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# Does Media Exposure Affect Financial Reporting Quality Through Auditors?

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## Abstract

We examine whether the media has an indirect corporate governance effect on financial reporting quality (FRQ) that operates through auditors. This occurs because greater media coverage can magnify an auditor's business risk by exposing the auditor to more potential litigation and reputation damage if an audit failure occurs. We use a path analysis to examine the direct and indirect channels of media corporate governance. We find a positive association between media coverage and FRQ that is mediated by audit fees, and the results are stronger for firms with greater incentives to engage in earnings manipulation. In contrast, we find no evidence that the media has a direct corporate governance effect on FRQ. Our results show how the media's corporate governance reach can be extended by auditors who care about how media coverage impacts their risk level.

## Keywords

media, auditor, business risk, financial reporting quality

## Introduction

In this article, we study how the media has a disciplining effect on financial reporting quality (FRQ) that operates through auditors. In our framework, auditors care about their clients' overall media coverage because the media visibility can magnify the auditor's business risk which is "the risk of potential litigation costs from an alleged audit failure and the risk of other costs, such as fee realization and reputational effects" (DeFond et al., 2016, p. 71).<sup>1</sup> The media can increase the potential loss for auditors by identifying fraud cases, by drawing attention to the audit failure, and as Cohen et al. (2016) suggest, by sensationalizing the auditor's role in the failure.

Furthermore, anecdotal evidence indicates news articles have been used as evidence in lawsuits against auditors. For example, in a class action suit against Friedman's Inc. and its auditor, Ernst & Young, the lead plaintiff included "review of news articles" as a source

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for evidentiary support. The plaintiff refers to specific news articles in the complaint, for example:

110. The Atlanta Journal-Constitution published an article entitled “Woes Mount at Friedman’s Jewelry Retailer Faces Probes, Will Restate Earnings,” on November 28, 2003 that discusses Friedman’s restatement and accounting improprieties at great length. In the article, Paul Resnik, an analyst who covers Friedman’s for J.M. Dutton & Associates stated that “[s]omething is definitely very wrong here,” and that what was most surprising about the bad debt issue was that it surfaced less than two months after Friedman’s sold 3.1 million shares of common stock. “When people do any offering, the numbers get looked at by auditors and lawyers” Resnick pointed out. “Why was this not discovered before?” Furthermore, Charles W. Mulford, Jr., Georgia Tech accounting professor and co-author of a book on spotting “creative accounting,” stated that normally, “a bad debt adjustment is not handled with a restatement.” (*In Re Friedman’s, Inc. Securities Litigation*, No. 52-1, 1:03-CV-3475-WSD, N.D.G., September 23, 2004)

The use of news articles in such cases *ex post* provides one link between media coverage and auditors’ business risk. Knechel et al. (2007) note that it is standard procedure for auditors to refer to media reports when assessing potential litigation and reputation risks associated with a client, consistent with auditors being concerned about a client’s media coverage *ex ante*.

An auditor can respond to higher business risk in two ways: (a) the auditor can charge a risk premium and (b) the auditor can increase audit effort to reduce the probability of an audit failure. As a result, both a risk premium and greater audit effort will be reflected in higher audit fees. As Bell et al. (2001) find a positive relation between auditors’ business risk and audit hours, we expect that the increase in audit fees will reflect, at least in part, an increase in audit effort. That is, the auditor may conduct additional work to reduce her business risk to an acceptable level. As such, we expect that auditors have incentives to devote extra audit effort to improve FRQ to address their business risk. As greater media attention can magnify auditors’ business risk, these incentives will be stronger for clients who are regularly in the media’s spotlight and are under more pressure to manipulate earnings. Thus, our main expectation is that the media has a disciplining effect on FRQ that operates through auditors and audit fees (effort).

To examine the media’s effects on FRQ through auditors, we conduct a path analysis. Path analysis is an extension of multiple regression that allows researchers to consider more complex models that include both direct and indirect effects (e.g., Stage et al., 2004; Streiner, 2005).<sup>2</sup> Path analysis is appropriate in our setting as we expect that the media can indirectly affect FRQ through auditors. This indirect path is our primary interest. Furthermore, using path analysis, we are able to decompose the indirect path into two path coefficients, one for the effect of the source variable (media coverage) on the mediating variable (audit fees) and another for the effect of the mediating variable on the outcome variable (FRQ). Figure 1 illustrates these paths.<sup>3</sup>

In our analyses, we use data from Thomson Reuters News Analytics (TRNA), which contains press coverage data at the client-firm level (see the “Method” section for more detail) to gauge auditor’s perceived media coverage of a client. In particular, we use the total number of news items reporting one firm in a given year as our measure of media coverage. Consistent with our conjecture, we find that a client’s lagged media coverage increases FRQ measured by accrual quality and that this relation is mediated through audit fees. In contrast, we find no evidence of a direct media corporate governance effect on

FRQ.<sup>4</sup> Furthermore, this auditor-mediated effect becomes stronger for clients with greater incentives to engage in earnings manipulation (e.g., more earnings-related news coverage) (Dai et al., 2016; Matthes, 2009). These findings are consistent with the media having an indirect corporate governance role on FRQ that operates through auditors who care about the effect of media coverage on their business risk.

One of the challenges of our study is the endogeneity of media coverage. To address endogeneity concerns, we conduct a battery of additional tests—a two-stage analysis, analysis with instrumental variables (IVs), and a quasi-natural experiment—and find that our inferences do not change. Although none of those tests can fully rule out the potential endogeneity issue, this evidence gives us greater confidence that the relation running from media coverage to FRQ is not just correlational. Finally, we also conduct validation tests to support our assumption that auditors face significant business risks when their clients experience high media coverage.

We contribute to the literature on the corporate governance role of the media (e.g., Core et al., 2008; Dai et al., 2015; Dyck et al., 2008; Joe et al., 2009; Liu & McConnell, 2013). We extend this literature by examining the effect of media coverage on firms' FRQ. In contrast to prior research, we hypothesize that the media may have an indirect corporate governance effect on FRQ. To our knowledge, we are the first to show that the media's governance role can operate through a third party, in this case the firm's auditor. Thus, our study provides a timely answer to Miller and Skinner's (2015) call for research that provides insights into the interaction between the media and financial market intermediaries beyond the issuers themselves.<sup>5</sup>

We also contribute to the literature that focuses on auditors' reactions to *specific* news events. While a few early studies (e.g., Joe, 2003; Mutchler et al., 1997) examine how auditors react to news about a particular type of news (e.g., a loan default), how auditors respond to a client's *general* media visibility has received little attention in the literature. One exception is the study by Gong et al. (2018). They find a positive association between general media coverage and audit fees in China. We extend Gong et al. (2018) by examining whether media coverage has an effect on FRQ that operates through auditors. Moreover, we (a) focus on the United States where litigation risk is particularly high, (b) use path analysis to examine the indirect role of auditors, and (c) measure media coverage more broadly as Gong et al. (2018) only consider articles from three newspapers in China.

The remainder of the article unfolds as follows. Section "Hypotheses Development" develops the hypothesis. Section "Method" describes the research design. Section "Empirical Results" reports the main results. Sections "Endogeneity Tests" and "Additional Analyses" provide additional analyses, and section "Conclusion" concludes the article.

## Hypotheses Development

Coverage in the media can be an indicator of investor attention, put the firm in the public spotlight, and affect managerial decisions (e.g., Engelberg & Parsons, 2011; Hillert et al., 2014; Solomon et al., 2014). Prior studies provide evidence of a corporate governance role for the media. For example, Joe et al. (2009) find that following negative exposure in *Business Week*, weak boards take corrective actions such as replacing the CEO and board chair, increasing the proportion of outsiders on the board, and decreasing the use of staggered boards. Liu and McConnell (2013) document that managers are more likely to abandon value-reducing acquisition attempts after unfavorable media coverage and find this effect can be attributed to the media dissemination of negative news about the value-

reducing acquisition. Similarly, Dai et al. (2015) find that insider trading profits are inversely related to prior news coverage, consistent with wider dissemination creating a disciplining effect.

We propose that the media has an indirect corporate governance role that operates through auditors. Auditors have strong financial and reputational incentives to constrain opportunistic financial reporting by their clients to avoid an audit failure. Thus, we posit that the media coverage of a firm can magnify the auditor's business risk, which consists mainly of litigation risk and reputation risk (e.g., DeFond et al., 2016). That is, an auditor's business risk is the residual risk of the auditor being sued or being unable to attract and retain clients after reducing audit risk to an acceptable level.

