchia, R. E. (2000) "The Economic Consequences of Increased Disclosure," Journal of Accounting Research, 38(May), pp. 91–124.

Leuz, C. and Verrecchia, R. E. (2011) "Firms' Capital Allocation Choices, Information Quality, and the Cost of Capital," Working Paper.

Leuz, C. and Wysocki, P. D. (2016) "Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research," Journal of Accounting Research, 54(2).

Levi, Y. and Welch, I. (2017) Best Practice for Cost-of-Capital Estimates, Journal of Financial and Quantitative Analysis.

Li, C. (2015) "The hidden face of the media: How financial journalists produce information," Working Paper, pp. 1–64.

Li, E. X., Ramesh, K. and Shen, M. (2011) "The role of newswires in screening and disseminating value-relevant information in periodic SEC reports," Accounting Review, 86(2), pp. 669–701.

Liu, B. and McConnell, J. J. (2013) "The role of the media in corporate governance: Do the media influence managers' capital allocation decisions?" Journal of Financial Economics. Elsevier, 110(1), pp. 1–17.

Liu, T., Ullah, B., Wei, Z., & Xu, L. C. (2013) "The Dark Side of Disclosure : Evidence of Government Expropriation from Worldwide Firms," World Bank Group, (760), pp. 1–47.

Marshall, B. R., Visaltanachoti, N. and Cooper, G. (2014) "Sell the Rumor, Buy the Fact?" Accounting and Finance, 54, pp. 237–249.

Maskara, P. K. and Mullineaux, D. J. (2011) "Information asymmetry and self-selection bias in bank loan announcement studies," Journal of Financial Economics. Elsevier, 101(3), pp. 684–694.

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

McInish, T. H. and Wood, R. A. (1992) "An Analysis of Intraday Patterns in Bid / Ask Spreads for NYSE Stocks," The Journal of Finance, 47(2), pp. 753–764.

McNichols, M. F. and Stubben, S. R. (2015) "The effect of target-firm accounting quality on valuation in acquisitions," Review of Accounting Studies, 20(1), pp. 110–140.

Menkveld, A. J. (2013) "High frequency trading and the new market makers," Journal of Financial Markets. Elsevier, 16(4), pp. 712–740.

Merton, R. C. (1987) "A Simple Model of Capital Market Equilibrium with Incomplete Information," The Journal of Finance, 42(3), pp. 483–510.

Miguel, E. and Kremer, M. (2004) "Worms: Identifying impacts on education and health in the presence of treatment externalities," Econometrica, 72(1), pp. 159–217. doi: 10.1111/j.1468-0262.2004.00481.x.

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

Miller, G. S. and Skinner, D. J. (2015) "The evolving disclosure landscape: How changes in technology, the media, and capital markets are affecting disclosure," Journal of Accounting Research, 53(2), pp. 221–239.

Moyer, R. C., Chatfield, R. E. and Sisneros, P. M. (1989) "Security Analyst Monitoring Activity: Agency Costs and Information Demands," The Journal of Financial and Quantitative Analysis, 24(4), p. 503.

Mutchler, J. F., Hopwood, W. and McKeown, J. M. (1997) "The Influence of Contrary Information and Mitigating Factors on Audit Opinion Decisions on Bankrupt Companies," Journal of Accounting Research, 35(2), p. 295.

Myers, S. C. and Majluf, N. S. (1984) "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have," NBER Working Paper, No. 1396.

Neuhierl, A., Scherbina, A. and Schlusche, B. (2013a) Market reaction to corporate press releases, Journal of Financial and Quantitative Analysis.

Neuhierl, A., Scherbina, A. and Schlusche, B. (2013b) "Market reaction to corporate press releases," Journal of Financial and Quantitative Analysis, 48(4), pp. 1207–1240.

Neumann, J. J. and Kenny, P. M. (2007) "Does Mad Money make the market go mad?" Quarterly Review of Economics and Finance, 47(5), pp. 602–615.

