

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

Hagit Levy  
*Zicklin School of Business*  
*Baruch College*  
Email: [Hagit.Levy@baruch.cuny.edu](mailto:Hagit.Levy@baruch.cuny.edu)

Ron Shalev  
*Stern School of Business*  
*New York University*  
Email: [rshalev@stern.nyu.edu](mailto:rshalev@stern.nyu.edu)

Emanuel Zur  
*Smith School of Business*  
*University of Maryland*  
[ezur@rhsmith.umd.edu](mailto:ezur@rhsmith.umd.edu)

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**Abstract:** The recent *Gantler v. Stephens* (2009) decision by the Delaware Supreme Court significantly increases the personal litigation risk of certain corporate officers. This study uses the ruling as a quasi-natural experiment to investigate the effect of personal litigation risk on disclosure and accounting decisions. The court's ruling makes explicit the possibility that corporate officers who do not serve on the board of directors can be held personally liable for breaching fiduciary duty to the firm. Focusing on firms' Chief Financial Officers (CFOs)—the corporate officers most likely to influence disclosure and accounting decisions—we investigate how the ruling affects their choices. We compare firms with CFOs not serving on their firm's board of directors to firms with CFOs serving on their firm's board of directors and find that following the *Gantler* ruling, firms with CFOs not serving on the board are more likely to disclose negative news early, report more conservative financial statements, but show no statistically significant change in accrual earnings management practices. We also show that non-board member CFOs use a more negative tone during earnings announcements conference calls. Taken together, our results suggest that CFOs have a significant influence on firms' disclosure decisions and respond to personal litigation risk over and above corporate litigation risk.

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## 1. Introduction

The Delaware Supreme Court, renowned for its corporate governance decisions, ruled in 2009 in the case of *Gantler v. Stephens*<sup>1</sup> (hereafter: *Gantler*) that corporate officers owe the same fiduciary duties of care and loyalty to the corporation and its shareholders as corporate directors. Although it was uncertain whether company officers and company directors legally owe the same fiduciary duty to shareholders, prior to the ruling it was common practice that corporate officers not serving on the board of directors were not subject to judicial scrutiny. The practical implication of the *Gantler* ruling is that the actual and perceived personal litigation risk of corporate officers not serving on the board increased as corporate officers are now also subject to judicial scrutiny even when they do not serve on the board of directors. In fact, recent legal literature argues that non-board members' personal litigation risk has surpassed board members' litigation risk following the *Gantler* ruling. Follet (2010), for example, claims that while Title 8 of the Delaware General Corporation Law (section 102(b)(7)) allows firms to adopt a provision to company bylaws exculpating board members from monetary liability for breaching fiduciary duty, the law does not explicitly allow such provision with regards to non-board members. In addition, while board member enjoy the "business judgment presumption,"<sup>2</sup> it is not clear that non-director officers enjoy the same presumption (Follet, 2010).

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

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<sup>1</sup> *Gantler v. Stephens*, 965 A.2d 695, 708-09 (Del. 2009).

<sup>2</sup> The business judgment rule puts the burden on the plaintiff to prove that the decision challenged breached fiduciary duty—good faith loyalty or care.

corporate officers while holding constant the likelihood of the firm being sued. In this study we exploit the quasi-natural experiment created by the Delaware Supreme Court decision to investigate whether and how *ex-ante personal* litigation risk affects managerial accounting and financial disclosure choices.

We focus on the Chief Financial Officer's (CFO) personal litigation risk because the CFO is the officer that is most likely to be influenced by the *Gantler* ruling. While most Chief Executive Officers (CEOs) serve on the board of directors, CFOs normally do not (Bedard, Hoitash and Hoitash, 2014). In addition, with the exception of the CEO, the CFO is the corporate officer with the largest influence on a firm's accounting and financial disclosure choices, which comprise the majority of shareholders' lawsuits. Extant research in accounting and finance has highlighted the role CFOs play in firms' accounting choices. For example, Ge, Matsumoto, and Zhang (2011) suggest that CFOs have a statistically significant influence on firms' accounting choices. Chava and Purnanandam (2007) and Jiang, Petroni, and Wang (2010) suggest that CFOs' influence over earnings management decisions is greater than that of CEOs.

We analyze changes in CFO accounting- and financial-disclosure choices following the *Gantler* ruling along four dimensions, which extant literature has suggested may be affected by the level of litigation risk: (1) *Timing of disclosure of bad news*. Beyer, Cohen, Lys and Walther (2010) summarize the literature on the relation between litigation risk and voluntary disclosure. They suggest that there is mixed evidence on whether early disclosure of bad news reduces litigation costs, and whether firms respond to litigation risk with more or less disclosure. (2) *Accounting conservatism*. Basu (1997), Watts (2003 a,b), Chung and Wynn (2008), and Blunck (2009) provide discussion and empirical evidence on the relation between litigation risk and accounting conservatism, which suggests that accounting conservatism increases with litigation

risk. (3) *Accruals-based Earnings Management*. Cohen, Dey, and Lys (2008) provide evidence that increased personal litigation risk on CEOs and CFOs in regard to firms' financial reporting practices resulting from the Sarbanes-Oxley Act led to a significant reduction in firms' accrual-based earnings management. (4) *CFOs' tone during earnings announcements conference calls*. Rogers, Van Buskirk and Zechman (2011) provide evidence that an optimistic tone in earnings announcements increases litigation risk.

When analyzing the first, second, and third dimensions described above (early disclosure of bad news, accounting conservatism, and accruals-based earnings management) we effectively test joint hypotheses: First, that CFOs have influence on these corporate policies and second, that the shock to personal litigation risk changed CFOs' accounting and disclosure choices. Throughout the analyses we focus on the changes in choices made by CFOs not serving on the board following the *Gantler* ruling. Our control group in the quasi-natural experiment consists of firms on which CFOs serve on the board of directors. We expect the change in disclosure and accounting choices to occur only for firms with CFOs not serving on the board.

First, we investigate whether the increase in CFOs' personal litigation risk results in a more timely disclosure of bad news. To that end, we focus on firms' interim guidance (i.e., a guidance that is issued by firm management before earnings announcement) and test whether, after the *Gantler* ruling, a firm with a non-board-serving CFO is more likely to issue interim guidance when a negative earnings surprise is likely. To gauge a potential negative earnings surprise, we compare consensus analysts' forecasts for period  $t$  that was issued immediately following an earnings announcement of period  $t-1$  to actual earnings of period  $t$ . A potential negative surprise is defined as actual earnings of period  $t$  falling below consensus analysts' forecasts issued following earnings announcement of period  $t-1$ . Focusing on a subset of firms with potential

negative earnings surprise, we find that the likelihood of firms with non-board-serving CFOs issuing interim earnings guidance when they are likely to miss analysts' consensus forecasts increased following the *Gantler* ruling when compared to firms with board-serving CFOs. A similar analysis of firms that are likely to report a positive earnings surprise suggests that, unlike the case of early disclosure of bad news, there is no statistically significant difference between firms with non-board-members CFOs and firms with board-member CFOs when disclosing potentially good news.

Second, we investigate whether financial reporting of firms with non-board-serving CFOs is affected by the change in personal litigation risk following the *Gantler* court ruling. Two dimensions of financial reporting are explored: accounting conservatism and earnings management. We use the Kahn and Watts (2009) measure for accounting conservatism (*C\_score*) and test whether following the *Gantler* ruling a systematic change exists in the *C\_score* of firms on which boards CFOs do not serve. Analysis suggests that financial reports of firms with non-board-serving CFOs become more conservative following the increase in CFOs' personal litigation risk when compared to firms with board-serving CFOs. Specifically, the *C\_score* of firms with non-board-serving CFOs increases following the *Gantler* ruling when compared to the *C\_score* of firms with board-serving CFOs. This result is consistent with Chung and Wynn (2008) who provide a cross-sectional analysis of legal liability coverage and find that firms with narrower legal-liability coverage of directors and officers demonstrate more conservative financial reporting.