*Ex ante* an auditor can respond to business risk in two ways: (a) the auditor can charge a risk premium and (b) the auditor can increase audit effort to reduce the probability of an audit failure. Bell et al. (2001) find that auditors price their business risk, suggesting a positive relation between a client's media coverage and its audit fee. They also find that the increase in audit fees is due to an increase in the number of audit hours worked rather than an increase in the hourly billing rate, consistent with the auditor exerting additional effort to reduce business risk. We expect that if auditors increase their fees in response to greater media coverage, at least some of the fee increase will reflect a greater effort to improve FRQ. Thus, the media may have an indirect corporate governance effect on FRQ that runs through auditors. As auditors care about how media coverage will impact their business risk, they have incentives to improve the FRQ of firms that are in the media spotlight.

We expect that the media's effect on FRQ through this indirect channel will be positive. That is, it is hard to envision a situation where an auditor would be pressured by the media to reduce a client's FRQ because doing so would merely increase the auditor's business risk by exposing her to greater litigation and reputational risk without generating any obvious benefits. Consequently, the auditor has incentives to constrain the client's earnings management attempts that are brought about by media coverage. It leads to the following directional hypothesis:

**Hypothesis:** There is a positive indirect association between a firm's media coverage and FRQ that acts through audit fees.

This indirect channel has two legs. First, it predicts that a client's media coverage will be positively related to its audit fees. Second, it predicts a client's audit fees will be positively related to its FRQ.<sup>6</sup>

## Method

### *Path Analysis*

We perform a path analysis to examine whether media coverage affects FRQ. According to Baron and Kenny (1986), a path analysis can test whether a source variable (media coverage) affects an outcome variable (FRQ) directly and/or indirectly through a mediating variable (audit fees). Given that we wish to test the conceptual model depicted in Figure 1, path analysis is appropriate as Stage et al. (2004) state that "[p]ath analysis is most useful when the researcher has a clear hypothesis to test, or a small number of hypotheses, all of which can be represented within a single path diagram" (p. 7). Accounting studies using a path analysis to examine the indirect effect of a source variable on an outcome variable

include Payne and Ramsey (2008), Bhattacharya et al. (2012), DeFond et al. (2016), and Hilary et al. (2016).

Following DeFond et al. (2016), we estimate the following system of equations:

$$AudFee = a_0 + a_1 Media + a_k Controls^k + \varepsilon \quad (1a)$$

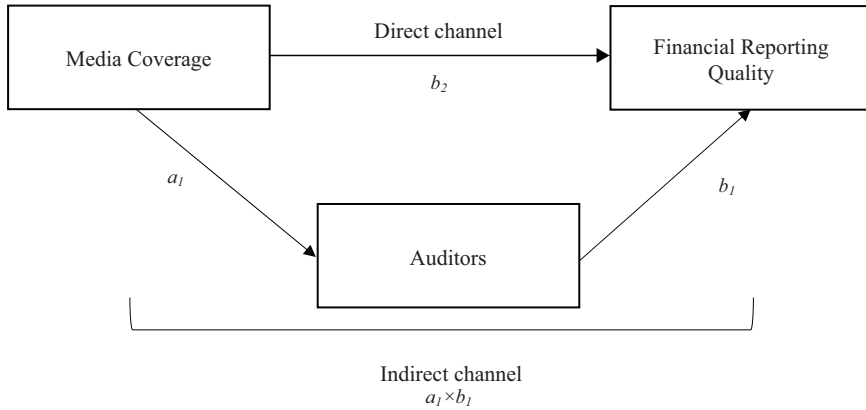
$$FRQ = b_0 + b_1 AudFee + b_2 Media + b_k Controls^k + \varepsilon \quad (1b)$$

where Equation 1a is the standard audit fee model and Equation 1b examines the effect of both media coverage and audit fees on FRQ. The outcome variable for the path analysis is the client's FRQ (*FRQ*) which is measured in two ways (e.g., Francis et al., 2008). The first is the absolute value of discretionary accruals estimated from the performance-matched modified Jones model following Kothari et al. (2005), and the second is the standard deviation of the residual from the Dechow–Dichev (Dechow & Dichev, 2002) model. Given that larger values of these measures indicate lower quality financial reporting, for ease of interpretation, we multiply each by  $-1$  so that each measure increases with the quality of financial reporting.<sup>7</sup> *Media*, the source variable, is the natural log of the number of news items about client  $i$ . We obtain the number of news items from the TRNA database. *AudFee* is the natural log of audit fees in year  $t$ .

As illustrated in Figure 1, the coefficient  $b_2$  in Equation 1b measures the direct path from media coverage to FRQ. The product of the coefficients  $a_1$  and  $b_1$  ( $a_1 \times b_1$ ) measures the indirect path from media coverage to FRQ through audit fees. Based on our hypothesis, the product is expected to be significantly positive.<sup>8</sup> Because Equation 1a assumes that the auditor uses prior media coverage to approximate future media coverage of the client, *Media* is measured over a period from the second quarter of the previous fiscal year to the first quarter of the current fiscal year because audit firms typically negotiate their fees with their clients in the first quarter of the fiscal year (Hackenbrack et al., 2014).<sup>9</sup>

To estimate our system of equations, we use the same control variables for Equations 1a and 1b. To identify an appropriate set of controls, we draw on recent studies that examine audit fees (e.g., André et al., 2016; Bills et al., 2017) and FRQ (e.g., Lambert et al., 2017).

For example, we control for firm size as it can affect audit fees (e.g., André et al., 2016) as well as FRQ (e.g., Lambert et al., 2017). Rather than use the book value of total assets which is common in many fee models (e.g., Simunic, 1980), we follow DeFond et al. (2016) and use the client's market value (*MV*) because we also want to control for the client's general visibility which is more related to market capitalization. Controlling for general visibility is important in our setting because it is possible that media coverage could just reflect firm size effect (Miller, 2006). In addition, market value is generally used in studies examining FRQ (e.g., Hossain et al., 2017; Lambert et al., 2017). However, we note that our results are unchanged if the book value of total assets is used instead of *MV*. We also include measures of short-term liquidity, long-term default risks, and accounting performance measure (*Quick*, *InvRec*, *Lev*, *Loss*, and *ROA*) to control for the effects of liquidity and financial risks on audit pricing. Next, we control for the complexity of a firm's operations (*NumSeg*, *Spit*, *FOPs*, and *MA*). Finally, we include auditor-related variables—that is, auditor type (*BigN*), audit opinion (*GC*), and peak season effects (*Busy*)—as additional controls.<sup>10</sup> Appendix provides definitions for all the variables.



**Figure 1.** Theoretical framework.

Note. This figure shows the theoretical framework of a path analysis that examines how media coverage (*Media*) affects FRQ (*FRQ*) through auditors (*AudFee*). It also demonstrates how each path coefficient ( $a_1$ ,  $b_1$ , and  $b_2$ , respectively) in the following equations reflect the concept of different effects in the framework:

$$AudFee = a_0 + a_1 Media + a_k Controls^k + \varepsilon \quad (1a)$$

$$FRQ = b_0 + b_1 AudFee + b_2 Media + b_k Controls^k + \varepsilon \quad (1b)$$

Finally, we include industry fixed effects in both Equations 1a and 1b to control for unobserved heterogeneity across industries and year fixed effects to account for transitory economy-wide factors that could affect audit pricing decisions.

### Sample and Data

Our media data is from TRNA which is a commercial database that incorporates all news items from the Reuters Data Feed as well as items released through business-related news-wires (e.g., PR Newswire, Business Wire, GlobeNewswire, Marketwire; Hendershött et al. 2015).<sup>11</sup> Recent studies using this database include Hendershött et al. (2015) and Cahan et al. (2015). We use this database to determine the number of news items about a particular client. In doing so, we rely on TRNA's relevance rating that scores each news item in terms of relevance to a particular firm. This is necessary because a news item that focuses on one firm often will mention other firms (e.g., competitors, suppliers). TRNA's relevance score for a news story varies from 0 to 1 and equals 1 if a firm is mentioned in the headline of the story. We select news items with a relevance score equal to 1 to ensure that the client is the focus of a particular story.<sup>12</sup>

The data for audit fees and audit opinions come from Audit Analytics. We retrieve merger and acquisition data from SDC while the remaining data are from Compustat. We then combine these data. Our data requirements yield an initial sample of 22,086 firm-year observations for the period 2003–2011. We begin in 2003 because that is the first year when TRNA data are available. To control for the effect of outliers, all continuous variables are winsorized at 1% and 99% tails.