Niessner, M. and So, E. C. (2018) "Bad News Bearers: The Negative Tilt of Financial Press," SSRN Electronic Journal.

Nikolaev, V. v. (2010) "Debt Covenants and Accounting Conservatism," Journal of Accounting Research, 48(1), pp. 137–176.

Nimark, K. P. and Pitschner, S. (2019) "News media and delegated information choice," Journal of Economic Theory. Elsevier Inc., 181, pp. 160–196.

Nyhan, B. and Reifler, J. (2015) "The Effect of Fact-Checking on Elites: A Field Experiment on U.S. State Legislators," American Journal of Political Science, 59(3), pp. 628–640.

Parsons, C. A., Sulaeman, J. and Titman, S. (2018) "The Geography of Financial Misconduct," Journal of Finance, 73(5), pp. 2087–2137.

Pavic, I., Galetic, F. and Piplica, D. (2016) "Similarities and Differences between the CR and HHI as an Indicator of Market Concentration and Market Power," British Journal of Economics, Management & Trade, 13(1), pp. 1–8.

Rhoades, S. A. (1995) "Market share inequality, the HHI, and other measures of the firm-composition of a market," Review of Industrial Organization, 10(6), pp. 657–674.

Rogers, J. L., Skinner, D. J. and Zechman, S. L. C. (2016) "The role of the media in disseminating insider-trading news," Review of Accounting Studies, 21(3).

Schulhofer-Wohl, S. and Garrido, M. (2013) "Do Newspapers Matter? Short-Run and Long-Run Evidence From the Closure of The Cincinnati Post," Journal of Media Economics, 26(2), pp. 60–81.

Shiller, R. J. (1980) "Do stock prices move too much to be justified by subsequent changes in dividends?," NBER Working Paper, 456, pp. 1–58.

Sloan, R. G. (2001) “Financial accounting and corporate governance: A discussion,” Journal of Accounting and Economics, 32(1–3), pp. 335–347.

Smith, C. W. and Warner, J. B. (1979) “On financial contracting. An analysis of bond covenants,” Journal of Financial Economics, 7(2), pp. 117–161.

Strebulaev, I. A. and Yang, B. (2013) “The mystery of zero-leverage firms,” Journal of Financial Economics. Elsevier, 109(1), pp. 1–23.

Tetlock, P. C. (2014) “Information Transmission in Finance,” Annual Review of Financial Economics, 6(1), pp. 365–384.

Tinic, S. M. (1972) “The Economics of Liquidity Services,” Quarterly Journal of Economics, 86(1), pp. 79–93.

Tinic, S. M. and West, R. R. (1972) “Competition and the Pricing of Dealer Service in the Over-the-Counter Stock Market,” Journal of Financial and Quantitative Analysis, 7(3), pp. 1707–1727.

Tversky, A. and Kahneman, D. (1973) “Availability: A heuristic for judging frequency and probability,” Cognitive Psychology, 5(2), pp. 207–232.

Tversky, A. and Kahneman, D. (1974) “Judgment under uncertainty: Heuristics and biases,” Science, 185(4157), pp. 1124–1131.

Twedt, B. J. (2016) “Spreading the Word: Price discovery and newswire dissemination of management earnings guidance,” Accounting Review, 91(1), pp. 317–346.

Verrecchia, R. E. (2001) “Essays on disclosure,” Journal of Accounting and Economics, 32(1–3), pp. 97–180.

Waldman, S. (2011) “The changing media landscape in a broadband age,” Working Group on Information Needs of Communities, p. 468.

Welch, I. (2004) “Capital structure and stock returns,” Journal of Political Economy, 112(1), pp. 106–131.

Wooldridge, J. M. (2006). Introductory Econometrics: a Modern Approach. Mason, Ohio: Thomson/South-Western.

Xu, Y. and Malkiel, B. G. (2003) “Investigating the Behavior of Idiosyncratic Volatility,” Journal of Business, 76(4), pp. 613–644.

Yuan, Y. (2015) “Market-wide attention, trading, and stock returns,” Journal of Financial Economics. Elsevier, 116(3), pp. 548–564.

