The Effect of CFO Personal Litigation Risk on Firms' Disclosure and Accounting Choices

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Abstract: In *Gantler v. Stephens* (2009), the Delaware Supreme Court makes explicit that corporate officers owe the same fiduciary duty to the firm and shareholders as do board members. The decision increased the risk of non-board-serving officers being added as named defendants to investor litigation but did not change the risk of corporate litigation. Analyzing the effect of the *Gantler* ruling on non-board-serving CFOs, we find a significant change in their behavior as well as in their firms' disclosure and accounting choices. Specifically, speech tone during earnings calls of non-board-serving CFOs becomes more negative when compared to board-serving CFOs and the firm's CEO and their firms disclose bad news earlier and report more conservatively. Results are stronger for firms incorporated in Delaware. Our findings suggest that CFOs respond to personal litigation risk over and above corporate litigation risk.

"Although we may not be able to change the character of corporate officers, we can change behavior through incentives and penalties. That, in my judgment, could dramatically improve the state of corporate governance."

-Alan Greenspan (2002)

1. Introduction

In *Gantler v. Stephens*,[1] the Delaware Supreme Court ruled in 2009 as a "case of first impression" [2] that corporate officers owe the same fiduciary duty of care and loyalty to the corporation and its shareholders as do corporate directors. The ruling opened the door for shareholders to add non-board-serving officers to shareholder litigation and thus increased corporate officers' personal litigation risk. Before the ruling, courts largely ignored the issue of corporate officers' fiduciary duty, and shareholders did not include non-board-serving officers as named defendants in litigation (Thomas and Wells 2011). The ruling prompted scholars to highlight the increased risk on non-board-serving officers (e.g., Johnson and Garvis 2009; Thomas and Wells 2011). Practitioner journals and legal newsletters likewise warned corporate officers against the increased risk of becoming named-defendants. [3] Investors also took notice of the *Gantler* precedent and began to name corporate officers as defendants in litigation.[4]

The *Gantler* ruling, however, does not change the scope of actions that can be brought against a firm and its directors, and thus only changes the *ex-ante personal litigation risk* of corporate officers while holding constant the likelihood of the firm and its directors being sued. We exploit the quasi-natural experiment created by the *Gantler* decision to investigate whether and how *personal* litigation risk affects firms' financial disclosure and accounting choices.

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[1] Gantler v. Stephens, 965 A.2d 695, 708-09 (Del. 2009).

[2] A case of first impression is a new legal issue or interpretation that has not been addressed by the court before.

[3] See for example, *New Jersey Law Journal*, June 2010 for practitioner journals, and Gibson-Dunn, Chief Executive Legal Guide, "http://www.gibsondunn.com/publications/Documents /CEOLegalGuide-CorporateLawChapter.pdf ," and King & Spalding, The Deal Pipeline, http://www.kslaw.com/ imageserver/KSPublic/library/publication/2011articles/10-11TheDealSpalding.pdf. for legal newsletters..

[4] A simple Lexis-Nexis search reveals that, out of 114 court opinions and rulings that cite *Gantler*, 15 involve a non-board-member defendant.

We focus on chief financial officers (CFOs), as they are the corporate officers most likely affected by the *Gantler* ruling. While most CEOs serve on the board of directors, CFOs rarely do (Bedard, Hoitash, and Hoitash 2014). Yet besides the CEO, the CFO is the officer with the largest influence on a firm's financial disclosure and accounting choices. Chava and Purnanandam (2007), Jiang, Petroni, and Wang (2010), Ge, Matsumoto, and Zhang (2011) all suggest that CFOs have statistically significant influence on their firms' accounting choices. Brochet, Faurel and McVay (2011) suggest that CFOs are more involved in disclosure content but less in disclosure policy. We analyze changes in financial disclosure and accounting choices following the *Gantler* ruling along four dimensions that may be affected by the level of the CFO's personal litigation risk: (1) CFOs' speech tone during earnings announcements conference calls, (2) timing of bad news disclosure, (3) accounting conservatism, and (4) accounting-based restatements of financial reports.

We analyze changes in the CFO speech tone during both the briefing and the Q&A portions of conference calls. We are interested in whether the tone of non-board-serving CFOs turns more negative after *Gantler* when compared to peers within and outside the firm. Analyzing the conference-call tone allows us to disentangle the CFO effect from the firm effect by using the CEO of the same firm as a control. We find that non-board-serving CFOs' speech tone becomes more pessimistic following the *Gantler* ruling when compared with board-serving CFOs. Using the firm's CEO on the same conference call as a control, we also find that CFO speech tone, relative to CEO tone, becomes more negative following *Gantler* for firms with non-board-serving CFOs.

We also investigate whether *Gantler* leads to more timely disclosure of bad news. We analyze firms' interim guidance—guidance not accompanied by an earnings announcement—

and test whether, after the ruling, a firm with a non-board-serving CFO is more likely to issue interim guidance when a negative earnings surprise is likely. We term "potential negative surprise" as an instance in which actual earnings of quarter t fall short of the consensus analyst forecast issued immediately following earnings announcement of quarter $t-1$. We find that the likelihood of firms with non-board-serving CFOs issuing interim guidance increases following *Gantler* when compared to firms with board-serving CFOs.

To investigate whether the ruling affects firms' accounting choices, we focus on accounting conservatism and accounting-based restatements, both of which have been linked to litigation risk. We use the Kahn and Watts (2009) measure for accounting conservatism (*C_score*) to provide evidence that the financial reports of firms with non-board-serving CFOs become more conservative when compared with firms with board-serving CFOs following *Gantler*. We do not find similar evidence on accounting-based restatements. We do find, however, very weakly significant results when we estimate the restatement regression for a subsample of firms based on a one-to-one propensity-score matching of firms with CFOs serving on the board (12.5% of the whole sample) with firms with a CFO not serving on the board.

The lack of significant results on accounting-based restatements is not surprising, as the Sarbanes-Oxley Act, which predated *Gantler*, increased legal scrutiny on CFO accounting practices. This increased scrutiny resulted in a reduction in accrual earnings management (Cohen, Dey, and Lys 2008). Therefore, to the extent that accounting-based restatements stem from accruals management (Dechow, Ge, and Schrand 2010), Cohen et al. (2008) suggest that the *Gantler* ruling is unlikely to affect accounting-based restatements.

Finally, many state courts follow Delaware in corporate law, which suggests that the impact of the *Gantler* ruling may extend to firms incorporated outside of Delaware.

Nevertheless, the effect of the ruling is likely stronger among Delaware firms because not all states follow Delaware and Delaware firms and courts are likely to react sooner to the precedent. As predicted, we find that the change following *Gantler* is stronger among firms incorporated in Delaware for both CFO speech tone and accounting conservatism. We do not find a significant difference for early disclosure of bad news.

Our study extends the research stream that connects corporate litigation risk to disclosure and accounting choices by highlighting the effects of the risk of being a named defendant in shareholder litigation (i.e., *personal litigation risk*). As most corporate officers enjoy fully funded D&O insurance, they are shielded from direct financial liability (Black, Cheffins, and Klausner 2006). However, scholars and practitioners point to other costs of being named a defendant, such as reputational damage, opportunity cost, and distress (Symposium on Director Liability 2006; Black et al. 2006; Laux 2010; Brochet and Srinivasan 2014). Our study suggests that these costs are significant enough to influence managers' behavior. This evidence matters because one of the board of director's main roles is oversight of corporate officers (Jensen 1993; Srinivasan 2005; Helland 2006), while the other is advising management on investments and M&A (Boone, Field, Karpoff, and Raheja 2007; Linck, Netter, and Yang 2008; Lehn, Patro, and Zhao 2009). To the extent that (1) there is a trade-off between these two roles and (2) legal actions are an important oversight mechanism (Ferris, Jandik, Lawless, and Makhija 2007), officers responding to personal litigation risk suggests that court oversight replaces, to some extent, board oversight. This may enable boards of directors to partly shift their focus from monitoring corporate officers to other tasks. Our study also adds to the literature on the role of CFOs in disclosure, suggesting that, under certain circumstances, CFOs affect not only content (Brochet et al. 2011) but also policy of disclosure. Furthermore, by measuring the litigation risk

using an ex ante measure and not by actual incidence of litigation, we can generalize our findings beyond sued firms to include a broader sample and provide evidence that, on average, managers believe that firm's disclosure helps deter lawsuits.[5] From a practical perspective, our results provide evidence that legislation and policy targeting an individual manager's personal litigation risk may help increase the transfer of timely information to investors.