Third, using the Dechow, Sloan, and Sweeney (1995) modified Jones model and the Dechow and Dichev (2002) accrual and cash-flow mapping construct to proxy for firms' earnings management, we test whether the increase in CFO personal litigation risk affects

accruals earnings management in firms with non-board member CFOs. The Sarbanes-Oxley Act increased legal scrutiny on CFO accounting practices. After its passage, CFOs have to provide sworn statements on the accuracy of financial reports and thus are personally liable in the case of SEC enforcement or investor litigation. This increased legal scrutiny on CFO financial-reporting practices resulted in a reduction in accrual earnings management (Cohen, Dey and Lys, 2008). The *Gantler* ruling allows plaintiffs to include an additional claim in a personal lawsuit—breach of fiduciary duty. Therefore, it is not clear whether the *Gantler* ruling actually increased CFOs' perceived litigation risk in connection with financial reporting practices such as accrual-based earnings management. Consistent with the notion that Sarbanes-Oxley allows holding CFOs personally liable for financial reporting practices, results on accrual-based earnings management do not show a statistically significant change for firms with non-board-serving CFOs following the *Gantler* ruling.

Finally, we test changes in CFOs' tone during earnings announcements using textual analyses that have gained popularity in recent years in studies of managers' behavior, such as Rogers, Van Buskirk and Zechman (2011), Larcker and Zakolyukina (2012), and Davis et al. (2014). We are interested in whether the tone of non-board-serving CFOs turns more negative following the *Gantler* ruling. While speech attributes are a soft measure of disclosure, analyzing the tone in a conference call provides us with an opportunity to use a control group, additional to board-serving CFOs that we use throughout the analyses, the CEOs of the same firm. Analyses suggest that a non-board-serving CFO's tone turns more negative in response to a director's increased personal litigation risk. Specifically, we find that the overall tone of firm conference calls with non-board-serving CFOs becomes less optimistic following the *Gantler* ruling when compared with board-serving CFOs. Using firm CEOs on the same conference call as a natural

control group for the CFOs, we find that while the tone of non-board-serving CFOs becomes more negative following the *Gantler* ruling, the tone of CEOs does not become more negative. The difference in the change in tone between the CFO and the CEO is statistically significant. Our results are consistent with Rogers, Van Buskirk and Zechman (2011) who highlight the relation between an optimistic tone in earnings announcements and an increased likelihood of litigation.

Taken together, the evidence provided in this study highlights the importance of litigation risk in directing managers' behavior and is broadly consistent with previous research on litigation risk. However, our study extends this research stream by linking the *personal litigation risk* to corporate disclosure and accounting policies. An innovative aspect of this study is the measuring of CFO personal litigation risk through the *Gantler* ruling, which does not change the scope of actions that can be brought against a firm or a firm's litigation risk. Moreover, 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 disclosures help to deter lawsuits.<sup>3</sup>

Our study also sheds additional light on the role of CFOs in corporate disclosure policy. Ge, Matsumoto, and Zhang (2011) suggest that CFOs have a statistically significant influence on firms' accounting choices. Chava and Purnanandam (2007) and Jiang, Petroni, and Wang (2010) suggest that CFO influence over earnings management decisions is greater than that of CEOs. We extend these findings by documenting a significant CFO influence on financial disclosure choices over and above financial reporting.

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<sup>3</sup> See Lowry (2009) for a discussion on the limitation of using the actual incidence of litigation as a proxy for litigation risk.

Moreover, from a practical perspective, our results provide evidence that legislation and policy targeting an individual manager's personal litigation risk may be effective in increasing the transfer of timely information to investors. Finally, the quasi-natural experiment setting offered by the *Gantler* ruling allows us to use the difference-in-differences approach to provide evidence on the relation between corporate disclosure and accounting policies as well as personal litigation risk. The differences-in-differences method allows us to control for cross-sectional variations in fixed unobservable firm characteristics.

The remainder of the paper proceeds as follows. In Section 2, we review related literature and discuss the hypothesized relations. In Section 3, we describe the sample selection process. In Section 4 we discuss research methodology and present the empirical results. We conclude in section 5.

## **2. Literature review and hypothesis development**

### *2.1. Gantler v. Stephens (2009) -the change in CFOs' legal environment*

An on-going debate ensues among legal academics and practitioners on the scope of legal liability of corporate officers (see, for example, Johnson and Ricca, 2011). The essence of the debate is as follows: given that functions filled by a firm's corporate officers are fundamentally different from functions of board members (managing vs. directing), should corporate officers be subject to the same fiduciary duties as board members? More specifically, the function of a board of directors is to provide guidance on business strategy and oversee and monitor firms' management such that shareholders' wealth is enhanced. The board's role can be viewed as an intermediary between shareholders and the firm (Johnson and Ricca, 2011). Unlike board members, corporate officers are in charge of managing the firm's day-to-day business. As such,

they are viewed as agents of the firm.<sup>4</sup> One implication of the different functions of board members and corporate officers is that while corporate officers possess intimate knowledge, information, and control over day-to-day decisions, directors do not. Recognizing the difference, the letter of the law gives board members more protection in regard to litigation. For example, Title 8 of the Delaware General Corporation Law (section 102(b)(7)) allows firms to adopt a provision to company bylaws that exculpates board members from monetary liability for breaching fiduciary duty; however, no such permission is explicitly granted in regard to non-board members. Furthermore, in practice, protections such as indemnification, advancement of expenses, and directors and officer insurance are generally more available to board members than to corporate officers.

The above differences suggest a greater legal scrutiny on corporate officers that do not serve on a board of directors than on board members. Nevertheless, in practice, corporate officers that did not serve on boards were not directly sued for several reasons: First, the CEO, the most senior corporate officer and most likely target of investor litigation, is usually on the board of directors (Fayle, 2007 and Kim and Lu, 2011), thus plaintiffs have been generally satisfied with personally suing the CEO and other board members. Second, until 2004, the State of Delaware (the undisputed leader of corporate legal action) did NOT have jurisdiction over non-board member corporate officers who did not reside within the state's boundaries. Lastly, it was widely viewed that the role of penalizing corporate officers resides with the board of directors and thus, in practice, no legal action was brought against corporate officers in Delaware. This reality led corporate legal counselors and firms to believe that non-board member

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<sup>4</sup> Johnson and Ricca (2011) outline the core differences in the roles of directors and managers that should give rise to differences in legal liability.

corporate officers are shielded from investor litigation and, according to some legal scholars, to underestimate their associated personal litigation risk (Garvis and Johnson, 2009).

The *Gantler* ruling changed the legal environment surrounding non-board member corporate officers. In the case, First Niles, a holding company of a less-than-successful bank in Ohio, was sued along with five directors and one non-director officer, Mr. Lawrence Safarek, for allegedly deliberately defeating opportunities to sell the bank by not providing full due diligence material to two potential acquirers. In its ruling, the Delaware Supreme Court held that officers of a Delaware corporation owe the same fiduciary duty to the firm as board members. As a result, the court reviewed the conduct of both Mr. Safarek and the CEO. The ruling received much attention as it was the first time that the Delaware Supreme Court explicitly held that corporate officers are fiduciaries (e.g., Follet, 2010). The practical implication of the ruling is that non-director corporate officers can be sued directly for breaching fiduciary duty. The Delaware Supreme Court, however, did not balance the ruling by allowing firms to include in their bylaws exculpation from monetary liability article for corporate officers as is permitted for directors and left this decision to the legislator. The ruling effectively increased non-board-members' litigation risk. However, it did not change the scope of reasons for which investors can sue a firm and/or members of the board of directors. Thus, the ruling only increases the personal litigation exposure of corporate officers that do not serve on the board.