Zhang, J. (2008) “The contracting benefits of accounting conservatism to lenders and borrowers,” Journal of Accounting and Economics, 45(1), pp. 27–54.

9.0 TABLES

TABLES

Table 1, Panel A: Descriptive statistics of firms that experience shock to media employment

Summary statistics of firms identified with headquarters in Census Bureau statistical areas that recorded a 25% or more reduction in employment of Reporters and Correspondents or Broadcast News Analysts over a two-year period. Values are those from the time when the shock is recorded (at time t = 0). Beta is calculated using the Fama-French Three Factor model.

N = 1,373	Mean	25th percentile	Median	75th percentile	St. Dev.
Market value*	$1,421.77	$136.50	$438.52	$1,242.82	$3,673.63
Total assets*	$3,247.46	$188.21	$644.5	$1,837.40	$16,737.21
3-Factor Beta	0.8377	0.5054	0.8987	1.1547	0.4674
St. dev. returns	2.6394%	1.8206%	2.4382%	3.2303%	0.0109
Mean spread	$0.3507	$0.1606	$0.2751	$0.4406	$0.3116
3-Factor R^2	24.39%	6.65%	22.15%	37.28%	18.83%
No. of analysts	6.30	0	4	10	7.05
Area employees	1,480,867	798,120	1,127,100	1,839,170	1,197,639

* in millions

Table 1, Panel B: Descriptive statistics of control firms

Summary statistics of firms matched with those identified with headquarters in areas that recorded a reduction in media employment over a two-year period. Firms are matched by year, market value, and beta from the Fama-French 3 factor. Values are from the time when the shock is recorded for the matched, treated firm (at time t = 0).

N = 1,373	Mean	25th percentile	Median	75th percentile	St. Dev.
Market value*	$1,434.40	$139.23	$423.50	$1,214.81	$4,599.65
Total assets*	$3,557.43	$198.42	$624.36	$1,705.63	$19,296.63
3-Factor Beta	0.8377	0.5027	0.8924	1.1625	0.4689
St. dev. returns	2.6182%	1.8301%	2.4337%	3.2507%	0.0108
Mean spread	$0.3370	$0.1567	$0.2608	$0.4135	$0.4274
3-Factor R^2	24.68%	6.59%	21.94%	38.00%	19.43%
No. of analysts	6.44	1	5	10	6.78
Area employees	975,782	143,925	450,890	1,433,880	1,186,725

* in millions

Table 2: Unrestricted test for meet-beat analyst forecasts and year-ago EPS

Estimates for Byzalov and Basu (2019) distribution discontinuity test at the just-meet and just-beat mean analyst estimates and year-ago EPS bins for firms that have experienced a reduction in media employment in the areas where the firm is headquartered and matching sample of control firms. Bin widths are set at 0.0025, and discontinuity is tested for the 8 bins around a 0 difference between actual EPS and mean analyst forecast. The estimation interval is [-0.04, 0.04) difference between actual EPS and mean forecasts and actual EPS and year-ago EPS, following recommendations in Byzalov and Basu (2019). α is the polynomial coefficient in the probability function of pre-managed earnings at the intercept (α_0), a linear function (α_1), a quadratic function (α_2) and a cubic function (α_3). π_0 is the earnings management probability for just-meet, just-beat observations. Columns 1 and 4 are the results of the discontinuity test on firms after they have experienced a reduction in local media employment; Columns 2 and 5 are results of the test on the same firms before the reduction is recorded; Columns 3 and 6 show the results for a matched sample of control firms.