**Table 1.** Descriptive Statistics and Correlations.

Panel A. Descriptive Statistics						
Variable	N	M	SD	Q1	Median	Q3
<i>FRQ_DA</i>	22,086	-0.116	0.156	-0.138	-0.064	-0.027
<i>FRQ_DD</i>	22,086	-0.069	0.111	-0.076	-0.036	-0.015
<i>AudFee</i>	22,086	13.594	1.271	12.719	13.624	14.434
<i>Media</i>	22,086	3.110	0.794	2.708	3.135	3.611
<i>BigN</i>	22,086	0.778	0.415	1.000	1.000	1.000
<i>Busy</i>	22,086	0.674	0.469	0.000	1.000	1.000
<i>Fops</i>	22,086	0.511	0.500	0.000	1.000	1.000
<i>GC</i>	22,086	0.025	0.156	0.000	0.000	0.000
<i>InvRec</i>	22,086	0.246	0.183	0.096	0.215	0.355
<i>Lev</i>	22,086	0.423	1.486	0.000	0.136	0.584
<i>Loss</i>	22,086	0.328	0.469	0.000	0.000	1.000
<i>MA</i>	22,086	0.241	0.428	0.000	0.000	0.000
<i>MV</i>	22,086	6.166	1.980	4.792	6.161	7.487
<i>NumSeg</i>	22,086	2.300	1.828	1.000	1.000	3.000
<i>Quick</i>	22,086	2.465	2.611	1.015	1.577	2.795
<i>ROA</i>	22,086	-0.034	0.240	-0.038	0.034	0.077
<i>Spit</i>	22,086	0.662	0.473	0.000	1.000	1.000

(continued)

## Empirical Results

### Descriptive Statistics

The descriptive statistics for all variables used in our analyses are reported in Panel A of Table 1. Table 1 shows that the mean of the natural log of audit fees is 13.594 which is equivalent to an audit fee of \$801,307. Consistent with prior literature (e.g., Cahan et al., 2015), the mean of the natural log of media coverage is 3.110 which is equivalent to an average of 22.42 news items per client per year. In untabulated results, we find the correlation between lagged and current media coverage is 0.80, consistent with prior media coverage being a good approximation of future visibility. In Panel B, we report the pairwise correlations between variables. To summarize, we find both *Media* and *AudFee* are positively related to our two FRQ measures. These results support our conjecture that auditors spend audit effort to improve FRQ and media coverage is positively correlated with FRQ. However, these are univariate correlations which do not consider the impact of other variables on FRQ we should control for or the mediation effect we try to document.

### Preliminary Analyses

Before we discuss the results of our path analysis, we conduct two preliminary analyses. First, we examine the overall effect of the media on FRQ by estimating an ordinary least squares (OLS) regression where *FRQ\_DA* or *FRQ\_DD* is the dependent variable and *Media* and the control variables described above are the independent variables. In the untabulated results, we find the overall effect of *Media* on both measures of FRQ is statistically insignificant, which is consistent with the media having opposing effects on FRQ that offset.<sup>13</sup>



**Table 1.** (continued)

Panel B. Pearson Correlations.

	FRQ_DA	FRQ_DD	AudFee	Media	BigN	Busy	FOps	GC	InvRec	Lev	Loss	MA	MV	NumSeg	Quick	ROA
FRQ_DA																
FRQ_DD	<b>.233</b>															
AudFee	<b>.188</b>	<b>.152</b>														
Media	<b>.061</b>	<b>.068</b>	<b>.471</b>													
BigN	<b>.139</b>	<b>.131</b>	<b>.491</b>	<b>.261</b>												
Busy	<b>-.037</b>	<b>.007</b>	<b>.104</b>	<b>.072</b>	<b>.067</b>											
FOps	<b>.113</b>	<b>.061</b>	<b>.438</b>	<b>.218</b>	<b>.206</b>	<b>-.044</b>										
GC	<b>-.159</b>	<b>-.149</b>	<b>-.109</b>	<b>-.030</b>	<b>-.106</b>	<b>.012</b>	<b>-.103</b>									
InvRec	<b>.028</b>	<b>-.048</b>	<b>-.076</b>	<b>-.192</b>	<b>-.151</b>	<b>-.196</b>	<b>.142</b>	<b>-.031</b>								
Lev	<b>.030</b>	<b>.029</b>	<b>.134</b>	<b>.046</b>	<b>.076</b>	<b>.055</b>	<b>-.008</b>	<b>-.030</b>	<b>-.074</b>							
Loss	<b>-.254</b>	<b>-.129</b>	<b>-.233</b>	<b>-.034</b>	<b>-.140</b>	<b>.052</b>	<b>-.181</b>	<b>.208</b>	<b>-.133</b>	<b>-.022</b>						
MA	<b>.062</b>	<b>.061</b>	<b>.231</b>	<b>.192</b>	<b>.107</b>	<b>-.006</b>	<b>.143</b>	<b>-.058</b>	<b>-.026</b>	<b>.032</b>	<b>-.138</b>					
MV	<b>.216</b>	<b>.175</b>	<b>.766</b>	<b>.476</b>	<b>.497</b>	<b>.072</b>	<b>.337</b>	<b>-.194</b>	<b>-.216</b>	<b>.096</b>	<b>-.405</b>	<b>.240</b>				
NumSeg	<b>.095</b>	<b>.071</b>	<b>.302</b>	<b>.110</b>	<b>.114</b>	<b>-.008</b>	<b>.124</b>	<b>-.051</b>	<b>.050</b>	<b>.053</b>	<b>-.151</b>	<b>.132</b>	<b>.241</b>			
Quick	<b>-.080</b>	<b>-.004</b>	<b>-.276</b>	<b>-.066</b>	<b>-.075</b>	<b>.020</b>	<b>-.090</b>	<b>-.049</b>	<b>-.262</b>	<b>-.108</b>	<b>.169</b>	<b>-.104</b>	<b>-.160</b>	<b>-.180</b>		
ROA	<b>.316</b>	<b>.183</b>	<b>.242</b>	<b>.019</b>	<b>.136</b>	<b>-.066</b>	<b>.233</b>	<b>-.361</b>	<b>.180</b>	<b>.037</b>	<b>-.644</b>	<b>.124</b>	<b>.370</b>	<b>.149</b>	<b>-.134</b>	
Spit	<b>.013</b>	<b>.019</b>	<b>.342</b>	<b>.191</b>	<b>.173</b>	<b>.031</b>	<b>.232</b>	<b>-.011</b>	<b>-.031</b>	<b>.084</b>	<b>.052</b>	<b>.119</b>	<b>.194</b>	<b>.117</b>	<b>-.152</b>	<b>.004</b>

Note. Panel A reports descriptive statistics and Panel B reports Pearson correlations for the variables used in the analyses. In Panel B, correlations that are significant at the 5% level are shown in bold.

**Table 2.** Media Coverage, Audit Fees, and FRQ (Interaction Approach).

	(1)	(2)
	FRQ_DA	FRQ_DD
	Coeff. (p-value)	Coeff. (p-value)
<i>Media</i> × <i>AudFee</i>	<b>.001 (.562)</b>	<b>.000 (.542)</b>
<i>Media</i>	-.007 (.662)	-.006 (.573)
<i>AudFee</i>	.007* (.090)	.005* (.066)
<i>BigN</i>	.019*** (.000)	.010*** (.001)
<i>Busy</i>	-.006** (.022)	.001 (.701)
<i>Fops</i>	.007** (.022)	.004* (.083)
<i>GC</i>	-.050*** (.000)	-.061*** (.000)
<i>InvRec</i>	-.010 (.373)	-.052*** (.000)
<i>Lev</i>	-.000 (.803)	.000 (.733)
<i>Loss</i>	-.021*** (.000)	-.002 (.511)
<i>MA</i>	.001 (.575)	.002 (.132)
<i>MV</i>	.000 (.841)	-.001 (.422)
<i>Numseg</i>	.001** (.024)	.001* (.052)
<i>Quick</i>	-.000 (.717)	.001* (.072)
<i>ROA</i>	.146*** (.000)	.062*** (.000)
<i>Spit</i>	-.008*** (.001)	-.002 (.352)
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Number of obs.	22,086	22,086
R <sup>2</sup>	.164	.172

Note. This table reports the results of an OLS regression where the dependent variable is FRQ and the independent variables are *Media*, the interaction of media coverage and audit fees (*Media* × *AudFee*), and the control variables from Equations 1a and 1b. Column 1 reports the results when the dependent variable is *FRQ\_DA* and Column 2 reports the results when the dependent variable is *FRQ\_DD*. Industry and year fixed effects are included but not reported for brevity. See Appendix for variable definitions. *p*-values are calculated based on robust standard errors clustered at the client firm level. \*, \*\*, and \*\*\* denote significance at 10%, 5%, and 1% levels, respectively. FRQ = financial reporting quality;; OLS = ordinary least squares.