2. Background and hypothesis development

2.1. Gantler v. Stephens (2009)

In *Gantler v. Stephens*, a Delaware corporation, First Niles, a holding company whose sole business is to own and operate the Home Federal Savings and Loan Association of Niles, Ohio (the "bank"), was sued along with five directors and one non-director officer, Lawrence Safarek, who served as a vice president and treasurer of the bank. The events that led to the litigation started in 2004, after the board decided to put the bank up for sale, against management's recommendation, to force its delisting. Three offers were made to purchase the bank, and the potential purchasers conducted due diligence. Two offers were later withdrawn, and the third was revised down and eventually rejected by the board. That led to the board's decision to delist the bank. The plaintiffs claimed that board members deliberately failed the sale of the bank and misled shareholders to dupe them into approving the delisting. The claim against Lawrence Safarek was that he breached his fiduciary duty by not providing the potential purchasers with timely and complete information during due diligence. In its ruling, the Delaware Supreme Court held as a "case of first impression" that corporate officers owe the same fiduciary duty to the firm as board members.

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[5] See Lowry (2009) for a discussion on the limitation of using the actual incidence of litigation as a proxy for litigation risk.

2.2. Directors' and officers' fiduciary duty

Before the *Gantler* case, the Delaware court never addressed the issue of officers' fiduciary duties, as can also be inferred from the court referring to the ruling as "a case of first impression". However, academics and practitioners have previously debated the scope of the legal liability of corporate officers (see, for example, Johnson and Ricca (2011) for description of the long lasting debate). The debate revolved around the extent of the fiduciary duties—different from or the same as that of board members—that officers owe the corporation. The argument turned on the groups' respective roles within a company. The literature describes two roles of the board: overseeing management, and guiding and supporting investment and acquisition decisions (Jensen 1993; Srinivasan 2005; Helland 2006; Boone et al. 2007; Linck et al. 2008; Lehn et al. 2009). Corporate officers, in contrast, are in charge of managing the firm's day-to-day business. As such, they are viewed as agents of the firm.[6]

Several factors had contributed to courts not ruling on the issue of corporate officers' fiduciary duties, some of technical nature and others of a conceptual nature. On the technical side, until 2004, Delaware (the undisputed leader of corporate legal action) did *not* have jurisdiction over non-board-serving corporate officers who did not reside within the state. Also, the CEO, the most senior corporate officer and most likely target of investor litigation, usually serves on the board of directors (Fayle 2007; Kim and Lu 2011), and plaintiffs have been generally satisfied with suing the CEO and other board members.[7] The conceptual reasoning followed the argument that the role of penalizing corporate officers for breach of fiduciary duties resides with the board as part of its oversight duties, and not with courts.

2.3. The effect of the Gantler ruling

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[6] Johnson and Ricca (2011) outline the core differences in the roles of directors and managers that should give rise to differences in legal liability.

[7] Klausner and Hegland (2010) suggest the in 99% of shareholder litigation the CEO is a named defendant.

Gantler was the ruling in which the Delaware Supreme Court explicitly held that corporate officers hold the same fiduciary duty as directors. As such, the ruling received much attention from scholars (e.g. Follet 2010) and practitioners' journals (e.g., *New Jersey Law Journal*, June 2010). Law firms also began warning their clients against the implications of *Gantler*. Of the 53 firms from the top 100 US law firms that issued in 2009 client newsletters, 46 (85%) highlight the importance of the *Gantler* ruling to corporate officers fiduciary duties.

The practical implication of the ruling is that non-director officers can be personally sued for breaching fiduciary duty and that it is the role of courts, and not of the board of directors, to discipline corporate officers breaching their fiduciary duties. Before *Gantler*, courts ignored the issue of officers' fiduciary duties, and corporate officers were not added as named defendants to shareholders litigation unless they served on the board of directors (Thomas and Wells 2011). After the ruling, however, shareholders took notice of the ability to add corporate officers as named defendants and started to do so.

Until 1998 the duty of disclosure, part of director and officers' fiduciary duty, was limited to situations in which shareholder action was required (e.g., approval of M&A). In 1998, the supreme court of Delaware, in *Malone v. Brincat*[8], ruled that, under Delaware law, stockholders could bring claims arising from directors' mis-disclosures, even absent a request for shareholder action, opening the door to claims such as misrepresentations in financial reports. The Delaware Chancery Court reiterated this holding in the *InfoUSA Inc.* shareholders litigation, and suggested that the way to pursue relief would be a derivative action:

> "When a Delaware corporation communicates with its shareholders, even in the absence of a request for shareholder action, shareholders are entitled to honest communication from directors, given with complete candor and in good faith. Communications that depart from this expectation, particularly where it can be shown that the directors involved issued their communication with the knowledge that it was

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[8] Malone v. Brincat, 722 A.2d 5 (Del. 1988).

deceptive or incomplete, violate the fiduciary duties that protect shareholders. Such violations are sufficient to subject directors to liability in a derivative claim."[9]

As to the extent to which the *Gantler* ruling increased the cost of litigation facing corporate officers, Black et al. (2006) suggest that being added as a named defendant likely has a minor effect on corporate officers' out-of-pocket liability risk, as firms or their D&O insurance likely covers judgments. They argue that reputational costs, time, and aggravation are the principal threats of being a named defendant. Brochet and Srinivasan (2014) interview attorneys and directors who have experienced litigation and suggest that time and distress are the main costs for directors who are named as defendants in lawsuits.[10]

Note that, despite the legal evidence provided in this study that is consistent with *Gantler* ruling increasing corporate officers' personal litigation risk, there are legal scholars who question whether *Gantler* had the argued effect. Thus, all the analyses in this study essentially test joint hypotheses: (1) that the *Gantler* ruling increased personal litigation risk for non-board-serving CFOs and that they were aware of the increase and (2) that the increased risk affected CFOs' disclosure and accounting choices. The drawback of testing a joint hypothesis is that, given insignificant results, there is no effective way to disentangle the components of the joint hypotheses to identify which drives the insignificance.

2.4. The role of the CFO in corporate disclosure and accounting choices

The corporate officer most likely to be affected by *Gantler* is the firm's CFO. Whereas CEOs almost always serve on their firms' boards of directors, CFOs usually do not (Bedard et al. 2014). Yet with the exception of the CEO, the CFO is the corporate officer most influential in

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[9] InfoUSA, Inc. Shareholders Litigation 953 A.2d 963 (Del. Ch. 2007)

[10] If indeed the nonmonetary costs of increased litigation risk are likely to affect CFOs' behavior, the officers are likely to demand higher pay to compensate them for this risk. Analyses suggest that both CFO salary and the ratio of CFO salary to the CEO salary increases post *Gantler* for nonboard-member CFOs when compared with board-member CFOs. We do not tabulate these results, as they are beyond the scope of this study.

decisions pertaining to the firm's financial disclosure and reporting choices. Anecdotally, Lawrence Safarek, the only non-board-member officer in the *Gantler* case, served as the company's treasurer, an equivalent position to the CFO. Recent studies in accounting and finance highlight the significant role CFOs play in disclosure and accounting decisions. Regarding accounting decisions, Ge et al. (2011) investigate the effect of CFOs' personal attributes, which the authors label "style," on accounting decisions, such as discretionary accruals, operating leases, and expected rates of return in pension plans and find that CFO style influences these decisions. Chava and Purnandam (2007) and Jiang et al. (2010) analyze CFOs' influence on earnings management practices relative to that of CEOs, by comparing the sensitivity of earnings management to their compensation structure and conclude that CFOs have more influence on earnings management policies. Feng, Ge, Luo, and Shevlin (2011) document CFO involvement in material-accounting manipulation but suggest that this involvement, which is costly to the CFO given the high probability of SEC action, can be explained by CEO pressure rather than by financial benefits accruing to the CFO.

The evidence on CFO influence on disclosure practices is more subtle. Brochet et al. (2011) analyze CEOs' and CFOs' influence on guidance decision made by frequent guiders and non-guiders. They find that when frequent guider firms' CEOs are replaced, a resulting break in guidance is permanent, while a similar break as a result of CFO replacement is only temporary. They also find that the likelihood of a break varies with CFO forecasting experience but not with CEO forecasting experience. They conclude that CEOs have more influence on firm-level disclosure policy decisions (whether to disclose) and that CFOs are more involved with the content of the disclosure (what to disclose).

We exploit the quasi-natural experiment of the *Gantler* ruling to investigate whether personal litigation risk affects financial disclosure and accounting choices made by a firm's CFO. We focus on four dimensions of disclosure and accounting decisions: the CFO speech tone during conference calls, the timing of bad news disclosure, accounting conservatism, and accounting-based restatements.

2.5 Litigation risk and CFO's speech tone

We start our analysis with a soft measure of disclosure: speech tone in a conference call. Out of our four measures, it allows the cleanest and most direct test of whether the CFO's behavior changed following the *Gantler* ruling. Whereas the other three measures are firm level measures, the speech tone is particular to the CFO. Furthermore, speech analysis allows us to use the *CEO*'s tone in the same conference call as a natural control for the CFO's tone, effectively disentangling the CFO from the firm and directly focusing on changes in CFOs' behavior.