	Meet-beat analyst estimates			**Meet-beat year-ago EPS**		
	(1) Post-treatment firms	(2) Pre-treatment firms	(3) Control firms	(4) Post-treatment firms	(5) Pre-treatment firms	(6) Control firms
α_0	-0.007***	-0.003	-0.004**	0.043***	0.012	0.042***
	(0.002)	(0.002)	(0.002)	(0.011)	(0.013)	(0.010)
α_1	-0.125	0.290***	-0.064	-0.999*	-0.541	0.615
	(0.079)	(0.094)	(0.072)	(0.417)	(0.469)	(0.473)
α_2	3.018***	1.650***	2.522***	-1.141	2.176	-1.385
	(0.239)	(0.286)	(0.220)	(1.140)	(1.417)	(0.966)
α_3	2.593***	-1.102	2.135**	9.272*	7.841	-4.500
	(0.829)	(0.905)	(0.677)	(3.965)	(4.474)	(3.967)
π_0	**-3.119*** **	**7.957**	**-4.974** **	**0.163** **	**0.232**	**-0.104**
	(1.001)	**(8.258)**	**(2.092)**	**(0.074)**	**(0.341)**	**(0.126)**
Obs.	2,736	1,629	2,661	143	107	160

Standard errors are in parenthesis
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 3: Positive earnings with controls

Estimates for Byzalov and Basu (2019) discontinuity test for for zero or just-positive earnings. Earnings is net income scaled by market value to control for size differences in bins from [-0.06, 0.06). *Treat* is a dummy variable equal to 1 if a firm has experienced a reduction in media employment in the areas where the firm is headquartered. *Analyst Coverage* is a dummy variable equal to 1 if at least one analyst has issued an earnings forecast for the firm in the year before earnings is reported. Other control variables are intensity of Costs of Goods Sold, R&D, Current Assets, and Current Liabilities. Bin widths are set at 0.0025, and discontinuity is tested for the 16 bins around 0 earnings reported with parameters estimated from the 24 bins on either side of 0 earnings.. α is the polynomial coefficient in the probability function of pre-managed earnings at the intercept (α_0), a linear function (α_1), a quadratic function (α_2) and a cubic function (α_3). π_0 is the earnings management probability for the 16 bins on either side of 0 earnings. The coefficients for the interaction terms between the control variables and the parameters α_0, α_1, α_2, and α_3 are not shown.

	Earnings around 0
α_0	0.022***
	(0.003)
α_1	0.595***
	(0.092)
α_2	0.054
	(0.141)
α_3	-0.835**
	(0.344)
π_0	-0.039
	(0.060)
π Treat	0.048*
	(0.028)
π Analyst Coverage	-0.066
	(0.053)
π COGS Intensity	-0.039
	(0.028)
π R&D Intensity	0.427***
	(0.120)
π CA Intensity	0.045
	(0.091)
π CL Intensity	-0.027
	(0.125)
Obs	10,086

Standard errors are in parenthesis
**** p<0.01, ** p<0.05, * p<0.1*

Table 4: Local media reductions and discretionary accruals

Table 4 shows the results of the correlation between the absolute value of discretionary accruals and years *t* = -1 to +6 when a reduction in local media employment is recorded at year *t* = 0. Columns 1 and 2 show results of discretionary accruals measured by the Jones (1991) model and the modified Jones (1995) model of Dechow, Sloan and Sweeney. Columns 3 and 4 include controls associated with the information environment of the firm.