Second, to consider whether *AudFee* has a moderating role on the relation between *Media* and FRQ (rather than a mediating role), we expand our OLS model and include the interaction between *AudFee* and *Media*. Table 2 reports the results of this analysis. The coefficients for *Media* × *AudFee* are insignificant for both measures of FRQ. Thus, audit fees do not have a moderating role in this context.

These preliminary analyses suggest the relation between *Media* and FRQ may be more complex than the simple overall relation depicted by OLS. As a result, these findings support our decision to conduct a path analysis and decompose the media effect on FRQ into a direct effect and an indirect channel that operates through auditors.<sup>14</sup>

### Path Analysis

Columns (1) and (2) of Table 3 report the results of the path analysis that examines the theoretical auditor-related channel we propose. We do not find any support for a direct media corporate governance effect on FRQ after controlling for audit fees and the control variables as the coefficient for  $b_2$  in Equation 1b is not significant. This finding is consistent

**Table 3.** Path Analysis of Media Coverage, Audit Fees, and FRQ.

	Predicted sign	(1)	(2)
		FRQ_DA	FRQ_DD
		Coeff. (p-value)	Coeff. (p-value)
$P(\text{Media}, \text{AudFee}) = a_1$	+	.074*** (.000)	.074*** (.000)
$P(\text{AudFee}, \text{FRQ}) = b_1$	+	.070*** (.000)	.078*** (.000)
<b><math>P(\text{Media}, \text{FRQ})</math></b>			
<b>H1: Direct = <math>b_2</math></b>	?	<b>.009 (.220)</b>	<b>.001 (.919)</b>
<b>H2: Indirect = <math>a_1 \times b_1</math></b>	+	<b>.005*** (.000)</b>	<b>.006*** (.000)</b>
Control variables		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of obs.		22,086	22,086
$\chi^2_{\text{GoF}/df}$		1.47	1.41

Note. This table reports the results from a path analysis that examines how media coverage affects FRQ. We estimate the following equations:

$$\text{AudFee} = a_0 + a_1 \text{Media} + a_k \text{Controls}^k + \varepsilon \quad (1a)$$

$$\text{FRQ} = b_0 + b_1 \text{AudFee} + b_2 \text{Media} + b_k \text{Controls}^k + \varepsilon \quad (1b)$$

FRQ represents the proxies for FRQ, that is,  $\text{FRQ\_DA}$  and  $\text{FRQ\_DD}$ . Columns (1) and (2) report the results for Equations 1a and 1b.  $P(X1, X2)$  stands for the standardized path coefficients. Constant terms, control variables, and fixed effects are included but not reported for brevity. See Appendix for variable definitions. The significance of the indirect effect is estimated using the Sobel (1982) test statistics. \*, \*\*, and \*\*\* denote significance at 10%, 5%, and 1% levels, respectively. FRQ = financial reporting quality.

with the media sending conflicting signals to managers regarding FRQ. On one hand, through its watchdog, dissemination, and entertainment (i.e., tendency to sensationalize news) roles, the media can force firms to improve their FRQ. On the other hand, the media can expose managers to market pressure to improve their short-term financial results, leading to greater earnings manipulation and lower FRQ.

We find that, as predicted by our main hypothesis, the product of  $a_1 \times b_1$  is significantly positive for both measures,  $\text{FRQ\_DA}$  and  $\text{FRQ\_DD}$  (coefficient = 0.005, 0.006, respectively, with  $p$ -values < .01). Thus, our results are consistent with auditors increasing their charges in response to more media coverage and using the additional audit fees to increase their audit effort and improve FRQ. Specifically, we find that while the media has a corporate governance effect in constraining managers' opportunistic behavior (i.e., earnings management), it works through auditors who increase audit effort to counteract their higher business risk. This provides support for an indirect channel of media corporate governance that operates through auditors.

We also note that, in Columns (1) and (2) of Table 3,  $a_1$  in Equation 1a which captures the effect of media coverage on audit fees is positive and significant. Furthermore,  $b_1$  in Equation 1b is positive and significant which indicates that higher audit fees are associated with better FRQ. Thus, we find support for the two legs that underlie the indirect channel.<sup>15</sup>

A possible concern about our main analysis is that media coverage is correlated with the client's general visibility which is a function of firm size. Asthana and Kalelkar (2014)

argue and find evidence that the increase of a client's general visibility, measured by the addition of a client to S&P 500 index, leads to lower audit fees. However, theoretically, media coverage differs from the firm's general visibility. First, a firm's general visibility cannot sensationalize an auditor's role in an accounting failure, but the media can slant the news and portray the auditor's involvement in a negative light (e.g., Cohen et al., 2016). Second, media can make less visible firms (e.g., firms with small size) more visible. Empirically, we find the correlation between *MV* and *Media* is 0.48, suggesting that, while related, they capture different aspects of visibility of a client. In addition, the finding of prior literature on the relationship between a client's general visibility and audit fees is inconsistent with ours. As documented in this article, we find the client's media coverage increases audit fees.<sup>16</sup>

### *Cross-Sectional Analysis*

In this section, we perform a cross-sectional analysis to further support our finding that the media's role in improving FRQ mainly works through auditors. Specifically, as we argued in the previous section, the media can exert pressure on managers to manipulate earnings. If so, we expect the indirect channel of media corporate governance will be more pronounced when the media pressure on a client is high. Empirically, we use the number of earnings-related news items to measure such pressure following Dai et al. (2016). Empirically, we divide our sample into two groups based on the sample median value of the number of earnings-related news items which captures to what extent information about the firm's financial performance is exposed to the public (Beyer et al., 2010).

Table 4 presents the estimation results of the path analysis for the four subsamples. For both measures of clients' FRQ, we find that the mediation effect of audit fees on the relationship between a client's media coverage and its FRQ is stronger when media pressure on manager's misreporting is higher. For example, when *FRQ\_DA* is the dependent variable, the indirect effect of the media on FRQ is 0.008 for the group with more earnings-related news and 0.004 for the group with less earnings-related news, and the difference is significant at the 10% level.<sup>17</sup>

### **Endogeneity Tests**

Although we have addressed the concern that a client's general visibility or size may be driving our results, readers may still be concerned about endogeneity problems. In our setting, one type of endogeneity issue, reverse causality, is not likely to explain our results for two reasons. First, we already use the media coverage over the year prior to when the fee is set in performing all of our tests, consistent with a lag-lead approach. Furthermore, given media coverage of a firm could be persistent, we re-estimate Equations 1a and 1b after including audit fees paid in the previous year ( $AudFee_{i,t-1}$ ) as additional control in Equation 1a. Our results remain unchanged (untabulated). Second, we calculate media coverage over an entire year rather than in a short window at the time the audit fee is disclosed to the public. It is unlikely that audit fees would generate much news outside the time they are initially disclosed. Thus, our findings do not appear to be purely driven by reverse causality.<sup>18</sup>

However, two endogeneity concerns require further attention. First, it is possible that the improvement in FRQ is driven by a client's demand for high-quality audits rather than an auditor's own incentive. Second, even though we control for a battery of firm