The corporate officer that is most likely affected by the *Gantler* ruling is the firm's Chief Financial Officer (CFO). While corporate CEOs are almost uniformly members of their firm's board of directors, CFOs generally are not (Bedard, Hoitash and Hoitash, 2014). With the exception of the CEO, the CFO is the corporate officer with the deepest involvement in decisions pertaining to the firm's financial reporting and financial disclosure. Decisions on disclosure of

financial information or lack thereof are among the most commonly challenged in shareholder-firm litigation. Anecdotally, Mr. Safarek, the only non-board member officer in the *Gantler* case, served as the company's Treasurer, an equivalent position to a company's CFO. Recent studies in accounting and finance highlight the significant role CFOs play in accounting decisions. Ge, Matsumoto, and Zhang (2011) investigate the effect of CFOs' personal attributes (which the authors label "style") on accounting decisions such as discretionary accruals, operating leases, and expected rate of returns in pension plans and find that CFO "style" is influential in these decisions. Chava and Purnandam (2007), and Jiang, Petroni, and Wang (2010) compare CFOs' influence on earning management to that of CEOs' by comparing the sensitivity of earnings management to their compensation structure and conclude that CFOs are more influential in firms' earnings management policies. Finally, Feng et al. (2011) document CFO involvement in material-accounting manipulation but suggest that this involvement, which is costly to the CFO given the higher probability of SEC action, could be explained by CEO pressure rather than by personal financial benefits to the CFO through equity incentives.

We exploit the opportunity provided by the quasi-natural experiment of the *Gantler* court ruling to investigate whether personal litigation risk affects financial disclosure and accounting choices made by the firm's Chief Financial Officer. Specifically, we focus on four dimensions of disclosure and financial reporting: the timing of bad news disclosure, accounting conservatism, accrual earnings management, and CFO language optimism during conference calls.

## *2.2 Litigation risk and timing of disclosure*

The relation between litigation risk and management disclosure has been widely explored by researchers. Early studies focused on whether litigation risk affects the timing of bad news disclosure. Specifically, researchers were interested in learning whether managers attempt to

preempt litigation risk by providing early disclosure of bad news. Beyer, Cohen, Lys and Walther (2010) summarize this strand of literature. They note that there is mixed evidence on whether early disclosure of bad news reduces litigation costs, and on whether firms respond to litigation risk with more or less disclosure. Skinner (1994) argues that early disclosure is likely to reduce litigation risk by weakening the argument that managers withheld negative information from investors and reducing contingent losses in case of a lawsuit. Therefore, firms might want to disclose bad earnings news early to avoid a sharp drop in stock price at the time of earnings announcements. Skinner (1994) finds some evidence to support this argument. In a concurrent study to Skinner (1994), Francis, Philbrick, and Schipper (1994) provide contradicting 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, Philbrick, and Schipper (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 (both increasing in the damages ensued on investors) and find that early disclosure does reduce litigation risk. Kothari, Shu and Wysocki (2009) analyze managers' inclination to delay disclosure of bad news relative to good news and find that litigation concerns mitigate managers' incentives to delay the disclosure of bad news to investors. Donelson et al. (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 by Graham, Harvey, and Rajgopal (2005) also provides evidence consistent with early disclosure reducing litigation risk.

Two studies analyze the effects of litigation risk on overall firm-disclosure level and provide somewhat contradicting evidence. Baginski, Hassel, and Kimbrough (2002) compare disclosure patterns of firms in the highly litigious U.S. environment with firms in the less-litigious Canadian environment and find more disclosure for U.S. firms in periods of declining earnings but not for Canadian firms. 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 to the general population because they are based on firms that were sued. Finally, a recent study by Naughton et al. (2014) analyzes changes around *Morrison Vs. National Bank of Australia* case, which increased litigation risk on cross listed firms and find that the firms respond to reduced litigation costs by reducing public disclosure.

In this study, we test whether CFOs' increased personal litigation risk following the *Gantler* ruling affects the timing of bad news disclosure. 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.

### *2.3 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 existing supporting literature. He argues that the asymmetric payoff of litigation creates an incentive to understate a firm's assets in order to reduce litigation costs. Basu (1997)

partitions the sample period based on litigation activity and finds that the level of conservatism increases in periods of high-litigation activity. 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 in order 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 coverage. Blunck (2009) models ex-ante litigation risk using realized security litigation costs and finds that higher ex-ante litigation risk is associated with more conservative financial reporting. Finally, two recent studies (Tan and Wongsunwai, 2014, and Bens and Huang, 2014) analyze changes in firms' conservative reporting following the 1991 court ruling in *Credit Lyonnais Vs. Pathe Communications* that increased directors fiduciary duty towards firm's debt holders. They find that the increase in litigation risk from lawsuits brought by debt holders resulted in accounting practices that are tilted more towards bondholders than shareholders.

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

#### *2.4 Litigation risk and accruals earnings management*

The Sarbanes-Oxley Act of 2002 increased legal scrutiny over accounting practices firms use in their financial reports. CEOs and CFOs are required to certify the accuracy of financial reports in SEC filings, which holds them responsible for, and increases the personal litigation risk related to, financial reports (Zhang, 2007). Cohen, Dey, and Lys (2008) provide evidence

that accrual-based earnings management sharply declined in the period following the Sarbanes-Oxley Act while real earnings management increased. They argue that the decline in accrual management is expected because of the increased legal costs associated with Sarbanes-Oxley and the fact that accrual management is detectable. Sarbanes-Oxley imposes a direct legal accountability on CEOs and CFOs for accounting practices used in financial reporting such that CFOs can be personally sued for misrepresentations in financial reports. Therefore, it is not clear that allowing investors to bring an additional claim to a lawsuit based on breach of fiduciary duty as the *Gantler* ruling now permits, actually increases the CFO's personal litigation risk for actions already covered under the Sarbanes-Oxley act, such as accrual-based earnings management. Therefore, we have no prediction of the ruling's effect on firms' accruals-based earnings management practices.

### *2.5 Litigation risk and CFO's language optimism*

When testing the before-mentioned predictions, we effectively measure disclosure and accounting practices at the **firm** level. We differentiate between firms that should be affected by the *Gantler* ruling and firms that should not by comparing firms with non-board-serving CFOs and firms with board-serving CFO's. In this section we describe a prediction that relies on a softer measure of disclosure – speech tone in earnings announcement conference calls – which allows us to compare CFOs' behavior change following the *Gantler* ruling to the change in behavior of the same firm's CEO.