	(1) Jones model discretionary accruals	(2) Modified Jones model discretionary accruals	(3) Jones model discretionary accruals	(4) Modified Jones model discretionary accruals
Market-to-book	0.010***	0.010***	0.008***	0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
Market value	-0.002	-0.002	0.005	0.005
	(0.003)	(0.003)	(0.003)	(0.003)
ROA	-0.009	-0.007	-0.009*	-0.008
	(0.006)	(0.006)	(0.005)	(0.006)
1/Total assets	0.795***	0.732**	0.832***	0.768***
	(0.291)	(0.283)	(0.283)	(0.275)
Δ Sales	0.006***	0.006***	0.006***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
Δ PPE	-0.013	-0.011	-0.018	-0.016
	(0.026)	(0.026)	(0.025)	(0.025)
Year t = -1	0.020***	0.020***	0.020***	0.020***
	(0.006)	(0.007)	(0.006)	(0.006)
Year t = 0	0.024***	0.022***	0.023***	0.021***
	(0.009)	(0.008)	(0.008)	(0.008)
Year t = 1	0.018***	0.017**	0.018***	0.017***
	(0.007)	(0.007)	(0.006)	(0.006)
Year t = 2	0.007	0.006	0.008	0.007
	(0.007)	(0.007)	(0.006)	(0.006)
Year t = 3	0.012	0.014*	0.014*	0.016**
	(0.008)	(0.008)	(0.007)	(0.007)
Year t = 4	0.002	0.002	0.005	0.005
	(0.006)	(0.006)	(0.006)	(0.006)
Year t = 5	0.011	0.007	0.015**	0.011*
	(0.007)	(0.006)	(0.007)	(0.006)
Year t = 6	0.019**	0.011	0.025***	0.016**
	(0.008)	(0.007)	(0.007)	(0.007)
Analyst Coverage			-0.001	-0.001
			(0.005)	(0.005)
S&P 1500			-0.040***	-0.039***
			(0.007)	(0.007)
Obs.	17,357	17,351	17,357	17,351
R-squared	0.213	0.208	0.217	0.213
Adjusted R-squared	0.209	0.205	0.214	0.210
Year fixed effects	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes

Standard errors are in parenthesis
**** p<0.01, ** p<0.05, * p<0.1*

Table 5: Probability of executive turnover

Table 5 shows the results of a probit model estimation in which the outcome variable is 1 if a CEO leaves the firm for any reason other than retirement in the three years after year t = 0 and 0 otherwise.

Probability of executive turnover in next 3 years	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]
Treat	-0.263*	0.149	-1.77	0.077	-0.556	0.029
Analyst Coverage	-0.096	0.248	-0.39	0.698	-0.582	0.390
S&P Index	-0.146	0.182	-0.81	0.421	-0.503	0.210
Book-to-market	0.061	0.129	0.47	0.634	-0.191	0.314
Annual returns	-0.152	0.178	-0.85	0.394	-0.501	0.197
Leverage ratio	-0.208	0.365	-0.57	0.568	-0.923	0.507
ROA	-0.727	0.479	-1.52	0.129	-1.666	0.212
Log of total assets	0.129***	0.049	2.65	0.008	0.034	0.225
CEO age	0.003	0.005	0.67	0.505	-0.006	0.013
CEO tenure	0.019**	0.010	2.02	0.043	0.001	0.038
Intercept	-2.277***	0.413	-5.51	0.000	-3.087	-1.467

Mean dependent variable	0.068	SD dependent var	0.252
Pseudo r-squared	0.056	Number of obs	751
Chi-square	20.724	Prob > chi2	0.023

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

Table 6: Executive compensation of firms with nearby media reduction vs. controls

Table 6 shows results from the OLS regression of CEO compensation and changes in CEO compensation for firms that have experienced a reduction in media employment in the area where the firm is headquartered and a matching set of control firms. Columns 1 and 3 use compensation and changes in compensation reported by the firm to the SEC, and Columns 2 and 4 use a calculation that includes the CEO's actual profits from stock and option sales and exercises.

	(1) Total compensation reported to SEC	(2) Total compensation adjusted for stock, option sales	(3) Δ Total compensation reported to SEC	(4) Δ Total compensation adjusted for stock, option sales
Treatment	2683.903***	9590.898***	-568.722	142.122***
	(724.653)	(2448.840)	(728.485)	(20.572)
One-year lag returns	70.612	79.659	16.353	19.507
	(63.997)	(76.146)	(79.765)	(26.799)
Two-year lag returns	78.417	180.968**	-23.121	-2.228
	(52.082)	(83.677)	(20.243)	(2.877)
Market value	240.299	-243.317	-68.344	57.810***
	(364.393)	(861.846)	(111.662)	(21.869)
Book-to-market	322.432	-159.024	-33.107	-9.719
	(377.626)	(499.411)	(47.630)	(12.946)
Leverage	1849.304*	1131.811	-1197.312	58.143
	(1023.778)	(2352.879)	(1624.598)	(97.806)
Lag st. dev. of returns	440.575	-920.422	-597.316	46.185
	(1141.403)	(2709.048)	(488.897)	(105.814)
ROA	1054.867	-197.409	-502.400	-20.985
	(659.895)	(2490.713)	(561.667)	(55.610)
Tenure	58.827**	496.051***	16.758	-6.882***
	(29.293)	(36.928)	(22.159)	(0.980)
Intercept	-3412.141	2943.716	856.578	-364.897**
	(2628.762)	(8675.958)	(1159.070)	(161.568)
Obs.	3,423	3,416	2,804	2,752
R-squared	0.772	0.562	0.173	0.456
Adjusted R-squared	0.714	0.450	-0.057	0.304