**Table 4.** Media Coverage, Audit Fees, and FRQ: Media Pressure in Reporting Good Performance.

	FRQ_DA		FRQ_DD	
	(1)	(2)	(3)	(4)
	Number of earnings news: High	Number of earnings news: Low	Number of earnings news: High	Number of earnings news: Low
Predicted sign				
	Coeff. (p-value)	Coeff. (p-value)	Coeff. (p-value)	Coeff. (p-value)
$P(\text{Media, AudFee}) = a_1$	.094*** (.000)	.058** (.000)	.094*** (.000)	.058*** (.000)
$P(\text{AudFee, FRQ}) = b_1$	.085*** (.000)	.074*** (.000)	.080*** (.000)	.067*** (.000)
<b>P(Media, FRQ)</b>				
<b>H1: Direct = <math>b_2</math></b>	<b>-.029*** (.008)</b>	<b>.010 (.355)</b>	<b>-.007 (.564)</b>	<b>-.007 (.516)</b>
<b>H2: Indirect = <math>a_1 \times b_1</math></b>	<b>.008*** (.000)</b>	<b>.004*** (.000)</b>	<b>.007*** (.000)</b>	<b>.004*** (.000)</b>
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Number of obs.	10,879	11,207	10,879	11,207
p-Value of comparison of $(a_1 \times b_1)_{\text{High}}$ and $(a_1 \times b_1)_{\text{Low}}$	.053*		.069*	

Note. This table reports the results of regressions for the path analysis (Equations 1a and 1b) conditional on earnings focus of news articles.  $P(X1, X2)$  stands for the standardized path coefficients. Constant terms, control variables, and fixed effects are included but not reported for brevity. See Appendix for variable definitions. The significance of the indirect effect is estimated using the Sobel (1982) test statistics.  $\chi^2_{\text{Gof/df}}$  is less than 2 for all models. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. FRQ = financial reporting quality.

characteristics especially the general visibility in our regression analysis, it is still possible that other omitted variables may explain our results. Consequently, we conduct a series of additional tests to address these two specific endogeneity issues.

### *Clients' Demand for High-Quality Audits*

Although we do not find a direct effect of media coverage on FRQ, our finding of a positive media coverage effect on audit fees and FRQ is consistent with an alternative corporate governance view where the media creates client demand for more audit work. More specifically, a client can be concerned that an audit failure may lead to litigation or reputation damage, and as a result, the client may demand more audit work (and pay more audit fees) unilaterally, resulting in improved FRQ. To address this alternative explanation, we conduct two additional tests.

First, we directly control for clients' litigation risk in Equation 1a. Following Kim and Skinner (2012), we use the estimation results of their model (2) and construct a firm-year litigation measure. In addition, we follow Dai et al. (2015) and use the client's corporate social responsibility performance, based on KLD Research and Analytics, as a time-specific measure of the client's reputation. Our results should not hold after including these measures if our findings are purely driven by the client's response to its own litigation and reputation risks that arise because of greater media exposure. While our sample size decreases after adding the additional controls, we continue to find that media coverage is positively correlated with audit fees after controlling for the client's litigation and reputation risk. Furthermore, results continue to support a mediated relation where the effect of media coverage on clients' FRQ runs through audit fees (untabulated).<sup>19</sup>

Our second test to mitigate the client demand explanation focuses on the client's internal governance. Engel et al. (2010) find that audit committee quality is positively correlated with audit fees, suggesting firms with good internal corporate governance systems may demand higher quality audit services. Hence, if the alternative view is true, intensive media exposure could lead to improvements in a client's corporate governance—for example, audit committee quality—and, as a result, the client demands and purchases more audit services, leading to higher fees and FRQ accordingly.

To address this conjecture, we directly control for clients' corporate governance in our path analysis. Empirically, we use three corporate governance measures: (a) audit committee size (number of audit committee members scaled by total number of directors, a proxy for monitoring demand), (b) the percentage of financial experts on the audit committee (number of directors with accounting or finance background scaled by total number of directors in audit committee, a proxy for monitoring quality), and (c) the audit committee's total compensation (Engel et al., 2010). Untabulated results indicate that media coverage is still positively correlated with audit fees after controlling for the above proxies for internal governance quality, and the effect of media coverage on FRQ that is mediated by audit fees remains positive and significant in the path analysis, even though our sample size is reduced due to the additional control variables.

Overall, the evidence does not support an alternative interpretation where the positive impact of media coverage on FRQ is mainly driven by the *clients' incentive* for higher audit quality. However, we acknowledge that the incentive to avoid future misreporting or scrutiny is a common interest for both the client and auditor, and FRQ in equilibrium is the outcome of a mutual agreement between these parties. Even so, our results are consistent

with auditors having stronger incentives to improve FRQ because, as discussed, clients face conflicting incentives in the face of media coverage.

### *Omitted Variables*

To further address omitted variables in general and establish causality, we use the following four approaches.

1. *Residual of media coverage.* We first use the residual from a media coverage determinant model and examine whether the residual of media coverage still plays a role in audit pricing and clients' FRQ. Specifically, we follow Dai et al. (2015) and include the following firm characteristics as the determinants of news coverage at the firm level: trade frequency, firm size, market-to-book ratio, annual stock return, stock return volatility, research and development expense, return on assets, and index membership. Following Miller (2006), we also include analyst following, and based on Solomon and Soltes (2012), we include an indicator for clients with small, positive earnings surprises. It is expected that the residuals from the first-stage determinant model ( $R\_Media$ ) are less likely to capture the firm characteristics that are related to media coverage. We re-estimate our Equations 1a and 1b by replacing *Media* with  $R\_Media$ . Our sample reduces to 13,470 because of additional data requirements.

Panel A of Table 5 reports the results. We find the product of  $a_1 \times b_1$  is significant at the 1% level in both the  $FRQ\_DA$  and  $FRQ\_DD$  models, suggesting that there is an indirect effect of the media coverage residuals on clients' FRQ that runs through audit fees. In addition, we do not find any evidence that the direct effect of media coverage on FRQ ( $b_2$ ) is significant in either model.

2. *IV analysis.* As an alternative approach to tease out the effect of the firm-level endogenous determinants on media coverage, we use an IV analysis. A number of papers, including Gurun and Butler (2012) and Dai et al. (2015), argue that information gathering and processing (which are at the heart of media coverage) can be done more easily when the physical distance between the firm and news outlets is shorter. In contrast, no economic intuition directly links this instrument to audit fees, which supports the exclusion restriction for this instrument. Following Gurun and Butler (2012) and Dai et al. (2015), our IV,  $DJS$ , is a dummy variable that equals 1 if a client's headquarters is located in the same state as one of Dow Jones' regional offices, and 0 otherwise. In the first stage, we regress *Media* on our control variables from Equation 1a and  $DJS$ . Then, we calculate the predicted value of media coverage and use this instrumented measure of media coverage ( $\hat{Media}$ ) to re-estimate Equations 1a and 1b.

Panel B of Table 5 shows the results of our two-stage IV analysis. As in Dai et al. (2015), untabulated results show that the measure for geographic proximity,  $DJS$ , is positively associated with *Media*. Following Larcker and Rusticus (2010), we reject the null hypothesis of weak instrument with Kleibergen–Paap Wald  $F$ -statistic equal to 12.47 with  $p$ -value less than .001 (Stock & Yogo, 2005). In the second stage, the indirect effects of instrumented media coverage on clients' FRQ via increased audit fees ( $a_1 \times b_1$ ) are also

**Table 5.** Additional Endogeneity Tests.

## Panel A. Residual of Media Coverage.

		FRQ_DA	FRQ_DD
	Predicted sign	Coeff. (p-value)	Coeff. (p-value)
$P(\text{Media}, \text{AudFee}) = a_1$	+	.085*** (.000)	.085*** (.000)
$P(\text{AudFee}, \text{FRQ}) = b_1$	+	.069*** (.000)	.075*** (.000)
<b><math>P(\text{Media}, \text{FRQ})</math></b>			
<b>H1: Direct = <math>b_2</math></b>	?	<b>.013 (.121)</b>	<b>.010 (.240)</b>
<b>H2: Indirect = <math>a_1 \times b_1</math></b>	+	<b>.006*** (.000)</b>	<b>.006*** (.000)</b>
Control variables		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of obs.		13,470	13,470

## Panel B. Instrumental Variable Approach.

		FRQ_DA	FRQ_DD
	Predicted sign	Coeff. (p-value)	Coeff. (p-value)
$P(\wedge \text{Media}, \text{AudFee}) = a_1$	+	.033*** (.000)	.033*** (.000)
$P(\text{AudFee}, \text{FRQ}) = b_1$	+	.073*** (.000)	.080*** (.000)
<b><math>P(\wedge \text{Media}, \text{FRQ})</math></b>			
<b>H1: Direct = <math>b_2</math></b>	?	<b>-.005 (.427)</b>	<b>-.010 (.116)</b>
<b>H2: Indirect = <math>a_1 \times b_1</math></b>	+	<b>.002*** (.000)</b>	<b>.003*** (.000)</b>
Control variables		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of obs.		22,086	22,086