Recent years have seen a proliferation of textual analysis as a way to measure disclosure (e.g., Mayew 2008; Larcker and Zakolyukina 2012; Davis, Ge, Matsumoto, and Zhang 2015). In the context of litigation risk, Rogers, Van Buskirk, and Zechman (2011) compile a sample of lawsuits filed by investors in federal courts and find that investors target optimistic statements made by managers in earnings announcements. The basic argument made by plaintiffs is that the statements triggered unrealistically optimistic expectations of firm performance. The authors compare a sample of sued firms to a sample of non-sued firms with similar characteristics. They find that the overall tone of the earnings announcements of sued firms was, on average, more optimistic than that of comparable firms. In an earlier study, Francis, Philbrick, and Schipper (1994), also use a form of textual analysis but find no such evidence. Building on Rogers et al.'s (2011) findings, we predict that, when compared with their CEOs and board-serving CFOs, non-

board-serving CFOs increase, in the years following *Gantler*, their negative tone in earnings announcements conference calls.

   2.6 Litigation risk and timing of disclosure

   The relation between litigation risk and the timing of bad news disclosure has been extensively explored. Early studies focus on whether litigation risk affects the timing of bad news disclosure. Specifically, researchers aimed at learning whether managers try to preempt litigation risk by providing early disclosure of bad news. Skinner (1994) argues and provides evidence that early disclosure is likely to reduce litigation risk by weakening plaintiffs' case that managers withheld bad news. In a concurrent study to Skinner (1994), Francis et al. (1994) provide contradictory evidence and show that early disclosure *increases* the probability of a subsequent lawsuit, which is inconsistent with the incentive for early disclosure of bad news. The literature that followed provided cross-sectional evidence mostly supporting the view that early bad-news disclosure reduces litigation risk. Largely consistent with Francis et al. (1994), Skinner (1997) finds that the probability of litigation does not decrease with early disclosure. However, he provides evidence that settlement amounts decrease, which, in turn, reduces litigation costs. Field, Lowry, and Shu (2005) model the endogenous relation between the incentive to disclose and settlement costs and find that early disclosure does reduce litigation risk. Kothari, Shu, and Wysocki (2009) analyze managers' inclination to delay disclosure of bad news and find that litigation concerns mitigate the incentives to delay disclosure. Donelson, McInnis, Mergenthaler, and Yu (2012) measure the timeliness of firms' bad news disclosure using the evolution of analysts' earnings forecasts and find that the probability of litigation decreases with the timeliness of bad news. Survey work by Graham, Harvey, and Rajgopal (2005) also provides evidence consistent with early disclosure reducing litigation risk.

Other studies analyze the effects of litigation risk on overall firm-disclosure level and provide somewhat contradictory evidence. Baginski, Hassel, and Kimbrough (2002) compare disclosure patterns of firms in the highly litigious United States with those in less-litigious Canada and find more disclosure for U.S. firms in periods of declining earnings but not for Canadian firms. Johnson, Kasznik, and Nelson (2001) investigate disclosure by technology firms following the safe-harbor provision in the Private Securities Litigation Reform Act of 1995 and find that firms respond, to the reduction in litigation risk, with increased disclosure. Rogers and Van Buskirk (2009) compile a sample of firms that have experienced recent shareholder litigation and provide evidence suggesting that a higher level of voluntary disclosure does not reduce the expected cost of litigation. Lowry (2009) points out that the Rogers and Van Buskirk (2009) results cannot be generalized because they are based on firms that were sued. Finally, a recent study by Naughton, Rusticus, Wang, and Yeung (2014) analyzes changes around the *Morrison vs. National Bank of Australia*[11] case, which decreased litigation risk of cross-listed firms, and finds that the firms respond to reduced litigation costs by reducing public disclosure.

In this study, we expect the *Gantler* ruling to have a significant effect. However, given the somewhat mixed evidence in the literature, we have no directional prediction on the relation between litigation risk and early disclosure of bad news.

2.7 Litigation risk and accounting conservatism

Accounting researchers have long argued that litigation cost is one of the drivers of conservative accounting. Watts (2003 a,b) lists litigation risk as a main reason for conservatism and reviews the supporting literature. He argues that the asymmetric payoff of litigation creates an incentive to understate a firm's assets to reduce litigation costs. Basu (1997) partitions the sample period of his study based on litigation and finds that the level of conservatism increases

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[11] Morrison v. National Australia Bank, 561 U.S. 247 (2010).

in periods of greater litigation. The literature that followed Basu (1997) largely finds a positive association between litigation cost and accounting conservatism. Holthausen and Watts (2001) find that conservatism is associated with auditors' legal liability regimes. Cahan and Zhang (2006) find that auditors demand more conservatism from former Arthur Anderson clients following that company's break-up to reduce litigation risk. Chung and Wynn (2008) find a positive association between accounting conservatism and litigation risk as measured by the cost of legal liability insurance. Blunck (2009) models litigation risk using realized security litigation costs and finds that higher litigation risk is associated with more conservative financial reporting. Finally, three recent studies—those by Aier, Chen, and Pevzner (2014), Bens and Huang (2014), and Tan and Wongsunwai (2014)— analyze changes in firms' conservative reporting following an increase in directors' fiduciary duty toward firms' creditors. They find that the increase in fiduciary duty to creditors resulted in more conservative accounting.

Taken together, this evidence leads us to predict that, following *Gantler*, CFOs' increased personal litigation risk will result in more conservative reporting in firms in which the CFO does not serve on the board.

2.8 Litigation risk and accounting-based restatements

Accounting literature often associates accounting restatements with increased risk of litigation (Palmrose and Scholz 2004; Lev, Ryan and Wu 2008). Thus, increased personal litigation risk following the *Gantler* ruling is likely to lead to a reduction in the behavior associated with accounting restatements. However, the literature also suggests that the main determinant of restatements is accruals based earnings management (Dechow et al. 2010). As the Sarbanes-Oxley Act of 2002 increased the legal scrutiny over accounting practices, Cohen et al. (2008) provide evidence that accruals-based earnings management sharply declined in the period

following the law's passage while real earnings management increased. Thus, as our sample starts after the enactment of SOX, we may not find significant results on restatements.

3. Sample Selection

We start the sample with all directors included in the RiskMetrics Directors Database, which covers the S&P 1,500 firms. To identify firm CFOs, we use AuditAnalytics databases (Governance and Director and Officer) as well as the Executive Compensation database (ExecuComp). To identify whether the CFO is a board member or not, we merge the directors data with the CFO data. This procedure yields an initial sample of 12,550 firm-years (1,754 firms). We use First Call and IBES for guidance data, IBES for analysts' earnings forecasts, and AuditAnalytics (Nonreliance Restatements) for accounting-based restatements data. We restrict our sample to fiscal years 2004–2012 to avoid any confounding effects of the Sarbanes-Oxley Act (Zhang 2007). Firm financial data are obtained from Compustat and return data from CRSP.[12]

Table 1 reports the percentage of CFOs not on board for the sample portioned by fiscal year (panel A), 1-digit SIC codes (panel B) and whether the state of incorporation is Delaware (panel C). CFOs serve on the board of directors of 12.1% of the sample observations (1,518 firm-years out of 12,550) and the percentage is stable over time, ranging from 11% to 14%.[13] There is no obvious industry clustering, and the percentage of CFOs on board is largely consistent across industries. Fifty eight percent of sample firms incorporate in Delaware and 42%

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[12] Return data is used to calculate C-Score.

[13] In 48 firm-years, the CFO also holds the CEO position. In these cases, we did not classify the firm-year as CFO to avoid confounding effects. We alternatively classify firms with CEO/CFO on the board as a firm with a CFO serving on the board; our results are robust to their inclusion.

in the rest of the country. The percentage of board-serving CFOs in Delaware-incorporated firms is very similar to the sample percentage (11.8% vs. 12.5%).[14]

Given that only 12.5 percent of the CFOs serve on the board of directors, our sample is unbalanced. We therefore use a propensity score procedure to identify a matched sample to the subsample of firms with CFOs serving on the board. Using the predicted probabilities—propensity scores—from a logistic prediction model of CFO board membership, we match each board-serving CFO observation with an observation of non-board serving CFO firm, in a way that minimizes the absolute value of the difference between the propensity scores. We use a one-to-one nearest-neighbor matching without replacement (Heckman, Ichimura, and Todd 1997). We use fiscal year 2008 for our matching process.[15] Detailed description of the procedure and logit estimation results are reported in appendix B. For each analysis in this study we include as a robustness a regression that is based on the matched subsample.

4. Research Design and Empirical Analysis

4.1 Research design

Our empirical analyses are designed to test whether non-board-serving CFOs changed their disclosure and accounting practices in response to the *Gantler* ruling. To that end, we use a difference-in-differences approach. We define the treatment group as non-board-serving CFO firms and the control group as board-serving CFO firms. We expect firms in our treatment group to be influenced by the change in personal litigation risk and therefore exhibit a change in financial disclosure and accounting choices after *Gantler*. However, we do not expect the ruling

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[14] We keep all states in the sample because other states tend to follow Delaware concerning corporate-litigation practices, and therefore we expect the effect of *Gantler* to extend beyond firms that were incorporated in Delaware (Reza 2013).