In recent years, with the emergence of textual analysis (e.g., Mayew, 2008), researchers have been using more subtle forms of disclosure, such as managers' tone in conference calls, to proxy for firms' disclosure practices. Studies such as Larcker and Zakolyukina (2012), which analyze deceptive discussions in conference calls, and Davis et al. (2014), which link optimistic

tone in conference calls with manager's specific characteristics, are examples of the use of textual analysis to detect disclosure patterns. More directly related to our analysis is a recent study by Rogers, Van Buskirk, and Zechman (2011) that compile a sample of lawsuits filed by investors in federal courts and find that investors target optimistic statements made by managers during conference calls. The basic argument made by the plaintiffs is that the statements triggered unrealistically optimistic expectations about the firm. The authors further investigate whether the firms that ended up being sued used a more optimistic tone in earnings announcements than a comparable sample of firms with similar characteristic that were not sued. They find that the overall tone of the conference calls, the basis for the litigation, was on average more optimistic than the tone of conference calls of comparable firms. This study was the first to provide such evidence. Francis, Philbrick, and Schipper (1994), who also used a form of textual analysis, found no such evidence.

Consistent with Rogers, Van Buskirk, and Zechman (2011), we predict the tone used by non-board-serving CFOs in firm conference calls following earnings announcement is less optimistic in the years that follow the *Gantler* ruling. We expect CEOs of these same firms to be unaffected by the ruling.

### **3. Sample Selection and Descriptive Statistics**

#### *3.1 Sample selection*

We start the sample selection process 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 firms on which boards a CFO serves on and

firms on which a CFO does not, we merge the director data with the CFO data. We restrict our sample to fiscal years 2004–2012 to avoid any confounding effects of the 2002 Sarbanes-Oxley Act, which increased management litigation risks (Zhang, 2007). Requiring firms in our sample to also have Compustat and CRSP data available yields a sample size of 12,550 firm-years (1,754 firms).

CFOs serve on the board of directors of 12.1% of the sample observations<sup>5</sup> (1,518 firm-years out of 12,550). Table 1, Panel A summarizes the sample distribution by year, the number of CFOs serving on boards per year, and the percentage of firms with a board-serving CFO. The number of observations per year is stable over time, ranging from 1,326 to 1,486. The percentage of board-serving CFOs is also stable over time, ranging from 11% to 14%.

Panel B of Table 1 reports the sample distribution by industry using two-digit SIC industry codes. There is no obvious industry clustering in the sample and the industries with the highest representation in our sample are Business Services (9.1%), Electronic and Other Electric Equipment (7.1%), Chemical and Allied Products (6.4%), and Depository Institutions (6.4%). Panel B also reports the percentage of CFOs serving on the board for each industry. While this percentage varies between 0.0% for Agricultural Production/Crops and Agricultural Services industry to 55.6% in the Agricultural Production/Livestock industry there is no clustering of industries on which CFOs serve on the board of directors.

Finally, Panel C of Table 1 reports the sample distribution by state of incorporation. The sample is clearly dominated by Delaware-incorporated firms with 58% of sample firms incorporated. The percentage of board-serving CFOs in Delaware-incorporated firms is very

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<sup>5</sup> In 48 firm-years the CFO also hold the CEO position. In these cases we did not classified 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.

similar to the whole sample percentage (11.8% vs. 12.1%). Some states exhibit higher participation of board-serving CFOs (e.g., Nebraska with 44% of board-serving CFOs) and some with no participation at all of CFOs on the board of directors (e.g., South Carolina, Oklahoma, Arizona). However, no single state, barring Delaware, has a significant influence on the sample.<sup>6</sup>

### *3.2 Descriptive statistics*

Table 2 reports the descriptive statistics for our sample firms. Panel A reports statistics for all sample firms. Statistics for sample firms do not exhibit obvious selection problems and fairly represent the population of COMPUSTAT firms. The average market-to-book ratio in our sample is 2.82, the average return on assets (ROA) is 11% and average leverage is 21%, all consistent with COMPUSTAT's population of public firms' averages. Panel B reports statistics for sample firms partitioned by whether the CFO serves on the board of directors. Statistics do not exhibit marked differences in terms of firm size, market-to-book ratio, ROA, leverage, and other financial measures between firms in which there is a board-serving CFO or non-board-serving CFO.

## **4. 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

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<sup>6</sup> We keep all states in the sample because other states tend to follow Delaware with regards to corporate litigation and therefore we expect the effect of the *Gantler* ruling to extend beyond firms that were incorporated in Delaware (Reza, 2013). Our results do not change if we keep only Delaware-incorporated firms in the sample.

financial disclosure and accounting choices. However, we do not expect the *Gantler* ruling to affect the group of firms in our control group, as board-serving CFOs were already subject to personal litigation risk prior to the ruling. Thus, the interaction of CFO board membership variable with years post-*Gantler* ruling 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:

$$DEP\_VAR_{i,t} = \beta_0 + \beta_1 Post_{i,t} + \beta_2 CFONotOnBoard_{i,t} + \beta_3 Post_{i,t} * CFONotOnBoard_{i,t} + \beta_{4-i} Controls_{i,t} + \beta_{j-0} FiscalYear_{i,t} + FirmFixedEffects + \varepsilon_{i,t} \quad (1)$$

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 provision of early disclosure of negative news, a firm's financial reporting conservatism, accrual-based earnings management, and the tone of the CFO in earnings announcement conference calls.

$Post_{i,t}$  is an indicator variable equal to one for fiscal years 2010 onwards and zero otherwise.  $CFONotOnBoard_{i,t}$  is an indicator variable equal to one for firms on which the CFO does not serve on the board of directors 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 year 2009, we eliminate year 2009 observations to ensure two clean groups—firm years before the ruling and firm years after the ruling.

## 4.2 Empirical results

### 4.2.1 Early disclosure of bad news

Using analysts' forecasts and firms' interim guidance, we test whether firms with non-board-member CFOs attempt to preempt potential litigation after the *Gantler* ruling by providing early disclosure of negative information. First, we identify a subset of firm quarters in which firms are likely to report negative earnings news that miss analysts' consensus forecasts. To be included in the subset, a firm's actual earnings per share for period  $t$  should fall short of analysts' median forecasts for period  $t$  that was issued immediately after period  $t-1$  earnings announcement. We then estimate model (1) as a logit regression for that subsample of firms. The dependent variable in the regression is an indicator variable that takes the value of 1 if the firm issues an earning interim guidance (warning) for period  $t$  in the middle of period  $t$  but before the earnings announcement of period  $t$  and zero otherwise (*PotNegSur*). As a placebo test, we also estimate the same regression for a subset of firms with potentially good news. The subset of firms with potentially good news is identified in a similar manner to the subset of firms with potentially bad news with the only change being that we require actual earnings for the period to beat analysts' forecasts (*PotPosSur*). If indeed a non-board-member CFO attempts to preempt personal litigation risk, we expect the coefficient on *CfoNotOnBoard\*Post* to be positive and significant for the potentially negative news subsample and not statistically significant for the potentially positive news subsample.

We follow Rogers, Van Buskirk, and Zechman (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 that the information of the potential miss was known to the CFO. Appendix A reports definitions and measurement description of all control variables. Results of the logit regressions are reported in Table 3. Column 1 reports results for the potentially bad news subsample. The coefficient on the variable of interest (*CfoNotOnBoard\*Post*) is significant at the 1% level (coefficient=1.09, z-stat=2.65). Results are consistent with behavior change following the *Gantler* ruling for the group of CFOs who now face higher litigation risk. Column 2 reports results for the subset of firms with potentially good news. In their review paper, Beyer, Cohen, Lys and Walther (2010) point to a gap in the literature on the relation between litigation risk and disclosure of good news (p. 310). The coefficient *CfoNotOnBoard\*Post* is not significant at conventional level, suggesting no difference between firms with non-board-members CFOs and firms with board-member CFOs in the likelihood of early disclosure of good new. This result is consistent with the notion that, unlike in the case of bad news, increased personal litigation risk does not trigger the early disclosure of good news.