## Panel C. Quasi-Natural Experiment.

		FRQ_DA	FRQ_DD
	Predicted sign	Coeff. (p-value)	Coeff. (p-value)
$P(\text{Closure}, \text{AudFee}) = a_1$	-	-.012** (.036)	-.012** (.036)
$P(\text{AudFee}, \text{FRQ}) = b_1$	+	.119*** (.000)	.129*** (.000)
<b><math>P(\text{Closure}, \text{FRQ})</math></b>			
<b>H1: Direct = <math>b_2</math></b>	?	<b>.003 (.812)</b>	<b>-.006 (.615)</b>
<b>H2: Indirect = <math>a_1 \times b_1</math></b>	-	<b>-.001** (.050)</b>	<b>-.002** (.049)</b>
Control variables		Yes	Yes
Year fixed effects		Yes	Yes
Industry fixed effects		Yes	Yes
Number of obs.		7,247	7,247

Note. This table reports the results of regressions for the path analysis (Equations 1a and 1b) for four tests that address endogeneity issues. Panel A reports the results of the path analysis when the residual of media coverage is used. We follow Dai et al. (2015) to estimate the first-stage determinant model to estimate the residuals. Panel B reports the results using an instrumented media coverage where the instrument is an indicator variable that is equal to 1 if the client's home state has Dow Jones regional news office. Panel C reports the results of a quasi-natural experiment based on the closure of major daily newspapers in Colorado and Maryland.  $P(X_1, X_2)$  stands for the standardized path coefficients. Constant terms, control variables, and fixed effects are included but not reported for brevity. See Appendix for variable definitions. The significance of the indirect effect is estimated using the Sobel (1982) test statistics.  $\chi^2_{\text{GoF}/df}$  is less than 2 for all models. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.



found to be significant at the 1% level in both models. The direct effect of the instrumented *Media* variable ( $b_2$ ) remains statistically insignificant.<sup>20</sup>

3. *Quasi-natural experiment.* The third approach to strengthen identification of the media's indirect corporate governance effect relies on a natural experiment that uses an exogenous shock that changes media coverage. The shocks we utilize are two local newspaper closures in Colorado and Maryland. On February 27, 2009, the *Rocky Mountain News*, a daily newspaper published in Denver, Colorado, announced its closure, leaving the *Denver Post* as the sole remaining large-circulation daily. On February 15, 2009, the *Baltimore Examiner*, one of the two big dailies in Baltimore, Maryland, had its last issue. We contend that the closures of these two major local newspapers reduced the media coverage of firms located in Colorado and Maryland, but have no plausible direct effect on auditors' behavior or the media coverage of firms in other states.<sup>21</sup> In addition, the untabulated results show that after 1 year of the closure of these two major local newspapers, the media coverage of firms in Colorado and Maryland was reduced by 5.66% of the mean value prior to the closures. Therefore, these two events meet the criteria of an exogenous shock.

To perform our audit fee tests, we set *Closure* equal to 1 for the firm-year observations located in Colorado and Maryland after 2009, and 0 otherwise. We then re-estimate Equations 1a and 1b by replacing *Media* with *Closure* and use observations from 2008 to 2010, that is, the year of the closures and the preceding and subsequent years, in order that it could mitigate the concern that our results are affected by confounding events using a longer testing period.<sup>22</sup> In contrast to *Media*, we expect that *Closure* will have a negative effect on audit fees and that the indirect path from *Closure* to FRQ will be negative. Panel C of Table 5 reports the results. We find the coefficient on the indirect effect from *Closure* to FRQ ( $a_1 \times b_1$ ) is negatively significant at less than 10% level across all four columns, indicating that the decline in media coverage is associated with a decline in FRQ. Meanwhile, the coefficient on the direct effect ( $b_2$ ) remains insignificant.

The central issue addressed in this section relates to the potential endogeneity of the media coverage variable itself. The results of various analyses in this section continue to show that the media has an indirect corporate governance role on FRQ that operates through auditors. Although none of these tests is individually able to rule out all possible alternative explanations, taken together, the results suggest that it is less likely that our main findings are client-driven or purely due to omitted variables.

## **Additional Analyses**

### ***Robustness Tests***

We examine the robustness of our main results. First, we examine whether the media leads auditors to ultimately constrain both income-increasing and income-decreasing accruals. As we discussed in the previous section, while media pressure can give managers incentive to inflate current earnings upward or manipulate current earnings downward to increase reported numbers in the future periods, auditors should be motivated to reduce both types of earnings management. Columns (1) and (2) of Table 6 report the results. We find that the mediated effect of media coverage on FRQ ( $a_1 \times b_1$ ) is indeed positive and significant

**Table 6.** Robustness Checks.

	(1)	(2)	(3)	(4)
	Subsample of income-increasing discretionary accruals		Subsample of income-decreasing discretionary accruals	
	FRQ_DA	FRQ_DA	FRQ_Restate	FRQ_MeetBeat
Predicted sign	Coeff. (p-value)	Coeff. (p-value)	Coeff. (p-value)	Coeff. (p-value)
$P(Media, AudFee) = a_1$	.072*** (.000)	.076*** (.000)	.076*** (.000)	.081*** (.000)
$P(AudFee, FRQ) = b_1$	.071*** (.000)	.065*** (.000)	.037*** (.009)	.062*** (.000)
<b>P(Media, FRQ)</b>				
<b>H1: Direct = <math>b_2</math></b>	<b>-.009 (.396)</b>	<b>.015 (.130)</b>	<b>-.013 (.149)</b>	<b>-.020*** (.025)</b>
<b>H2: Indirect = <math>a_1 \times b_1</math></b>	<b>.005*** (.000)</b>	<b>.005*** (.000)</b>	<b>.003** (.011)</b>	<b>.005*** (.000)</b>
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Number of obs.	10,221	11,865	12,463	17,573

Note. This table reports the robustness checks of regressions for the path analysis (Equations 1a and 1b). Columns (1) and (2) are the results conditional on the direction of abnormal accruals. Columns (3) and (4) are the results of using two alternative measures of FRQ. P(X1, X2) stands for the standardized path coefficients. Constant terms, control variables, and fixed effects are included but not reported for brevity. See Appendix for variable definitions. The significance of the indirect effect is estimated using the Sobel (1982) test statistics.  $\chi^2_{Sobel/df}$  is less than 2 for all models. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

when we focus on the subsample with income-increasing (positive) discretionary accruals, indicating an indirect corporate governance role for the media in constraining income-increasing accruals via auditors. This result is consistent with prior literature that auditors are conservative for the firms with income-increasing accruals (Francis & Krishnan, 1999). In our context, auditors spend more effort to reduce income-increasing accruals when the clients' media visibility is higher.

Furthermore, we find the mediated effect of media coverage on FRQ ( $a_1 \times b_1$ ) is also positive and significant when we focus on the subsample with income-decreasing (negative) discretionary accruals. It suggests the media also has an indirect role in constraining income-decreasing accruals via auditors. This result is consistent with the prior literature that finds auditors tend to reduce downward earnings management (e.g., Francis et al., 1999; Reynolds & Francis, 2000; Myers et al., 2003). These studies argue that auditors have incentive to reduce both income-increasing and decreasing accruals because while income-increasing accruals can be used to inflate current earnings, income-decreasing accruals can be used to create "cookie jar reserves" that can be used to increase future earnings.

Next, we address concerns about estimation errors in computing the  $FRQ\_DA$  and  $FRQ\_DD$  proxies (Dechow et al., 2010). Specifically, we use a restatement indicator,  $FRQ\_Restate$ , that equals 0 if a client misreports its financial statements in year  $t$ , and 1 otherwise. Furthermore, we use an indicator,  $FRQ\_MeetBeat$ , that equals 0 for clients that meet or just beat their consensus analyst forecast by one cent in year  $t$ , and 1 otherwise. Like  $FRQ\_DA$  and  $FRQ\_DD$ ,  $FRQ\_Restate$  and  $FRQ\_MeetBeat$  are increasing in FRQ. Columns (3) and (4) of Table 6 report the results. Consistent with the main results, the mediated effect of media coverage on FRQ ( $a_1 \times b_1$ ) is positive and significant, indicating an indirect corporate governance role for the media on restatements and manipulation around earnings thresholds.<sup>23</sup> Also, we find evidence supporting the media's dark side as  $b_2$  is negative and significant in the  $FRQ\_MeetBeat$  specification. That is, greater media coverage is directly associated with a higher likelihood of earnings manipulations around analysts' earnings forecasts. However, this direct effect is offset, at least partly, by auditors who indirectly extend the media's corporate governance role.