[15] Our results are robust when matching firms with non-board-member CFOs in years 2005 through 2007.

to affect the firms in our control group, as board-serving CFOs were already subject to personal litigation risk before the ruling. Thus, the interaction of the CFO board-membership variable with period post-*Gantler* allows us to test the differential effect of the ruling on these two distinct groups. We use the interaction of these variables throughout our analyses as the main explanatory variable. The basic regression we use in the analyses is as follows:

$$DEP\_VAR_{i,t} = \beta_0 + \beta_1 Post_{i,t} + \beta_2 CFONotOnBoard_{i,t} + \beta_3 Post_{i,t}* CFONotOnBoard_{i,t} + \\ \beta_{4\text{-}i} Controls_{i,t} + \beta_{j\text{-}o} FiscalYear_{i,t} + FirmFixedEffects + \varepsilon_{i,t}, \qquad (1)$$

where $DEP\_VAR_{i,t}$ is the dependent variable of the analysis. The dependent variables, which we describe in detail below, pertain to the four dimensions of financial disclosure and reporting that we focus on in this study: the speech tone of the CFO in conference calls, the provision of early disclosure of negative news, firms' financial reporting conservatism, and accounting-based restatements.

$Post_{i,t}$ is an indicator variable equal to one for fiscal years 2010 onward and zero otherwise. $CFONotOnBoard_{i,t}$ is an indicator variable equal to one for firms for which the CFO does not serve on the board and zero otherwise. $Post_{i,t}* CFONotOnBoard$ is the variable of interest, an interaction between the above-described variables. In each of the analyses, we control for fiscal year- and firm-fixed effects. Since the *Gantler* ruling occurred in 2009, we eliminate that year's observations to ensure two clean groups—firm-years before the ruling and those afterward. Note that we include firm fixed effects throughout the analyses. We chose to include firm fixed effects to better gauge within-firm changes. Including firm and year fixed effects, however, renders interpretation of the main effects in the analyses ($Post_{i,t}$ and $CFONotOnBoard_{i,t}$) meaningless. Therefore, we ignore the main effect when reporting results.

4.2 Empirical results

4.2.1 <u>CFO Speech tone</u>

Descriptive Statistics

We follow Lang and Lundholm (2000), Rogers et al. (2011), Larcker and Zakolyukina (2012), and Davis et al. (2015) in constructing our conference-call tone variables. We use three base measures to construct the variables that we employ in the analysis: the number of words spoken during the briefing and Q&A sections of the conference call (*Words*), the number of negative words spoken during the briefing and Q&A sections of the call (*Neg_Words*), and the number of positive words spoken during the briefing & Q&A sections of the call (*Pos_Words*). The definition of negative and positive words is based on the Loughran and McDonald (2011) dictionary. We choose this dictionary for its applicability to business text.[16] Tone negativity (*Neg_Tone*) of the conference call is measured as *Neg_Words* minus *Pos_Words* divided by *Words*. We construct the following variables based on the above measures: (1) number of words spoken by the CFO (*Words_CFO*), (2) number of words spoken by the CEO (*Words_CEO*), (3) tone negativity of the CFO (*Neg_Tone_CFO*), (4) tone negativity of the CEO (*Neg_Tone_CEO*), and (5) CFO tone negativity relative to CEO tone negativity (*Rel_Tone*), measured as *Neg_Tone_CFO - Neg_Tone_CEO*. The CEO words and tone measures are used to augment our main analysis and provide an additional natural control group. As CEOs are not subject to increased personal litigation risk following the *Gantler* ruling, we do not expect CEO tone to be affected by the CFO's board status.

The data we use to construct the measures and variables described above are taken from conference call transcripts. We collect the transcripts by conducting a web crawl that targets the SeekingAlpha.com website. We identify each firm's CFO and CEO from the transcripts. Due to

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[16] The Loughran and McDonald (2011) dictionary excludes words that are typically not negative in a financial context such as liability, cost, and tax.

SeekingAlpha.com's limitations, the sample used in this analysis begins in year 2006. We analyze both the briefing section and the Q&A section of the conference call. We delete firms that provided only an audio link of the conference call. Table 2, Panel A, reports the descriptive statistics of the basic measures and variables described above for the full sample. The sample consists of 9,149 conference call transcripts. CFOs and CEOs use a large portion of conference call time. A CFO contributes an average of 27% of the words spoken during conference call, and a CEO contributes an average of 34% of the word spoken. The negativity of the tone of the CEO and the CFO shows no marked difference; both, on average, are slightly more positive than negative with approximately 0.6% (0.3%) more positive words used by the CEO (CFO) during the conference call than negative ones. Table 2, Panel B, reports the speech tone statistics for the sample firms partitioned by whether the CFO serves on the board of directors. Statistics do not display marked differences between firms with board-serving and non-board-serving CFOs.

Table 2 also reports the descriptive statistics for the control variables of the analysis. We include in our tone analyses control variables to control for general firm characteristics as well as for the pertinent news events. Specifically, we include size, market-to-book, ROA, earnings growth, and sales growth in the quarter of the announcement. Statistics of sample firms do not exhibit obvious selection problems, fairly represent the population of Compustat firms, and do not exhibit marked differences between firms with a board-serving CFO and those without one.

Univariate Analysis

Table 3 reports results of a univariate analysis of the change in the speech tone following *Gantler*, based on CFO board membership status. Panel A reports results for CFOs, panel B reports results for CEOs and Panel C reports results for the relative tone negativity, CFO-CEO. To account for personal differences between board serving and non-board-serving CFOs and

other firm-specific factors that can be controlled for in a multivariate setting, we use the sample of matched firms for this analysis. Non-board serving CFO speech tone turned significantly more negative following *Gantler* when compared with board serving CFOs. CEOs do not show a marked difference based on CFO board membership status, and the tone of all CEOs turns weakly more positive after *Gantler*. More interestingly, results in panel C suggest that when compared with the CEO of the same firm, the tone of non-board serving CFO turned more negative following *Gantler* whereas the tone of board serving CFOs did not change.

Regression Analysis

Table 4 reports the speech tone regression analyses results. Columns 1 and 2 report results of analyses of the CFO speech. (Column 1 analyzes number of words spoken, and column 2 analyzes tone negativity). Columns 3 and 4 report results for CEO speech. Column 5 reports results for the difference in negativity between the CFO and the CEO in the same conference call. Finally, column 6 reports results for analysis similar to that in column 5 using a subsample of matched firms

For both the CFO and the CEO, the total number of words spoken is not affected by the main variable of interest, the interaction between *CFONotOnBoard* and *Post* (columns 1 and 3), suggesting that the structure of the conference call, has not changed following *Gantler*. Analysis of the tone of the speakers provides evidence consistent with CFOs not serving on the board using less optimistic language after *Gantler*. The non-board-serving-CFOs' tone (Column 2) is significantly more negative after the ruling (coefficient= 0.003, t-stat=5.67) relative to the board-serving CFOs. CEO tone (Column 4), however, does not change based on CFO board membership. When we use the CEO speech tone as a natural control for the CFO's tone negativity in the same conference call (column 5), the analysis yields results that are consistent

with CFOs changing to a more negative tone following the increase in personal litigation risk (coefficient=0.003, t-stat=5.83), after controlling for the content of the conference call. The coefficients on our explanatory variable in the CFO tone and relative tone regressions correspond to an increase of about one half of a standard deviation in the tone negativity of CFO that do not serve on the board of directors post the *Gantler* ruling. The magnitude of effect is relatively small. The small magnitude is expected, as the *Gantler* ruling increased only the likelihood of the CFO of being a named defendant in shareholders litigation but did not affect corporate litigation risk. Finally, when we repeat the analyses in column 5 for the propensity-matched subsample (column 6), the results are qualitatively similar to the full sample results (coefficient= 0.004, t-stat=4.66).[17] These results suggest that, in an effort to mitigate the increased personal litigation risk, CFOs tone down their optimism when discussing their firms' financial results. We find, however, no spillover effect from the CFO tone the CEO tone, consistent with the notion that the *Gantler* ruling did not affect firm litigation risk or the personal litigation risk of board-serving officers.