#### 4.2.2 Accounting conservatism

We follow Kahn and Watts (2009)<sup>7</sup> and construct the C\_Score measure, which proxies for the asymmetric timeliness of bad news recording in financial reports. We expect firms with CFOs not serving on the board of directors to record negative news in a more timely fashion following the *Gantler* ruling. We control in the analysis for variables that have been 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,

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<sup>7</sup> 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.

cash flow, ROA, intangible assets, capital intensity, and investments. Table 4 reports results. Column 1 shows the results with no control variables. Column 2 shows results with all control variables included. The coefficient on our explanatory variable, *CfoNotOnBoard\*Post*, is positive and significant at the 1% level (coefficient=0.03, t-stat=2.42). We interpret the results to suggest that the financial reports of firms with CFOs not serving on the board of directors have become more conservative in the post-*Gantler* period when compared with firms with CFOs that serve on the board of directors. Our results are consistent with a positive correlation between personal litigation risk and asymmetric timeliness of bad news reporting.

#### 4.2.3 Accrual-based earnings management

We use two constructs to measure a firm's accrual-based earnings management activity: The Dechow et al. (1995) modified Jones (1991) model and the Dechow and Dichev (2002) mapping of earnings to cash flows. We estimate regression model (1) using each construct alternatively as the dependent variable in the regression. We include the same control variables as used in the accounting-conservatism analysis. Results are reported in Table 5. Columns 1 and 2 report results using the Dechow et al. (1995) modified Jones model construct as the dependent variable (*EMI*), and Columns 3 and 4 report results using the Dechow and Dichev (2002) construct (*EM2*). The coefficient on the variable of interest, *CfoNotOnBoard\*Post*, is not significant at conventional levels in all regressions of Table 5. These results suggest that accrual management is not affected by the ability to directly sue a CFO for breaching fiduciary duty, which is explicitly permitted under the *Gantler* ruling.

Evaluation of these results in conjunction with the results on accounting conservatism point to an interesting insight as to the type of actions deemed risky for litigation following the Sarbanes-Oxley Act. Accounting conservatism affects investors along two dimensions: disclosure of bad news and accounting quality. Thus, the above-mentioned results on accounting

conservatism could be attributed to both disclosure and accounting quality. Attributing the results to accounting quality suggests that the increased personal litigation risk following Sarbanes-Oxley due to the failure to provide high-quality financial reports was not fully internalized by managers. The insignificant results of the effect of the *Gantler* ruling on accrual earnings management proxies, however, suggest that the early bad news disclosure component of conservatism is likely influenced by the increased personal litigation risk following the *Gantler* ruling. In addition, consistent with Cohen, Dey, and Lys (2008), the effect of personal legal costs as a mechanism to enforce accruals quality was not trivial.

#### 4.2.4 CFO tone negativity

We follow Lang and Lundholm (2000), Rogers, Van Buskirk, and Zechman (2011), Larcker and Zakolyukina (2012), and Davis et al. (2014) 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 section of the conference call (*WORDS*), the number of negative words spoken during the briefing section of the conference call (*NEG\_WORDS*), and the number of positive words spoken during the briefing section of the conference 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 specialized applicability to business text.<sup>8</sup> We construct the following variables based on the above measures: (1) Number of words spoken by the CFO (*CFO\_WORDS*). (2) Number of words spoken by the CEO (*CEO\_WORDS*). (3) Tone negativity of the entire briefing section of the conference call (*NEG\_TONE*) measured as:  $(NEG\_WORDS - POS\_WORDS)/WORDS$ . (4) Tone negativity of the CFO (*CFO\_NEG\_TONE*). (5) Tone negativity of the CEO (*CEO\_NEG\_TONE*).

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<sup>8</sup> The Loughran and McDonald dictionary excludes words that are typically not negative in a financial context such as liability, cost, and tax.

(6) CFO tone negativity relative to CEO's tone negativity (*REL\_TONE*) measured as *CFO\_NEG\_TONE - CEO\_NEG\_TONE*. 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 SeekingAlpha.com website. We identify each firm's CFO and CEO from the transcripts. Due to SeekingAlpha.com limitations, the sample used in this analysis begins in year 2006.<sup>9</sup> We delete firms that provided only an audio link of the conference call. Table 6, Panel A reports the descriptive statistics of the basic measures and variables described above for the full sample. The sample consists of 16,967 earnings-announcement conference call transcripts. The average number of words spoken during the briefing section of the conference call is 3,506. CFOs and CEOs use a large portion of conference call time. A CFO contributes an average of 35% of the words spoken during the briefing section of the conference call and a CEO contributes an average of 37%. When both speak during the call, they comprise more than 70% of the words spoken. The tone of the conference call is on average slightly more positive than negative with approximately 1% more positive words used during the conference call than negative words. This statistic is also displayed by CFOs and CEOs when measured separately (1.5% and 1% more positive words than negative ones, respectively). Finally, there is no marked difference in average optimism between the CEOs and CFOs.

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<sup>9</sup> Due to the website technical constraints, we use only the briefing section of the earnings conference call and not the question-and-answer section of the call. Larcker and Zakolyukina (2012) find no difference in the management deception between the briefing and the Q&A sections of the conference calls.

Table 6, Panel B reports the tone statistics for sample firms partitioned by whether the CFO serves on the board of directors. While most statistics discussed above do not display marked differences between firms with board-serving and non-board-serving CFOs, the CFOs' tone is on average slightly more optimistic when the CFO does not serve on the board of directors.

Table 7 reports the tone-regression analyses results. Columns 1, 3, and 5 report results for regressions in which the dependent variables are based on the number of words spoken and Columns 2, 4, and 6 report results for regressions in which the dependent variables are based on the negativity of the speaker's tone. Columns 1 and 2 report results of the analysis for the full briefing section of the conference call indiscriminate of the speaker. Columns 3 and 4 report results of analyses in which the CFO is the speaker and Columns 5 and 6 report results of analyses in which the CEO is the speaker. Column 7 reports results of an analysis of the CFO's tone negativity compared to the tone negativity of the CEO of the same company.<sup>10</sup>

The total number of words spoken during the briefing section of the conference call is not affected by our main variable of interest, the interaction between *CfoNotOnBoard* and *Post*. The length of the CEO and CFO discussions are also unaffected by the change in CFOs' personal litigation risk. Thus, the structure of the conference call, as measured by the number of words spoken in the briefing section of the conference call has not changed following the *Gantler* ruling. To the extent that the number of words spoken during the briefing section measures the level of firms' disclosure, these results suggest that the overall level of disclosure has not changed with the increase in the CFO's personal litigation risk.

Analysis on the tone of the speakers provides evidence consistent with CFOs not serving on the board using less optimistic language in the post-*Gantler* period. The overall tone of the

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<sup>10</sup> In the regression analysis, we use a linear transformation of the WORDS variables—WORDS/100 to ease understanding of coefficients.

conference call (Column 2) is significantly more negative following the *Gantler* ruling for firms with CFOs that do not serve on the board of directors (coefficient on the interaction variable, *CfoNotOnBoard\*Post*, is 0.001 with z-stat of 2.45). This result is consistent with the fact that the CFO is a major contributor to the call and therefore affects the overall tone. The non-board-serving-CFOs' tone (Column 4) is significantly more negative after the ruling (coefficient=0.002, z-stat=4.25). The CEOs' tone (Column 6), however, does not change for the same subset of firms. Finally, the analysis comparing CFO tone negativity with CEO tone negativity of the same company yields results consistent with only CFOs changing to a more negative tone following the increase in personal litigation risk (coefficient=0.002, z-stat=4.89).