## Validation Tests

In our hypothesis development, we argue that litigation risk and potential market share loss are two important channels in explaining the positive relation between audit fee and media coverage. These tests assume that the media's reporting of an auditor's poor-quality audits can lead to more litigation and reputation damage *ex post*. In this section, we conduct two tests to examine the validity of this assumption. Following prior literature (e.g., Hennes et al., 2008), we use clients' accounting restatements as an indicator of poor audit quality.

We first examine our assumption that greater media coverage of poor audit quality increases the likelihood that an auditor will be sued. To perform such a test, we collect data on lawsuits against auditors from the Securities Class Action Clearinghouse. We create an indicator variable,  $Sued$ , that is equal to 1 if the auditor was sued by shareholders within 1 year after a client's restatement. We also develop an indicator variable for high media coverage,  $HMedia1$ , based on whether the media coverage of a client is above sample median in year  $t$ . We construct an accounting restatement indicator,  $Restate$ , which is 1 if a client restates in year  $t$  and 0 otherwise. We regress the interaction term  $HMedia1 \times Restate$  on whether the auditor is sued in the next year ( $Sued$ ), including the control variables with

year fixed effects. Because our dependent variable, *Sued*, is a dummy variable, a logistic regression is used to estimate the likelihood of being sued in the year. To mitigate the potential concern that a regular fixed effects logit model will produce inconsistent estimates, we use Chamberlain's random effects (CRE) logit estimation (Wooldridge, 2002). In the untabulated tests, we find the coefficient of the interaction term  $HMedia1 \times Restate$  is significantly positive at the 1% level, indicating that auditors of restating clients with higher media coverage have higher litigation risk than auditors of restating clients with lower media coverage.

Our second test investigates the effects of reputational damage by examining the auditor's loss in local market share following a client restatement. Because market share requires a market, we follow Swanquist and Whited (2015) who examine whether auditor city offices that have restating clients suffer a larger decrease in local market share than city offices with no restating clients. We examine whether a city office with a restating client suffers a significantly larger loss in its local market share if the clients in the city office have greater media coverage. If a city office has a restating client, *Restate\_C* is coded 1. We measure the city office's local market shares using the city office's audit fees (or total audit and non-audit fees) scaled by the total audit fees (or total audit and non-audit fees) of all auditors in the same city. We calculate the change in market share of an auditor from year  $t$  to  $t + 1$ . We also develop an indicator variable for high media coverage, *HMedia2*, based on whether the average media coverage of all clients in one auditor city office is above sample median in year  $t$ . We then regress the change in the city office's market share on the interaction term  $HMedia2 \times Restate\_C$ , the control variables, and year and auditor-city office fixed effects. We compute market share measure based on audit fees. The untabulated results show that the coefficient of the interaction  $HMedia2 \times Restate\_C$  is significantly negative. These results provide evidence that the *ex post* market share loss following a restatement is greater when media coverage is high.

## Conclusion

We propose that the media could have an indirect corporate governance role on FRQ that operates through auditors. We posit that auditors care about their clients' media coverage because greater media exposure can increase the auditor's litigation risk and reputation risk associated with future audit failures. To address this risk *ex ante*, we expect auditors to increase audit fees of clients who have greater media coverage. Furthermore, we expect that at least part of higher audit fees will be used to increase audit effort and improve the client's FRQ, resulting in lower business risk for the auditor. Using a path analysis, we find that media coverage is positively associated with audit fees and that audit fees mediate the association between the client's media coverage and FRQ, consistent with the media having an indirect effect on FRQ.

Overall, our study provides a more nuanced understanding of the media's corporate governance role. While the focus of prior studies has been on how the media *directly* disciplines managers and their boards, as Miller and Skinner (2015) suggest, little is known about how the media interacts with other capital market participants, such as information intermediaries and monitors, and whether such interactions can enhance the media's corporate governance role. Our study suggests that the media has a corporate governance role for FRQ but that it operates through auditors.

**Table A1.** Variable Definitions.

Variable	Definition	Data source
Outcome variables		
<i>FRQ_DA</i>	Absolute value of discretionary accrual from the performance-matched modified Jones model from Kothari et al. (2005) in year $t$ , multiplied by $-1$ .	Compustat
<i>FRQ_DD</i>	The <i>SD</i> of the residual from the Dechow and Dichev (2002) model in year $t$ , multiplied by $-1$ .	Compustat
Source variable		
<i>Media</i>	The natural logarithm of the number of news items from the beginning of the second quarter of year $t - 1$ to the end of the first quarter of year $t$ .	Thomson Reuters
Mediating variable		
<i>AudFee</i>	The natural logarithm of total audit fee (in \$) in year $t$ .	Audit Analytics
Control variables for Equations 1a and 1b		
<i>BigN</i>	1 If the firm is audited by a Big 4 audit firm in year $t$ , 0 otherwise.	Audit Analytics
<i>Busy</i>	1 If the fiscal year end is December in year $t$ , 0 otherwise.	Compustat
<i>Fops</i>	1 If the firm has a foreign operation in year $t$ , 0 otherwise.	Compustat
<i>GC</i>	1 If the firm receives a going concern opinion in year $t$ , 0 otherwise.	Audit Analytics
<i>InvRec</i>	Sum of inventories and receivables, divided by beginning total assets in year $t$ .	Compustat
<i>Loss</i>	1 If the firm reports a loss in year $t$ , 0 otherwise.	Compustat
<i>Lev</i>	Total debt to equity ratio in year $t$ .	Compustat
<i>MA</i>	1 If the firm is engaged in a merger or acquisition in year $t$ , 0 otherwise.	SDC
<i>MV</i>	The natural logarithm of market capitalization in year $t$ .	Compustat
<i>NumSeg</i>	The number of business segments in year $t$ .	Compustat
<i>Quick</i>	Current assets minus inventories, divided by current liabilities in year $t$ .	Compustat
<i>ROA</i>	Income before extraordinary items deflated by total assets in year $t$ .	Compustat
<i>Spit</i>	1 If the firm reports a special item in year $t$ , 0 otherwise.	Compustat
Additional variables for endogeneity tests and additional analyses		
<i>Closure</i>	1 If the firm is located in Colorado or Maryland and year $t$ is after 2009, 0 otherwise.	
<i>FRQ_MeetBeat</i>	0 If the firm's reported earnings is equal to or just beats its consensus analyst forecast by one cent in year $t$ , 1 otherwise.	IBES
<i>FRQ_Restate</i>	0 If the firm misreports its financial statement in year $t$ , 1 otherwise.	Audit Analytics
<i>R_Media</i>	The residual of <i>Media</i> estimated from the first-stage regression model of the determinants of media coverage.	Thomson Reuters

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## Notes

1. We use media exposure, media coverage, and media visibility interchangeably in our paper.
2. A direct effect refers to the effect of A causing B. An indirect, or mediated, effect refers to a relationship between A and B, whereas A causes M, which in turn causes B.
3. Path analysis is widely used in behavioral and health sciences (Hayes, 2013), as well as several recent accounting studies (e.g., Bhattacharya et al., 2012; DeFond et al., 2016; Hilary et al., 2016). Path analysis aims to capture the mediation effect, which will inform the researchers how or why such an effect occurs. It is different from the interaction term in ordinary least squares (OLS) regression which is designed to capture the moderation effect. As discussed in the “Preliminary Analyses” section, when we run an OLS regression with the interaction term between audit fees and media coverage included, the interaction is insignificant. Thus, our path analysis is not merely capturing a disguised moderation effect where audit fees moderates the relation between media coverage and financial reporting quality (FRQ).
4. The insignificant direct effect of media can be explained by the two different effects of media on financial reporting. On one hand, the media can provide early detection of fraud in some cases (Dyck et al., 2010; Miller, 2006), at least for earnings manipulations that have already occurred. This will be transferred into a monitoring mechanism that curbs earnings management in advance. On the other hand, media visibility can also have a “dark side” (Dai et al., 2016; Malmendier & Tate, 2009) where media coverage creates incentives and pressure for managers to manipulate earnings. Therefore, the two competing force may make the direct effect of the media on FRQ ambiguous.
5. Miller and Skinner (2015) argue that “[f]uture research would benefit from a more complete theory of the role of the media in financial markets” (p. 232). They suggest that a “promising approach is to consider the media’s interaction with other players in the financial markets’ including auditors.”