4.2.2 Early disclosure of bad news

Using analysts' forecasts and firms' interim guidance, we test whether firms with non-board-serving CFOs are more likely to provide early disclosure of bad news after *Gantler* in an effort to preempt potential litigation. First, we identify a subset of firm quarters in which firms are likely to report earnings news that miss the analysts' consensus forecast. To be included in the subset, a firm's actual earnings per share for period t should fall short of the analysts' median forecast for period t that were issued immediately after the period t−1 earnings announcement. We then estimate model (1) as a linear probability regression for that subset of firms. The

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[17] Untabulated analyses provide consistent results for CFO and CEO analyses for the subsample of matched firms produced by the PSM procedure.

dependent variable in the regression is an indicator that takes the value of 1 if the firm issues an earnings interim guidance (a warning) for period t in the middle of period t but before the earnings announcement of period t, and zero otherwise (*PotNegSur*). We use a linear probability estimation, as it allows easier and more intuitive interpretation of the coefficients in the regression.[18]

We follow Rogers et al. (2011) and include the following set of control variables in the analysis: analysts' forecast dispersion (the average standard deviation of forecasts divided by absolute mean forecast), firm size (log market value of equity), and firm leverage (total debt/total assets). We also include the absolute magnitude of the difference between the actual and beginning of the quarter-median analysts' forecasts (*AbsDiff*) as a control variable, since the greater the difference, the more likely it is that the information of the potential miss was known to the CFO.

Table 5 reports the descriptive statistics of the control variables of the analysis, which also include the control variables for the analyses in sections 4.2.3 through 4.2.5. Statistics for sample firms do not exhibit obvious selection problems, fairly represent the population of Compustat firms, and do not exhibit marked differences between firms based on CFO board membership status.

Results of the OLS regressions are reported in Table 6. Column 1 reports results for a baseline regression with no control variables other than firm and year fixed effects. Column 2 reports results for a regression that includes all control variables. The coefficient on the variable of interest (*CFONotOnBoard×Post*) is significant at the 1% level (coefficient=0.10, t-stat=2.54). The coefficient corresponds to a 10% increase in the probability of issuing a guidance. Given the

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[18] As a robustness test, we use a maximum likelihood (logit) estimation for the bad news regression as well as for a placebo test for good news (untabulated). Both tests yield consistent results (significant for the bad news and insignificant for the good new placebo test).

unconditional probability of 20%, this comprises a 50% increase in the propensity to issue an interim guidance post the *Gantler* ruling. Column 3 reports results of a similar analysis of column 2 for the subsample composed of board-serving CFO firms and a matched group of non-board-serving CFO firms. Results are qualitatively similar to the full sample results.

4.2.3 Accounting conservatism

We follow Kahn and Watts (2009) and construct the *C_score* measure, which proxies for the asymmetric timeliness of bad news in financial reports. [19] We expect firms with CFOs not serving on the board to record bad news more promptly following *Gantler*. We control for variables found to influence cross-sectional differences in the *C_score*. We include the following variables at the firm level: R&D intensity, standard deviation of returns, size, market-to-book ratio, leverage, cash flow, ROA, intangible assets, capital intensity, and investments. Table 7 reports results. Column 1 reports results with no control variables. Column 2 reports results with all control variables included. The coefficient on our explanatory variable, *CFONotOnBoard×Post*, is positive and significant at the 5% level (coefficient=0.03, t-stat=2.42). The coefficient corresponds to a 10% standard deviation change in the conservatism measure. Column 3 reports results of a similar analysis of column 2 for the subsample composed of board-serving CFO firms and a matched group non-board-serving CFO firms. The results are qualitatively similar to the full sample results. The coefficient on the variable of interest (*CFONotOnBoard×Post*) is significant at the 5% level (coefficient=0.04, t-stat=2.08). We interpret the results to suggest that the financial reports of firms with CFOs not serving on the board have become more conservative in the post-*Gantler* period when compared with firms

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[19] We do not use the Basu (1997) measure of asymmetric timeliness as this measure is based on a time series of data. We do not have enough of a time series to construct independent non-overlapping periods.

with CFOs who serve on the board. These results are consistent with a positive correlation between CFO's personal litigation risk and asymmetric timeliness of bad news reporting.

4.2.4 Accounting-based restatements

To analyze whether the *Gantler* ruling affected CFOs actions that result in restatements of financial reports, we define *RESTATE* as an indicator variable coded 1 if a firm had to restate the financial reports of that year for accounting-based reasons, and 0 otherwise. We include the same control variables as used in the accounting-conservatism analysis. Results are reported in Table 8. Column 1 reports results with no control variables. Column 2 reports results with all control variables included. The coefficient on our explanatory variable, *CFONotOnBoard×Post*, is not significant at conventional levels. Column 3 reports results of a similar analysis of column 2 for the subsample composed of board-serving CFO firms and a matched group non-board-serving CFO firms. Results are weakly significant (coefficient=−0.04, t-stat=1.65). These results suggest that SOX likely covers the range of actions that lead to accounting-based restatements. These results are consistent with those of Cohen et al. (2008).

4.2.5 Is the Effect in the State of Delaware Stronger?

Delaware is the undisputed leader in corporate law and corporate litigation, a likely cause and effect of the fact that over 50% of the firms incorporate in Delaware. This leadership means that many states follow Delaware's precedents in corporate litigation. In California, for example, *Vardanyan v. Moroyan*, the court states the following:[20]

> "The proper characterization of a claim as direct or derivative is governed by the law
> of the state of incorporation, which in this case is California. See Kennedy v. Venrock
> Associates, 348 F.3d 584, 589 (7th Cir. 2003); 7547 Corp. v. Parker & Parsley Dev.
> Partners, L.P., 38 F.3d 211, 221 (5th Cir.1994). California corporate law is functionally
> identical to Delaware corporate law. See Oakland Raiders v. National Football League, 93
> Cal. App. 4th 572, 586 n. 5, 113 Cal. Rptr. 2d 255 (2001) ("The parties agree that we may

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[20] Case No. 5:12-cv-05645-HRL, District Court for the northern district of California, San Jose division.

properly rely on corporate law developed in the State of Delaware given that it is identical to California corporate law for all practical purposes").”

Minnesota courts in the *Medtronic Inc.* shareholder litigation and Kansas courts in *Burcham v. Uniso Bancorp* are examples of two other state courts that express similar adherence to Delaware corporate law. [21]

Nevertheless, not all state courts adhere to Delaware, and as Delaware courts are likely to react more quickly to the Delaware Supreme Court's precedents, the effect of the *Gantler* ruling is likely to be stronger, especially immediately after the ruling, among firms incorporated in Delaware. To investigate whether Delaware incorporation affects the magnitude of the relationship between the increased risk of being a named defendant and disclosure practices, we re-estimate the main regression of each of the four analyses we conduct in tables 4, 6, 7, 8. We include in each regression an interaction variable of the main variable of interest *CFONotOnBoard×Post* and an indicator variable that takes the value of 1 if the firm was incorporated in Delaware, and 0 otherwise. We report results in Table 9. In two of the three analyses in which we document the effect of the *Gantler* ruling (CFO speech tone negativity and accounting conservatism), the effect of the *Gantler* ruling is stronger among firms incorporated in Delaware than for firms incorporated elsewhere. We do not identify a differential effect for early disclosure of negative news. Overall, the results support the notion that the effect of the *Gantler* ruling was stronger among Delaware firms.

5. Conclusion

We exploit an exogenous shock to CFO personal litigation risk to provide evidence that the nonmonetary costs associated with being a named defendant in shareholder litigation (e.g.,

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[21] Hennepin County District Court File No. 27CV1411452, and 77 P.3d 130, 144–45 (Kan. 2003) respectively.

reputational harm and aggravation) are meaningful enough to affect corporate officers' behavior. Specifically, we provide evidence that an increase in personal litigation risk affects the tone used in conference calls. We also find that personal litigation risk induces managers to advance the disclosure of bad news through both earnings guidance and financial reports (conservatism). These results also suggest that the CFO is influential not only in decisions about disclosure content but also in those about disclosure policy. We do not find, however, an effect on accounting-based restatements. This lack of evidence suggests that the Sarbanes-Oxley Act may have promoted accrual quality to a degree that additional litigation risk does not have an incremental effect.