Our results are consistent with Rogers, Van Buskirk, and Zechman (2011) who provide evidence that an optimistic tone in conference calls increases a firm's litigation risk. Results suggest that in an effort to mitigate the increased personal litigation risk, CFOs have become less optimistic in conference calls after the *Gantler* ruling.

## **5. Conclusion**

When investigating the effect of litigation risk on managerial decisions, researchers face the challenge of measuring litigation risk. In this study we exploit an exogenous shock to CFO personal litigation risk to study and provide evidence that the CFO is influential in firms' corporate disclosure decisions and that the threat of personal litigation may affect corporate disclosure and accounting decisions. Specifically, we find that personal litigation risk will induce managers to advance the disclosure of bad news through earnings guidance and financial reports (conservatism). We do not, however, find an effect on a firm's accruals earnings management. This lack of evidence suggests that the Sarbanes-Oxley Act is effective in imposing personal litigation risk on CEOs and CFOs to promote accrual quality to a degree that additional litigation

risk does not have an incremental effect. Finally, we find that personal litigation risk drives CFOs to use less-optimistic language in conference calls.

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## APPENDIX A: Variable Definition

<i>Post</i>	Indicator variable—coded 1 for the period post the Gantler ruling (2010–2012)
<i>CfoNotOnBoard</i>	Indicator variable—coded 1 for firm years in which CFOs do not serve on the board of directors
<i>C_score</i>	Khan – Watts (2009) conservatism measure
<i>PotNegSur</i>	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.
<i>PotPosSur</i>	Potentially positive surprise—For the subset of firms for which actual earnings per share for period t exceeds 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 for period t in the middle of period t but before the earnings announcement of period t.
<i>EM1</i>	Residuals of the Dechow et al. (1995) modified Jones (1991) model
<i>EM2</i>	Residuals of the Dechow and Dichev (2002) accrual cash-flow mapping model
<i>WORDS</i>	Total number of words spoken during the briefing section of the conference call
<i>NEG_WORDS</i>	Total number of negative words spoken during the briefing portion of the conference call (based on the Loughran and McDonald (2011) dictionary)
<i>POS_WORDS</i>	Total number of positive words spoken during the briefing portion of the conference call (based on the Loughran and McDonald (2011) dictionary)
<i>NEG_TONE</i>	Tone negativity of the conference call measured as: (NEG_WORDS - POS_WORDS)/WORDS
<i>REL_TONE</i>	Relative Tone of CFO to CEO calculated as NEG_TONE_CFO-NEG_TONE_CEO
<i>Firm Age</i>	Firm age (using first year company appears in COMPUSTAT as year 0)
<i>R&amp;D</i>	Research and development expense / lagged assets (COMPUSTAT XRD / AT)
<i>Log MV</i>	Market value of equity (COMPUSTAT CSHO*PRCC_F)
<i>MTB</i>	Market value of equity / book value of equity (COMPUSTAT (CSHO*PRCC_F)/CEQ)
<i>LEV</i>	Total debt / total assets (COMPUSTAT (DLC+DLTT)/AT)
<i>CFO</i>	Operating activities net cash flow / total assets (COMPUSTAT OANCF/AT)
<i>ROA</i>	Return on assets (COMPUSTAT EBIT/AT)
<i>Intangibles</i>	Intangible assets / total assets (COMPUSTAT INTAN/AT)
<i>PP&amp;E</i>	Net PP&E / total assets (COMPUSTAT PPENT/AT)
<i>CAPEX</i>	Capital expenditure / total assets (COMPUSTAT CAPX/AT)
<i>AbsDiff</i>	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.
<i>Analyst Forecast Dispersion</i>	Standard deviation of forecasts divided by absolute mean forecast.

**Table 1 Sample Description**

Panel A: This table reports by fiscal year statistics of the number and percentage of observation of firms with CFOs not on the board of directors.

Fiscal year	# Observations	# CFO on board	Percent CFO on board
2004	1,357	155	11.4%
2005	1,354	188	13.9%
2006	1,394	178	12.8%
2007	1,396	181	13.0%
2008	1,326	167	12.6%
2009	1,384	155	11.2%
2010	1,408	155	11.0%
2011	1,445	152	10.5%
2012	1,486	187	12.6%
Total	12,550	1,518	12.1%

Panel B: This table reports by industry (2-digit SIC code) breakdown of the sample. The panel table also reports the percentage of firms within the industry with CFOs serving on the board of directors.

SIC Code	Industry Description	# Obs	% of sample	% CFO on board
1	Agricultural Production - Crops	9	0.1%	0.0%
2	Agricultural Production - Livestock	9	0.1%	55.6%
7	Agricultural Services	9	0.1%	0.0%
10	Metal, Mining	27	0.2%	7.4%
12	Coal Mining	42	0.3%	0.0%
13	Oil & Gas Extraction	405	3.2%	7.7%
14	Nonmetallic Minerals, Except Fuels	32	0.3%	6.3%
15	General Building Contractors	106	0.8%	31.1%
16	Heavy Construction, Except Building	48	0.4%	12.5%
17	Special Trade Contractors	30	0.2%	16.7%
20	Food & Kindred Products	330	2.6%	16.7%
21	Tobacco Products	30	0.2%	23.3%
22	Textile Mill Products	29	0.2%	0.0%
23	Apparel & Other Textile Products	128	1.0%	1.6%
24	Lumber & Wood Products	68	0.5%	13.2%
25	Furniture & Fixtures	80	0.6%	23.8%
26	Paper & Allied Products	167	1.3%	9.0%
27	Printing & Publishing	91	0.7%	18.7%
28	Chemical & Allied Products	802	6.4%	10.3%
29	Petroleum & Coal Products	106	0.8%	7.5%
30	Rubber & Miscellaneous Plastics Products	94	0.8%	28.7%
31	Leather and Leather Products	63	0.5%	22.2%

Panel B: continued

SIC Code	Industry Description	# Obs	% of sample	% CFO on board
32	Stone, Clay, & Glass Products	53	0.4%	5.7%
33	Primary Metal Industries	167	1.3%	12.0%
34	Fabricated Metal Products	155	1.2%	12.9%
35	Industrial Machinery & Equipment	707	5.7%	12.9%
36	Electronic & Other Electric Equipment	891	7.1%	14.8%
37	Transportation Equipment	296	2.4%	17.2%
38	Instruments & Related Products	693	5.5%	16.7%
39	Miscellaneous Manufacturing Industries	104	0.8%	10.6%
40	Railroad Transportation	36	0.3%	0.0%
42	Trucking & Warehousing	89	0.7%	9.0%
44	Water Transportation	56	0.4%	3.6%
45	Transportation by Air	75	0.6%	17.3%
47	Transportation Services	54	0.4%	22.2%
48	Communications	181	1.4%	8.8%
49	Electric, Gas, & Sanitary Services	667	5.3%	4.2%
50	Wholesale Trade - Durable Goods	291	2.3%	15.5%
51	Wholesale Trade - Nondurable Goods	126	1.0%	4.0%
52	Building Materials & Gardening Supplies	43	0.3%	4.7%
53	General Merchandise Stores	127	1.0%	19.7%
54	Food Stores	54	0.4%	13.0%
55	Automotive Dealers & Service Stations	91	0.7%	25.3%
56	Apparel & Accessory Stores	217	1.7%	12.0%
57	Furniture & Home Furnishings Stores	57	0.5%	26.3%
58	Eating & Drinking Places	208	1.7%	4.3%
59	Miscellaneous Retail	221	1.8%	13.1%
60	Depository Institutions	800	6.4%	10.1%
61	Nondepository Institutions	81	0.6%	6.2%
62	Security & Commodity Brokers	248	2.0%	9.3%
63	Insurance Carriers	503	4.0%	10.3%
64	Insurance Agents, Brokers, & Service	74	0.6%	9.5%
65	Real Estate	29	0.2%	27.6%
67	Holding & Other Investment Offices	591	4.7%	11.0%
70	Hotels & Other Lodging Places	17	0.1%	11.8%
72	Personal Services	43	0.3%	18.6%
73	Business Services	1141	9.1%	11.0%
75	Auto Repair, Services, & Parking	20	0.2%	20.0%
78	Motion Pictures	29	0.2%	17.2%
79	Amusement & Recreation Services	61	0.5%	8.2%
80	Health Services	222	1.8%	22.1%
82	Educational Services	78	0.6%	7.7%
87	Engineering & Management Services	199	1.6%	7.5%
99	Non-Classifiable Establishments	12	0.1%	0.0%

Panel C: This table reports by state breakdown of the sample. The panel table also reports the percentage of firms within the state with CFOs serving on the board of directors.