6. We recognize that prior research has examined these legs independently. For example, Gong et al. (2018) provide some evidence on the relation between media coverage and audit fees, while Eshleman and Guo (2014) study the relation between audit fees and audit quality. Our study is distinct from these prior studies because we examine these relations as part of a single conceptual model.
7. In additional analyses, we use two alternative measures of FRQ based on restatements and meeting/just beating analysts' forecasts to mitigate the estimation errors in the models used to measure discretionary accruals and Dechow–Dichev residual (Dechow et al., 2010). We do not use restatements or meeting/just beating earnings as our primary measures for two reasons. First, the binary and infrequent nature of these measures fails to capture subtle variations in FRQ which limits their generalizability and reduces their ability to detect cross-sectional and time-series variations in the effect of media coverage on FRQ (DeFond & Zhang, 2014). Second, the meeting/just beating measure can only be computed for firms covered by equity analysts and I/B/E/S database which may tend to understate the effect of media (Bushee et al., 2010).
8. We follow DeFond and Zhang (2014) and consider (a) audit fees as audit inputs and (b) FRQ being constrained by firms' innate characteristics, confounded by the reporting system, and affected by audit inputs. While both audit fees and FRQ measures can be viewed as measures of audit quality, they are not identical. DeFond and Zhang (2014) state that "an increase in audit fees cannot be unambiguously interpreted as an increase in audit quality" (p. 290) because audit fees also capture risk premia and reflect audit efficiency. Similarly, they note that measures of FRQ are "determined by many factors and audit quality is just one component" (DeFond & Zhang, 2014, p. 288).
9. Our results are not sensitive to measuring media coverage over either the entire previous or current fiscal year.
10. Our results are not affected if we further control for investment opportunities (e.g., book-to-market ratio), external financing, and advertising expense in our baseline models as these additional control variables could be correlated with media coverage and audit pricing.
11. According to Hendershött et al. (2015), the most common topics covered in the news stories are (in order): corporate forecasts, corporate results, corporate crises, debt markets, stock markets, major breaking news, corporate bonds, mergers and acquisitions, macro news, business activities, corporate analysis, hot stocks, regulation, government policies, legislation, fund industry news, broker research and recommendations, ratings, new issues, job losses and unemployment, and management issues and policy. To tease out the pure media effects, we exclude the firm-initiated news from our analysis.
12. We also check if our results are sensitive to the selection criteria of relevance score. In particular, we follow Hendershött et al. (2015) to include all the news of one particular firm and construct a yearly weighted number of news article measure using the relevance measure as weights. We find our results are robust to this alternative measure.
13. To conserve space, we do not report the untabulated results in detail, but they are available on request.
14. In a traditional mediation analysis (e.g., Baron & Kenny, 1986), the overall effect of X on Y (in our case, *Media* and FRQ, respectively) needs to be significant. However, Collins et al. (1998) argue that it is not necessary to show a significant total effect as a first step if one is investigating a stage-sequential process that unfolds over time. Although their setting is different from ours, similar to theirs, our process unfolds at three points in time: in our case, the media reports on a client, the auditor sets fees given media coverage, and the auditor determines FRQ given audit fees.
15. The overall fit of the causal model as a whole can be assessed using a goodness-of-fit chi-square ( $\chi^2_{\text{GoF}}$ ). However, because  $\chi^2_{\text{GoF}}$  is very sensitive to the sample size, the  $\chi^2_{\text{GoF}}$  is often deflated by its degrees of freedom where a  $\chi^2_{\text{GoF}}/df$  of 2 or less is an indicator of a good fitting model (e.g., Norman & Streiner, 2003). The  $\chi^2_{\text{GoF}}/df$  for the *FRQ\_DA* and *FRQ\_DD* models are 1.47 and 1.41, respectively.

16. We conduct two additional analyses to address the concern that our tests are merely detecting a residual size effect that is related to the client's general visibility. First, to account for the fact that our media measures could still proxy for high-order influences of firm size that are not captured by the linear influence of our control variables, we follow Focke et al. (2017) and include size splines based on the annual decile of firm size in our regressions. Second, we follow Hilary et al. (2014) and delete observations that have both bigger firm size and greater media coverage (i.e., those for which both *MV* and *Media* are greater than their sample median values). In this case, the correlation between *MV* and *Media* becomes 0.05 so that the concern that our media coverage captures the effect of size is mitigated. In all cases (results untabulated), our baseline results remain unchanged, suggesting that our results are not being driven by a residual size effect that is related to general visibility.
17. In an additional analysis, we investigate whether media's indirect effect on FRQ emanates from its creation of original information or from it disseminating existing information more broadly. Using the novelty score from Thomson Reuters News Analytics (TRNA) which reflects whether a news item  $j$  was preceded by a related news item  $k$  in a window period (e.g., 12 hr, 24 hr, 3 days, 5 days, 7 days) before the release of  $j$ , we define a news item as an "original news" item if it is not linked (related) to prior news items in the previous 24 hr and as "stale news" item if it is linked to prior news items in the previous 24 hr. After classifying each news item as original or stale, we recalculate the media coverage for each firm-year and create two new variables to capture the volume of original and stale news, respectively. Next, we orthogonalize the two measures to mitigate multicollinearity as these two variables are naturally highly correlated. We conduct our path analysis using the measures of original and stale news in place of *Media*. In untabulated results, we find that the auditor's business risk is affected by both the media's information creation role and dissemination role.
18. Although the likelihood is remote, another scenario for reverse causality is that better financial reporting quality and greater auditor effort of a firm could reduce information acquisition costs of outsiders (e.g., media) and hence attract more media coverage. Our tests in the "Omitted Variables" section that explore the exogenous sources of variations in media coverage with respect to FRQ and audit fees (e.g., instrumental variable [IV] and difference-in-difference test) help address this potential concern (e.g., Glaeser & Guay, 2017).
19. One can argue that Kim and Skinner's (2012) measure may capture the overall litigation risk of both clients and their auditors. If so, by controlling for overall litigation risk, we underestimate the role of the auditor's business risks arising from media coverage. At the same time, the significant results we obtained after controlling for clients' overall litigation risks provide us with more confidence that our findings cannot be explained by clients' litigation concerns that result in a higher demand for audit effort. This reasoning also applies to the concern that a client's corporate social responsibility performance could be potentially related to auditor reputation risk.
20. One potential criticism of our IV, *DJS*, is that it may be potentially correlated with the state-level economic development as most of Dow Jones regional offices are located in large cities in the more developed areas where audit fees are higher due to their higher cost of living and labor usage. To further alleviate this concern, we develop an alternative IV, *Reporters*, which is a dummy variable equal to 1 if the number of news reporters in one particular state scaled by state-level population is greater than the median value, and 0 otherwise. Conceptually, this IV controls for the effect of economic development at the state level. The untabulated results show that our findings are qualitatively unchanged.
21. According to the summarized information in Wikipedia ([https://en.wikipedia.org/wiki/List\\_of\\_defunct\\_newspapers\\_of\\_the\\_United\\_States](https://en.wikipedia.org/wiki/List_of_defunct_newspapers_of_the_United_States)), there are thousands of defunct newspapers in the United States. We choose the *Rocky Mountain News* and the *Baltimore Examiner* as our major events as their circulations are ranked the top two among all the defunct newspapers. The *Rocky Mountain News* had a circulation of 255,427 in 2006 and the *Baltimore Examiner* had a circulation of 236,000 in 2008.



22. Our findings are not affected when we use the full sample period.
23. To mitigate the potential reverse causality issue, we further control for whether a client misreports its financial statements in the last year (i.e., lagged value of *FRQ\_Restate*) in the *FRQ\_Restate* specifications. Doing so can also help highlight the component of audit effort (rather than risk premium) in audit fee. In addition, given the identification of misreporting cases is purely ex post (e.g., based on the restatement announcements issued after a certain misreporting period), we restrict our testing period till 2008 in order that we have a measurement window with reasonable length (i.e., at least 3 years) between the potential misreporting period and the restatement announcement date. Our results are not affected if we restrict our testing sample till 2009 or 2010.

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