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APPENDIX A: Variable Definition

AbsDiff	The distance between earnings per share for period t and analysts' forecasts for period t that was issued immediately after earnings announcement of period t-1.
Analyst Forecast Dispersion	Standard deviation of forecasts divided by absolute mean forecast.
Assets	Natural logarithm of total assets (COMPUSTAT AT).
Auditor_Change	An indicator variable coded 1 if the firm replaced its auditor during the current year.
AuditSize	The natural logarithm of the number of audit committee members.
Big4	An indicator variable coded 1 if the firm is audited by a Big 4 auditing firm.
CAPEX	Capital expenditure / total assets (COMPUSTAT CAPX/AT).
CFO	Operating activities net cash flow / total assets (COMPUSTAT OANCF/AT).
CFONotOnBoard	An indicator variable—coded 1 for firm years in which CFOs do not serve on the board of directors, 0 otherwise.
CFOOnBoard	An indicator variable—coded 1 for firm years in which CFOs serve on the board of directors, 0 otherwise
C_score	Khan – Watts (2009) conservatism measure.
Delaware	An indicator variable coded 1 if the firm is incorporated in Delaware.
Earnings_Growth	Change in earnings in quarter q relative to quarter q-4 scaled by total assets (COMPUSTAT (IBQ_q-IBQ_{q-4})/ATQ)
Firm Age	Firm age (using first year company appears in COMPUSTAT as year 0).
Independence	An indicator variable coded 1 if the number of firm insiders on the board of directors is smaller than the sample median.
Intangibles	Intangible assets / total assets (COMPUSTAT INTAN/AT).
LEV	Total debt / total assets (COMPUSTAT (DLC+DLTT)/AT).
Litigation	An indicator variable coded 1 if a firm is in a litigious industry (SIC codes 2833 to 2836; 3570 to 3577; 3600 to 3674; 5200 to 5961; and 7370).
Log MV	Log market value of equity (COMPUSTAT CSHO*PRCC_F).
Loss	An indicator variable coded 1 if the firm has experienced a loss in the current or previous year (COMPUSTAT NI).
MTB	Market value of equity / book value of equity (COMPUSTAT (CSHO*PRCC_F)/CEQ).
Neg_Tone	Tone negativity of the conference call measured as: (*Neg_Words* – Pos_Words)/Words.
Neg_Words	Total number of negative words spoken during the briefing and Q&A sections of the conference call (based on the Loughran and McDonald 2011dictionary).
PAFE	Proportion of audit committee members that are financial accounting experts to the number of audit committee members. Financial accounting experts are members holding a position of auditor, CFO, controller, CPA, treasurer, or vice president-finance as defined in *AuditAnalytics*.
Post	An indicator variable coded 1 for the period post the *Gantler* ruling (2010–2012).
Pos_Words	Total number of positive words spoken during the briefing and Q&A sections of the conference call (based on the Loughran and McDonald 2011 dictionary).
PotNegSur	Potentially negative surprise—For the subset of firms for which actual earnings per share for period t falls short of analysts' forecasts for period t that

	was issued immediately after earnings announcement of period t-1: Indicator variable coded 1 if the firm issued earning guidance (warning) for period t in the middle of period t but before the earnings announcement of period t.
PP&E	Net PP&E / total assets (COMPUSTAT PPENT/AT).
PSFE	Proportion of audit committee members that are supervisory financial experts to the number of audit committee members. Supervisory financial experts are members holding a position of CEO, chairman of the board, COO, or president of the company as defined in *AuditAnalytics* and are not financial accounting experts.
R&D	Research and development expense / lagged assets (COMPUSTAT XRD / AT).
Rel_Tone	Relative Tone of CFO to CEO calculated as Neg_Tone_CFO-Neg_Tone_CEO.
Restatements	An indicator variable coded 1 if the firm issued an accounting based restatement for the year.
ROA	Return on assets (COMPUSTAT EBIT/AT).
Sales_Growth	Growth in sales in quarter q relative to quarter q-4 (COMPUSTAT $SALESQ_q/SALESQ_{q-4}-1$)
Sales_Growth_dum	An indicator variable coded 1 if the year over year 2-digit SIC industry-adjusted sales growth falls into the top quintile of firms.
Segment	Number of reported business and geographic segments for the company.
Words	Total number of words spoken during the briefing and Q&A sections of the conference call.

APPENDIX B: Propensity Score Matching

We match our CFO on board firms to firms with non-servings CFOs based on both CFO and firm characteristics. Specifically, we follow Bedard, Hoitash, and Hoitash (2014), who test the likelihood of a CFO to serve on the board and estimate the following logit regression:

$CFONotOnBoard_i = \beta_0 + \beta_1 PAFE_i + \beta_2 PSFE_i + \beta_3 AuditSize_i + \beta_4 Independence_i + \beta_5 Assets_i + \beta_6 Loss_i + \beta_7 Segment_i + \beta_8 Big4_i + \beta_9 Auditor\_Change_i + \beta_{10} Litigation_i + \beta_{11} Sales\_Growth\_dum_i + FirmFixedEffects_i + \varepsilon_i,$

(1)

Where $CFONotOnBoard_i$ is an indicator variable equal to one for firms on which the CFO does not serve on the board of directors, and zero otherwise. $PAFE_i$ is the proportion of audit committee members that are financial accounting experts. $PSFE$ is the proportion of audit committee members that are supervisory financial experts. $AuditSize_i$ is the natural logarithm of the number of audit committee members. $Independence_i$ is an indicator variable coded 1 if the number of firm insiders in the board of directors is smaller than the sample median, and 0 otherwise. $Assets_i$ is the natural logarithm of total assets. $Loss_i$ is an indicator variable coded 1 if firm has experienced a loss in the current or previous year, and 0 otherwise. $Segment_i$ is the number of reported business and geographic segments for the company. $Big4_i$ is an indicator variable coded 1 if the firm is audited by one of the Big 4 auditing firms, and 0 otherwise. $Auditor\_Change_i$ is an indicator variable coded 1 if the firm replaced its auditor during the current year, and 0 otherwise. $Litigation_i$ is an indicator variable coded 1 if the firm is operating in a litigious industry, and 0 otherwise. $Sales\_Growth_i$ is an indicator variable coded 1 if the year

over year industry-adjusted sales growth falls into the top quintile of firms. Appendix A reports definitions and measurement description of all control variables.

We match firms using year 2008 as our benchmark and use this match for all sample years.

Panel A: This table reports the results of the likelihood of a CFO to serve on the board for fiscal year 2008. Control variables are defined in the appendix. The regression includes 2-digit SIC Industry-fixed effects. T-statistics are reported in parentheses below the coefficient estimates. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

Independent Variables	CFOOnBoard
PAFE	-0.046*
	(-1.78)
PSFE	-0.025***
	(3.17)
AuditSize	0.013**
	(2.35)
Independence	-0.244***
	(-15.62)
Assets	0.169*
	(1.65)
Loss	0.064
	(0.53)
Segment	0.008
	(1.47)
Big4	-0.019**
	(-2.13)
Auditor_Change	-0.001
	(-0.19)
Litigation	-0.015
	(-0.89)
Sales_Growth	0.155
	(1.59)
Constant	-0.735
	(2.43)
Industry FE	Yes
#Obs	1,326

Panel B: This table reports the estimated propensity score distributions.

Propensity Scores	#Obs	SD	Min	Median	Mean	Max
CFOOnBoard	167	0.047	0.051	0.140	0.151	0.349
CFONotOnBaord	167	0.045	0.050	0.138	0.148	0.336
Difference	167	0.002	0.001	0.002	0.003	0.013

Table 1 Sample Description

This table reports the percentage of CFOs not on board for the sample partitioned by fiscal year (panel A), 1-digit SIC codes (panel B) and whether the firm is incorporated in the state of Delaware (panel C).

Panel A

Fiscal year	# Observations	% of sample	% CFO on board
2004	1,357	10.8%	11.4%
2005	1,354	10.8%	13.9%
2006	1,394	11.1%	12.8%
2007	1,396	11.1%	13.0%
2008	1,326	10.6%	12.6%
2009	1,384	11.0%	11.2%
2010	1,408	11.2%	11.0%
2011	1,445	11.5%	10.5%
2012	1,486	11.8%	12.6%
Total	12,550	1,518	12.1%

Panel B

SIC Code	Industry Description	# Obs	% of sample	% CFO on board
0-999	Agriculture, Forestry and Fishing	27	0.2%	18.5%
1000-1999	Mining, Construction	690	5.5%	11.4%
2000-2999	Manufacturing	1,831	14.6%	11.7%
3000-3999	Manufacturing	3,223	25.8%	15.0%
4000-4999	Transportation, Communication, Electric, Gas, and Sanitary Services	1,158	9.3%	6.8%
5000-5999	Trade (Wholesale and Retail)	1,435	11.5%	13.0%
6000-6999	Finance, Insurance and Real Estate	2,326	18.6%	10.4%
7000-7999	Services	1,311	10.5%	11.4%
8000-8999	Services	499	4.0%	14.0%
9000-9999	Public Administration	12	0.1%	0.0%

Panel C

State of Incorporation	# Obs	% of sample	% CFO on board
Delaware	7,155	57.7%	11.8%
Non-Delaware	5,359	42.8%	12.5%

Table 2 Descriptive Statistics: Speech Variables

Panel A: This table reports descriptive statistics of the dependent and control variables used in the tone analyses. Control variables represent quarterly variables for the earnings announcement quarter.