Standard errors are in parenthesis
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

10.0 FIGURES

Figure 1: Number of firms with negative shocks to media employment by year

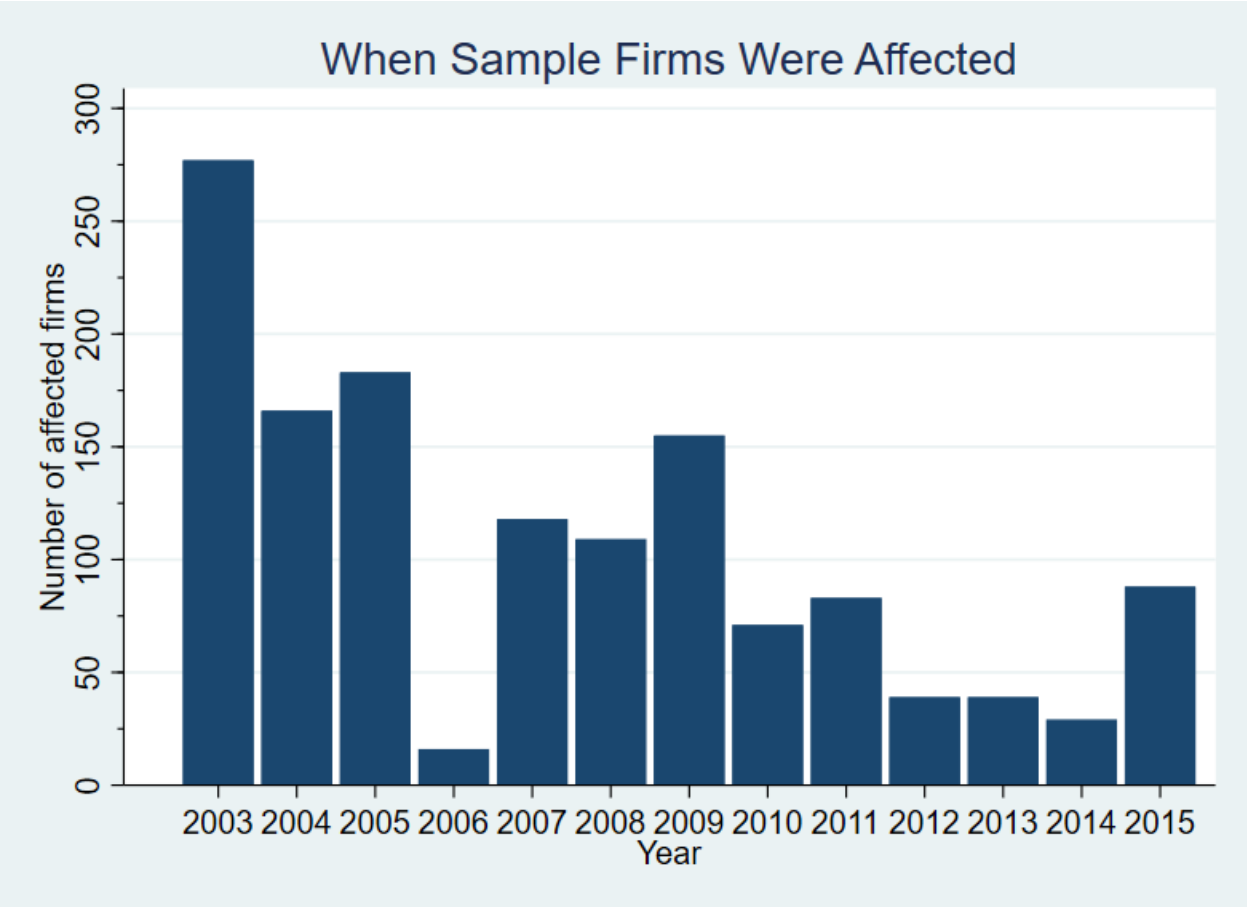

Figure 1. The frequency of the years in which the negative shock to employment of Reporters and Correspondents and Broadcast News Analysts occurred. From 2003 to 2015, 1,373 firms were identified as containing a shock to media employment in the geographic region in which they are headquartered.