State of Incorporation	# Obs	% of sample	% CFO on board
Alaska	9	0.1%	0.0%
Alabama	18	0.1%	27.8%
Arkansas	26	0.2%	7.7%
Arizona	20	0.2%	0.0%
California	250	2.0%	6.8%
Colorado	1	0.0%	0.0%
Connecticut	46	0.4%	8.7%
District of Columbia	8	0.1%	0.0%
Delaware	7155	57.7%	11.8%
Florida	195	1.6%	17.9%
Georgia	166	1.3%	20.5%
Hawaii	11	0.1%	0.0%
Iowa	38	0.3%	15.8%
Idaho	9	0.1%	0.0%
Illinois	51	0.4%	3.9%
Indiana	144	1.2%	3.5%
Kansas	19	0.2%	0.0%
Kentucky	15	0.1%	0.0%
Louisiana	45	0.4%	8.9%
Massachusetts	214	1.7%	20.1%
Maryland	640	5.2%	9.8%
Michigan	131	1.1%	13.0%
Minnesota	250	2.0%	14.8%
Missouri	132	1.1%	22.7%
Mississippi	31	0.3%	38.7%
Montana	9	0.1%	0.0%
North Carolina	130	1.0%	13.1%
Nebraska	18	0.1%	44.4%
New Jersey	174	1.4%	13.2%
New Mexico	9	0.1%	0.0%
Nevada	161	1.3%	14.3%
New York	375	3.0%	14.4%
Ohio	398	3.2%	14.1%
Oklahoma	34	0.3%	0.0%
Oregon	101	0.8%	15.8%
Pennsylvania	311	2.5%	8.4%
Puerto Rico	2	0.0%	0.0%
Rhode island	9	0.1%	0.0%
South Carolina	42	0.3%	0.0%

Panel C: continued

State of Incorporation	# Obs	% of sample	% CFO on board
South Dakota	18	0.1%	0.0%
Tennessee	117	0.9%	15.4%
Texas	213	1.7%	4.7%
Utah	48	0.4%	14.6%
Virginia	218	1.8%	10.1%
Vermont	7	0.1%	0.0%
Washington	146	1.2%	11.6%
Wisconsin	212	1.7%	16.5%
West Virginia	13	0.1%	0.0%
Wyoming	7	0.1%	0.0%

**Table 2 Descriptive Statistics**

Panel A: The descriptive statistics of the dependent and control variables.

Variable Name	# Observations	Mean	p25	p50	p75
<b>Dependent</b>					
<b>Early Disclosure</b>					
<i>PotNegSur</i>	8,405	0.21			
<i>PotPosSur</i>	19,961	0.17			
<b>Conservatism</b>					
<i>C_score</i>	9,724	-0.033	-0.225	0.012	0.202
<b>Earnings Management</b>					
<i>EM1</i> (Dechow et al., 1995)	8,513	0.00	-0.03	0.00	0.04
<i>EM2</i> (Dechow and Dichev ,2002)	7,471	0.02	0.01	0.02	0.03
<b>Control</b>					
<i>Log MV</i>	10,399	7.55	6.64	7.49	8.44
<i>MTB</i>	10,980	2.82	1.44	2.15	3.35
<i>LEV</i>	11,071	0.21	0.05	0.19	0.32
<i>OCF</i>	11,053	0.11	0.05	0.10	0.16
<i>ROA</i>	11,002	0.11	0.05	0.09	0.16
<i>Intangibles</i>	10,780	0.19	0.02	0.12	0.31
<i>PP&amp;E</i>	10,551	0.26	0.06	0.17	0.38
<i>CAPEX</i>	11,063	0.05	0.01	0.03	0.06
<i>R&amp;D</i>	11,166	0.03	0.00	0.00	0.03
<i>Firm Age</i>	11,130	26.63	13.00	21.00	41.00
<i>AbsDiff – negative surprise</i>	8,405	0.09	0.02	0.045	0.11
<i>AbsDiff – positive surprise</i>	19,961	0.06	0.01	0.03	0.08

Panel B: The descriptive statistics of the dependent and control variables sorted by whether the firm's CFO is a board member.

Variable Name	CFO not on board					CFO on board				
	# Obs	Mean	p25	p50	p75	# Obs	Mean	p25	p50	p75
<b>Dependent</b>										
<b>Early Disclosure</b>										
<i>PotNegSur</i>	7,332	0.21				1,073	0.20			
<i>PotPosSur</i>	17,313	0.18				2,648	0.17			
<b>Conservatism</b>										
<i>C_score</i>	8,517	-0.030	-0.221	0.014	0.208	1,207	-0.052	-0.249	-0.016	0.172
<b>Earnings Management</b>										
<i>EMI</i> (Dechow et al., 1995)	7,429	0.00	-0.03	0.00	0.04	1,084	-0.00	-0.04	-0.00	0.03
<i>EM2</i> (Dechow and Dichev, 2002)	6,527	0.02	0.01	0.02	0.03	944	0.03	0.01	0.02	0.04
<b>Control</b>										
<i>Log MV</i>	9,112	7.54	6.62	7.47	8.43	1,287	7.63	6.75	7.63	8.47
<i>MTB</i>	9,633	2.77	1.43	2.13	3.31	1,347	3.11	1.54	2.28	3.60
<i>LEV</i>	9,719	0.21	0.05	0.19	0.32	1,352	0.20	0.06	0.17	0.31
<i>OCF</i>	9,702	0.11	0.05	0.10	0.16	1,351	0.11	0.06	0.11	0.16
<i>ROA</i>	9,661	0.11	0.05	0.09	0.15	1,341	0.11	0.05	0.10	0.17
<i>Intangibles</i>	9,455	0.19	0.02	0.11	0.31	1,325	0.20	0.02	0.13	0.31
<i>PP&amp;E</i>	9,261	0.27	0.06	0.17	0.39	1,290	0.24	0.07	0.17	0.33
<i>CAPEX</i>	9,710	0.05	0.01	0.03	0.06	1,353	0.05	0.01	0.03	0.06
<i>R&amp;D</i>	9,803	0.03	0.00	0.00	0.03	1,363	0.03	0.00	0.00	0.04
<i>Firm Age</i>	9,774	26.65	13.00	21.00	41.00	1,356	26.51	14.00	21.00	40.50
<i>AbsDiff – negative surprise</i>	7,332	0.09	0.02	0.04	0.11	1,073	0.10	0.02	0.05	0.12
<i>AbsDiff – positive surprise</i>	17,313	0.06	0.01	0.03	0.08	2,648	0.06	0.01	0.03	0.08

**Table 3 Early Disclosure of Bad News**

This table reports results of a logit analysis on early disclosure of bad news. Column 1 reports results for a subset of sample firms with potentially negative earnings surprise. Firms included in the subset 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 for the two variables (*CfoNotOnBoard\*Post*), and control variables. Column 2 reports results for a similar analysis to Column 1 for a subset of sample firms with potentially positive earnings surprise. Firms included in the subset beat at period t median analysts' earnings forecasts that were issued immediately after earnings announcement of period t-1. All regressions include year- and firm-fixed effects (suppressed). The sample include years 2004 to 2012. Year 2009 is excluded from the analysis. Z-statistics are reported in parentheses below the coefficient estimates. \*\*\*, \*\*, \* indicate significance at the 1%, 5%, or 10% levels respectively, two-tailed tests.