	# Observations	Mean	p25	p50	p75
Tone Variables					
# words CEO[22] (*Words_CEO*)	9,149	3,049	2,022	2,896	3,853
% words by CEO	9,149	0.34	0.25	0.34	0.42
# words CFO (*Words_CFO*)	9,149	2,413	1,571	2,184	2,957
% words by CFO	9,149	0.27	0.19	0.26	0.33
% words by CEO&CFO	9,149	0.61	0.54	0.61	0.69
# words CFO/ #words CEO	9,149	1.12	0.49	0.76	1.18
CEO tone (*Neg_Tone_CEO*)	9,149	-0.006	-0.010	-0.006	-0.003
CFO tone (*Neg_Tone_CFO*)	9,149	-0.003	-0.007	-0.002	0.002
Relative tone (*Rel_Tone*)	9,149	0.004	-0.001	0.003	0.008
Control Variables					
Log MV$_q$	9,149	8.46	7.50	8.45	9.44
MTB$_q$	9,149	3.00	1.38	2.16	3.51
ROA$_q$	9,149	0.01	0.00	0.01	0.02
Earnings_Growth$_q$	9,149	0.001	-0.003	0.001	0.005
Sales_Growth$_q$	9,149	0.09	-0.01	0.07	0.17

Panel B: This table reports descriptive statistics of the tone analyses variables sorted by whether the CFO serves on the board of directors.

	CFO not on board					CFO on board				
	# Obs	Mean	P25	P50	P75	# Obs	Mean	P25	P50	P75
Tone Variables										
# words CEO (*Words_CEO*)	7,773	3,030	2,008	2,884	3,830	1,376	3,156	2,106	2,999	3,986
% words by CEO	7,773	0.34	0.26	0.34	0.42	1,376	0.34	0.25	0.34	0.43
# words CFO (*Words_CFO*)	7,773	2,400	1,566	2,177	2,923	1,376	2,486	1,607	2,204	3,137
% words by CFO	7,773	0.27	0.19	0.26	0.33	1,376	0.27	0.19	0.25	0.33
% words by CEO&CFO	7,773	0.61	0.54	0.61	0.69	1,376	0.61	0.54	0.61	0.69
# words CFO/#words CEO	7,773	1.12	0.50	0.76	1.18	1,376	1.11	0.48	0.74	1.21
CEO tone (*Neg_Tone_CEO*)	7,773	-0.006	-0.009	-0.006	-0.003	1,376	-0.007	-0.010	-0.006	-0.003
CFO tone (*Neg_Tone_CFO*)	7,773	-0.002	-0.007	-0.002	0.002	1,376	-0.003	-0.008	-0.003	0.001
Relative tone (*Rel_Tone*)	7,773	0.004	-0.001	0.003	0.008	1,376	0.003	-0.001	0.003	0.007
Control Variables										
Log MV$_q$	7,773	8.46	7.48	8.44	9.46	1,376	8.48	7.65	8.50	9.33
MTB$_q$	7,773	2.89	1.35	2.10	3.36	1,376	3.64	1.56	2.59	4.30
ROA$_q$	7,773	0.01	0.00	0.01	0.02	1,376	0.01	0.00	0.02	0.03
Earnings_Growth$_q$	7,773	0.001	-0.002	0.001	0.005	1,376	-0.000	-0.003	0.001	0.006
Sales_Growth$_q$	7,773	0.09	-0.01	0.07	0.17	1,376	0.10	-0.00	0.08	0.17

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[22] Word & tone analyses by officer use only observations in which both CEO & CFO participate in the conference call.

Table 3 Univariate Tests: Speech Tone

This table reports descriptive statistics of speech tone for a two by two partition by the periods before and after the *Gantler* ruling and whether the CFO is a board member. Panel A reports CFO speech tone, panel B reports CEO speech tone and panel C reports CFO tone relative to CEO tone. The sample of 1,478 observations includes only firms that did not replace CFO over the sample period and only one matched firm for every CFO on board firm. Matching procedure is reported in appendix B. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

Panel A: CFO speech tone

Mean of the dependent variables	Before the *Gantler* ruling	After the *Gantler* ruling	Difference
Non-board-serving CFO firms	-0.0058	-0.0024	0.0035***
Board-serving CFO firms.	-0.0019	-0.0034	-0.0014**
Difference	0.0039***	-0.0010**	

Panel B: CEO speech tone

Mean of the dependent variables	Before the *Gantler* ruling	After the *Gantler* ruling	Difference
Non-board-serving CFO firms	-0.008	-0.009	-0.001*
Board-serving CFO firms.	-0.006	-0.007	-0.001*
Difference	0.001*	-0.001	

Panel C: Relative CFO-CEO speech tone

Mean of the dependent variables	Before the *Gantler* ruling	After the *Gantler* ruling	Difference
Non-board-serving CFO firms	0.0018	0.0047	-0.0030***
Board-serving CFO firms.	0.0044	0.0038	0.0006
Difference	-0.0026***	0.0009*	

Table 4 Regression Analyses - Speech Tone in Conference Calls

This table reports results of regressions testing the effect of the *Gantler* ruling on speech tone in conference calls. Columns 1–6 report coefficients and t-stats produced by regressions in which the dependent variables are based on Words (# of words in the conference call), and Neg_Tone ((#negative words - #positive words)/#words). The explanatory variables are CFONotOnBoard (Indicator variable coded 1 if the CFO does not serve on the board), Post (Indicator variable coded 1 for the post ruling period), an interaction term of the two variables (CFONotOnBoard×Post), and control variables. Control variables are defined in the appendix. Columns 1 and 2 report results for the CFO's portion of the call and Columns 3 and 4 for the CEO's portion of the call. Column 5 reports results for a regression that compares CFO tone negativity with the CEO tone negativity in the same call (Rel_Tone= Neg_Tone _CFO- Neg_Tone _CEO) and column 6 reports results of a regression using the propensity scored matched sample. All regressions include year- and firm-fixed effects (suppressed). The sample includes years 2006 to 2012, excluding year 2009. T-statistics are reported in parentheses below the coefficient estimates. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

	CFO text		CEO text		CFO-CEO	
	Words_ CFO	Neg_Tone	Words_ CEO	Neg_Tone	Rel_Tone	PSM
Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)
Post	-242.35*	0.00	-341.65**	0.00**	-0.00	0.00
	(-1.95)	(0.3)	(-2.53)	(2.29)	(-1.24)	(0.27)
CFONotOnBoard	55.79	0.00**	-253.98***	0.00	-0.00**	-0.002***
	(0.64)	(-2.52)	(-2.68)	(0.37)	(-2.56)	(-2.74)
CFONotOnBoard×Post	-40.55	0.003***	163.96	-0.000	0.003***	0.004***
	(-0.42)	(5.67)	(1.55)	(-0.96)	(5.83)	(4.66)
Log MV	-16.97	-0.00***	119.18**	-0.00***	-0.00	-0.00
	(-0.35)	(-3.45)	(2.24)	(-2.8)	(-1.29)	(-0.26)
MTB	3.90	-0.00*	-20.58*	-0.00**	0.00	-0.00
	(0.38)	(-1.76)	(-1.86)	(-2.22)	(-0.14)	(-0.91)
ROA	-1033.53	0.00	2823.02**	0.00	0.00	-0.01
	(-0.89)	(0.06)	(2.24)	(0.57)	(-0.33)	(-0.59)
Earnings_Growth	-210.83	-0.01**	-1289.97	-0.01***	0.00	-0.00
	(-0.22)	(-2.08)	(-1.21)	(-2.91)	(0.04)	(-0.34)
Sales_Growth	29.79	-0.00**	-63.58	-0.00***	0.00	0.00
	(0.37)	(-2.61)	(-0.73)	(-4.56)	(0.64)	(0.66)
Constant	2731.76***	0.00**	2286.40***	-0.00*	0.01***	0.01
	(6.49)	(2.16)	(4.99)	(-1.72)	(3.12)	(1.17)

Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
# Obs	9,149	9,149	9,149	9,149	9,149	2,310

Table 5 Descriptive Statistics

Panel A: This table reports descriptive statistics of the dependent and control variables.

	# Obs	Mean	p25	p50	p75
Dependent					
Early Disclosure					
PotNegSur	8,405	0.21			
Conservatism					
C_score	9,724	-0.03	-0.23	0.01	0.20
Restatement					
Accounting Restatement	12,550	0.05			
Control					
Log MV	10,399	7.55	6.64	7.49	8.44
MTB	10,980	2.82	1.44	2.15	3.35
LEV	11,071	0.21	0.05	0.19	0.32
OCF	11,053	0.11	0.05	0.10	0.16
ROA	11,002	0.11	0.05	0.09	0.16
Intangibles	10,780	0.19	0.02	0.12	0.31
PP&E	10,551	0.26	0.06	0.17	0.38
CAPEX	11,063	0.05	0.01	0.03	0.06
R&D	11,166	0.03	0.00	0.00	0.03
Firm Age	11,130	26.63	13.00	21.00	41.00
AbsDiff	8,405	0.09	0.02	0.05	0.11

Panel B: This table reports descriptive statistics of the dependent and control variables sorted by whether the firm's CFO serves on the board of directors.