Figure 2: Number of firms with negative shocks to media employment by state

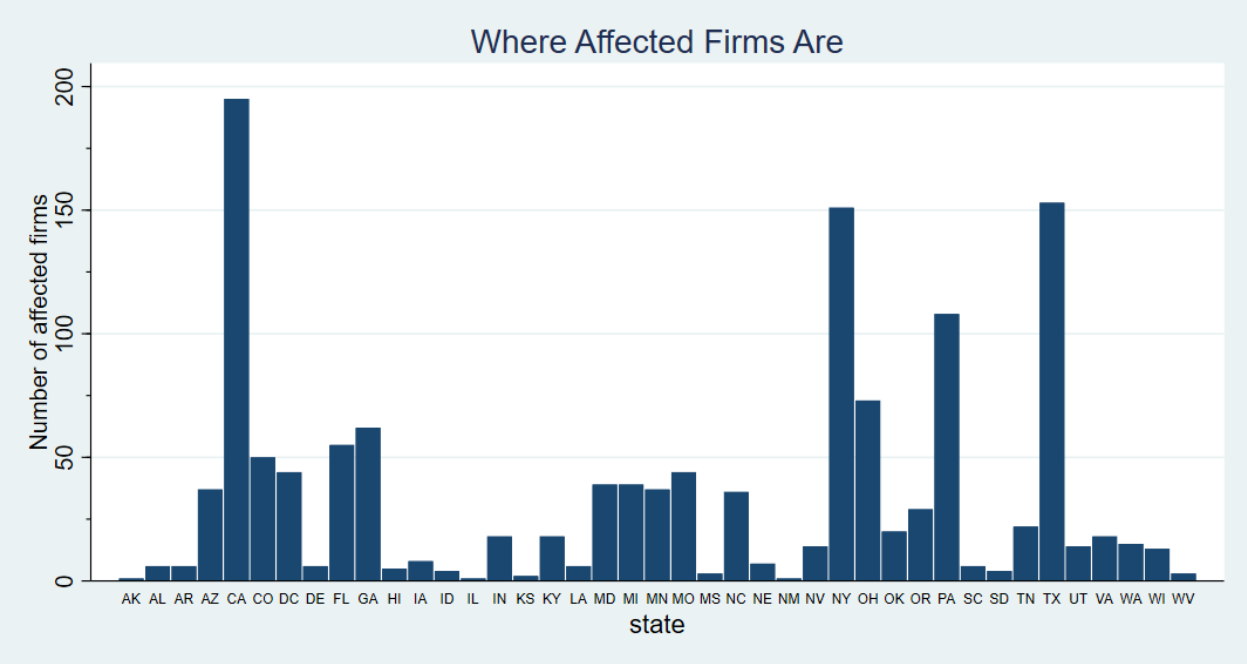

Figure 2. The frequency by state/territory in which the negative shock to employment of Reporters and Correspondents and Broadcast News Analysts occurred. From 2003 to 2015, 1,373 firms were identified as containing a shock to media employment in the Occupational Employment Statistical area in which they are headquartered. The OES areas spanned 41 states and the District of Columbia.