	CFO not on board					CFO on board				
	# Obs	Mean	p25	p50	p75	# Obs	Mean	p25	p50	p75
Dependent										
Early Disclosure										
PotNegSur	7,332	0.21				1,073	0.20			
Conservatism										
C_score	8,517	-0.03	-0.22	0.01	0.21	1,207	-0.05	-0.25	-0.02	0.17
Restatement										
Accounting restatement	11,032	0.05				1,518	0.06			
Control										
Log MV	9,112	7.54	6.62	7.47	8.43	1,287	7.63	6.75	7.63	8.47
MTB	9,633	2.77	1.43	2.13	3.31	1,347	3.11	1.54	2.28	3.60
LEV	9,719	0.21	0.05	0.19	0.32	1,352	0.20	0.06	0.17	0.31
OCF	9,702	0.11	0.05	0.10	0.16	1,351	0.11	0.06	0.11	0.16
ROA	9,661	0.11	0.05	0.09	0.15	1,341	0.11	0.05	0.10	0.17
Intangibles	9,455	0.19	0.02	0.11	0.31	1,325	0.20	0.02	0.13	0.31
PP&E	9,261	0.27	0.06	0.17	0.39	1,290	0.24	0.07	0.17	0.33
CAPEX	9,710	0.05	0.01	0.03	0.06	1,353	0.05	0.01	0.03	0.06
R&D	9,803	0.03	0.00	0.00	0.03	1,363	0.03	0.00	0.00	0.04
Firm Age	9,774	26.65	13.00	21.00	41.00	1,356	26.51	14.00	21.00	40.50
AbsDiff	7,332	0.09	0.02	0.04	0.11	1,073	0.10	0.02	0.05	0.12

Table 6 Early Disclosure of Bad News

This table reports results of regressions testing the effect of the *Gantler* ruling on firms' early disclosure of bad news. Firms included in the sample missed at period t median-analysts' earnings forecasts that were issued immediately after earnings announcement of period t-1. The dependent variable is coded 1 if the firm issued interim earnings guidance during period t but before earnings announcement of period t and zero otherwise. The explanatory variables are CFONotOnBoard (Indicator variable coded 1 if a CFO does not serve on the board), Post (Indicator variable coded 1 for the post ruling period), an interaction term of the two variables (CFONotOnBoard×Post), and control variables. Control variables are defined in the appendix. Column 1 presents results excluding all control variables, column 2 presents results including all control variables, and column 3 presents results of the propensity score matched sample. All regressions include year- and firm-fixed effects (suppressed). The sample includes years 2004 to 2012, excluding year 2009. T-statistics are reported in parentheses below the coefficient estimates. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

Independent Variables	(1)	(2)	(3) PSM
Post	-0.37***	-0.40***	-0.32***
	(-8.93)	(-9.44)	(-5.16)
CFONotOnBoard	-0.04	-0.03	-0.05
	(-1.21)	(-1.03)	(-1.18)
CFONotOnBoard×Post	0.10**	0.10**	0.10*
	(2.43)	(2.54)	(1.82)
AbsDiff		0.36***	0.42***
		(7.27)	(4.44)
Analyst Forecast Dispersion		-0.01***	-0.06
		(-2.64)	(-0.82)
Log MV		0.06***	0.07***
		(3.80)	(2.71)
MTB		-0.01**	0.00
		(-2.15)	(-0.05)
LEV		-0.17**	-0.18
		(-2.16)	(-1.42)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Num Obs	6,000	6,000	1,670

Table 7 Accounting Conservatism

This table reports results of regressions testing the effect of the *Gantler* ruling on firms' accounting conservatism. The dependent variable is the C_score measure calculated following Khan & Watts (2009). The explanatory variables are CFONotOnBoard (Indicator variable coded 1 if a CFO does not serve on the board), Post (Indicator variable coded 1 for the post ruling period), an interaction term of the two variables (CFONotOnBoard×Post), and control variables. Control variables are defined in the appendix. Column 1 reports results for an analysis with no control variables. Column 2 reports results for an analysis with a full set of control variables. Column 3 reports results of the propensity score matched sample. All regressions include year- and firm-fixed effects (suppressed). The sample includes years 2004 to 2012, excluding year 2009. T-statistics are reported in parentheses below the coefficient estimates. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

Independent Variables	(1)	(2)	(3) PSM
Post	0.23***	0.61***	0.36***
	(20.07)	(13.56)	(6.93)
CFONotOnBoard	-0.02***	-0.02**	-0.02**
	(-2.97)	(-2.59)	(-2.59)
CFONotOnBoard×Post	0.05***	0.03**	0.04**
	(4.13)	(2.42)	(2.08)
Firm Age		-0.05***	-0.03***
		(-7.99)	(-5.87)
R&D		-0.08	-0.11
		(-0.93)	(-0.52)
Log MV		-0.04***	-0.03***
		(-9.86)	(-11.08)
MTB		-0.01***	-0.02***
		(-9.25)	(-4.81)
LEV		0.02	0.01
		(0.73)	(1.28)
CFO		-0.09**	-0.08**
		(-2.57)	(-2.37)
ROA		-0.45***	-0.38***
		(-11.82)	(-6.28)
Intangibles		0.03	0.00
		(1.44)	(0.36)
PP&E		0.06**	0.08**

		(2.25)	(2.61)
CAPEX		-0.19***	-0.17***
		(-3.11)	(-4.63)
Constant	0.01	1.48***	1.32***
	(0.82)	(10.76)	(8.93)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
#observations	9,509	8,634	2,431

Table 8 Accounting-based Restatements

This table reports results of regressions testing the effect of the *Gantler* ruling on firms' accounting based restatements. The dependent variable is coded 1 if the firm issued an accounting based restatement for the year, zero otherwise. The explanatory variables are CFONotOnBoard (Indicator variable coded 1 if a CFO does not serve on the board), Post (Indicator variable coded 1 for the post ruling period), an interaction term of the two variables (CFONotOnBoard×Post), and control variables. Control variables are defined in the appendix. Column 1 reports results for an analysis with no control variables. Column 2 reports results for an analysis with a full set of control variables. Column 3 reports results of the propensity score matched sample. All regressions include year- and firm-fixed effects (suppressed). The sample includes years 2004 to 2012, excluding year 2009. T-statistics are reported in parentheses below the coefficient estimates. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

Independent Variables	(1)	(2)	(3)
			PSM
Post	0.01	0.01	-0.06
	(0.64)	(0.10)	(-0.39)
CFONotOnBoard	-0.02	-0.01	-0.02
	(-1.37)	(-1.04)	(-1.15)
CFONotOnBoard×Post	-0.00	-0.01	-0.04*
	(-0.28)	(-0.36)	(-1.65)
AGE		0.00	0.02
		(-0.01)	(0.81)
R&D		-0.05	0.03
		(-0.41)	(0.11)
Log MV		-0.01	-0.02
		(-0.84)	(-1.35)
MTB		0.00	0.00
		(1.37)	(0.98)
LEV		0.02	0.05
		(0.62)	(0.76)
CFO		0.00	-0.00
		(-0.01)	(-0.02)
ROA		-0.15***	-0.12
		(-2.75)	(-1.10)
Intangibles		0.08***	0.03
		(2.73)	(0.558)

PP&E		0.08*	0.10
		(1.93)	(1.09)
CAPEX		-0.14	-0.26
		(-1.55)	(-1.19)
Constant	0.07***	0.09	-0.20
	(5.81)	(0.4)	(-0.44)
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
#observations	11,166	9,357	2,364

Table 9 The Effect of Delaware Incorporation

This table reports results of the main regression in each of the four analyses in this study including a three-way interaction of CFONotOnBoard, Post and Delaware (an indicator variable that takes the value of 1 if the firm was incorporated in the state of Delaware, and 0 otherwise). Column 1 reports results of the relative speech tone analysis (reported in Table 4). Column 2 reports results of the negative news analysis (reported in Table 5). Column 3 reports results of the accounting conservatism analysis (reported in Table 6), and Column 4 reports results of the accounting based restatements analysis (reported in Table 7). All regressions include the full set of control variables in the original regressions as well as year- and firm-fixed effects (suppressed). T-statistics are reported in parentheses below the coefficient estimates. ***, **, * indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

	Rel_Tone	NEG_SURP	C_score	Restatements
Independent Variables	(1)	(2)	(3)	(4)
Post	-0.00	-0.42***	0.62***	-0.01
	(-0.4)	(-7.41)	(13.23)	(-0.12)
CFONotOnBoard	-0.00	-0.02	0.00	-0.02
	(-0.3)	(-0.44)	(0.04)	(-0.88)
CFONotOnBoard×Post	0.002**	0.15***	-0.003	0.01
	(2.31)	(2.61)	(-0.16)	(0.4)
Dealware×Post	-0.00	0.05	-0.01	0.03
	(-0.9)	(0.68)	(-0.27)	(0.84)
CFONotOnBoard×Delaware	-0.00	-0.02	-0.04**	0.01
	(-1.62)	(-0.28)	(-2.30)	(0.3)
CFONotOnBoard×Post×Delaware	0.002*	-0.09	0.05**	-0.03
	(1.75)	(-1.18)	(2.34)	(-0.84)
Control Variables	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
#observations	9,149	6,000	9,357	8,634