Independent Variables	Potentially negative surprise	Potentially positive surprise
<i>Post</i>	-6.35*** (-7.61)	-5.03*** (-9.34)
<i>CfoNotOnBoard</i>	-0.29 (-1.08)	-0.12 (-0.82)
<i>CfoNotOnBoard*Post</i>	1.09*** (2.65)	0.24 (1.26)
<i>AbsDiff</i>	2.9*** (7.35)	1.57*** (4.31)
<i>Analyst Forecast Dispersion</i>	-1.18*** (-3.11)	-0.74** (-2.56)
<i>Log MV</i>	0.42*** (3.4)	0.29*** (3.28)
<i>MTB</i>	-0.06* (-1.86)	0.00 (-0.21)
<i>LEV</i>	-1.66** (-2.44)	0.64 (1.63)
<i>Year FE</i>	Yes	Yes
<i>Firm FE</i>	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.13	0.07
<i>Num Obs</i>	4,035	10,410

**Table 4 Accounting Conservatism**

This table reports OLS results of the accounting-conservatism analysis. 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. The dependent variable in both analyses 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 for the two variables (CfoNotOnBoard\*Post), and control variables. Control variables are defined in the appendix. All regressions include year- and firm-fixed effects (suppressed). The sample include years 2004 to 2012. Year 2009 is excluded from the analysis. 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)
<i>Post</i>	0.23*** (20.07)	0.61*** (13.56)
<i>CfoNotOnBoard</i>	-0.02*** (-2.97)	-0.02** (-2.59)
<i>CfoNotOnBoard*Post</i>	0.05*** (4.13)	0.03** (2.42)
<i>Firm Age</i>		-0.05*** (-7.99)
<i>R&amp;D</i>		-0.08 (-0.93)
<i>Log MV</i>		-0.04*** (-9.86)
<i>MTB</i>		-0.01*** (-9.25)
<i>LEV</i>		0.02 (0.73)
<i>CFO</i>		-0.09** (-2.57)
<i>ROA</i>		-0.45*** (-11.82)
<i>Intangibles</i>		0.03 (1.44)
<i>PP&amp;E</i>		0.06** (2.25)
<i>CAPEX</i>		-0.19*** (-3.11)
<i>Constant</i>	0.01 (0.82)	1.48*** (10.76)
<i>Year FE</i>	Yes	Yes
<i>Firm FE</i>	Yes	Yes
<i>#observations</i>	9,509	8,634

**Table 5 Accrual-Based Earnings Management**

This table reports the OLS results of the accrual-based earnings management analysis. Columns 1 and 2 report results in which the dependent variable is the modified Jones model (Dechow et al., 1995). 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. Columns 3 and 4 report results for the Dechow and Dichev (2002) accrual cash-flow mapping model. 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 for the two variables (*CfoNotOnBoard\*Post*), and control variables. Control variables are defined in the appendix. All regressions include year- and firm-fixed effects (suppressed). The sample include years 2004 to 2012. Year 2009 is excluded from the analysis. 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	EM1		EM2	
	(1)	(2)	(3)	(4)
<i>Post</i>	0.00 (-0.48)	0.05** (2.57)	-0.00* (-1.66)	0.00 (0.16)
<i>CfoNotOnBoard</i>	0.01* (1.74)	0.00 (0.88)	-0.00* (-1.87)	-0.00* (-1.91)
<i>CfoNotOnBoard*Post</i>	0.00 (-0.41)	0.00 (0.41)	0.00 (-0.45)	0.00 (-0.66)
<i>Firm Age</i>		-0.01** (-2.47)		0.00 (-0.38)
<i>R&amp;D</i>		-0.39*** (-14.22)		0.07*** (4.39)
<i>Log MV</i>		-0.01*** (-6.5)		0*** (-3.52)
<i>MTB</i>		0*** (4.75)		0.00 (1.38)
<i>LEV</i>		-0.08*** (-9.56)		-0.01 (-1.38)
<i>CFO</i>		-0.8*** (-56.96)		-0.03*** (-4.67)
<i>ROA</i>		0.65*** (45.83)		0.01 (1.25)
<i>Intangibles</i>		0.05*** (7.51)		-0.01*** (-4.14)
<i>PP&amp;E</i>		0.06*** (6.08)		-0.02*** (-2.65)
<i>CAPEX</i>		0.09*** (4.1)		0.01 (0.74)
<i>Constant</i>	0.00 (-0.09)	0.23*** (4.02)	0.03*** (18.49)	0.07*** (2.65)
<i>Year FE</i>	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes
<i>#observations</i>	8,513	7,863	7,471	6,386

**Table 6 Descriptive Statistics: Speech Variables**

Panel A: The descriptive statistics of the dependent variables.

	# Observations	Mean	p25	p50	p75
<i>Tone Variables</i>					
# words ( <i>WORDS</i> )	16,967	3,506	2,528	3,296	4,194
# words CEO <sup>11</sup> ( <i>WORDS_CEO</i> )	12,985	1,288	834	1,165	1,591
% words by CEO	12,977	0.37	0.29	0.35	0.43
# words CFO ( <i>WORDS_CFO</i> )	12,985	1,238	815	1,120	1,530
% words by CFO	12,977	0.35	0.29	0.35	0.42
% words by CEO&CFO	12,977	0.72	0.61	0.72	0.83
# words CFO/ #words CEO	12,985	1.05	0.72	0.95	1.27
Tone ( <i>NEG_TONE</i> )	16,796	-0.009	-0.014	-0.009	-0.004
CEO tone ( <i>NEG_TONE_CEO</i> )	12,718	-0.006	-0.010	-0.006	-0.003
CFO tone ( <i>NEG_TONE_CFO</i> )	12,689	-0.005	-0.010	-0.005	0.000
Relative tone ( <i>REL_TONE</i> )	12,985	0.002	-0.002	0.001	0.006

Panel B: The descriptive statistics of our dependent variables by CFOs on boards.

	CFO not on board					CFO on board				
	# Obs	Mean	P25	P50	P75	# Obs	Mean	P25	P50	P75
<i>Tone Variables</i>										
# words ( <i>WORDS</i> )	14,643	3,498	2,529	3,279	4,177	2,324	3,561	2,527	3,394	4,286
# words CEO ( <i>WORDS_CEO</i> )	11,216	1,284	830	1,162	1,585	1,769	1,314	857	1,187	1,628
% words by CEO	11,209	0.37	0.29	0.35	0.43	1,768	0.37	0.29	0.35	0.44
# words CFO ( <i>WORDS_CFO</i> )	11,216	1,231	811	1,114	1,526	1,769	1,280	833	1,164	1,565
% words by CFO	11,209	0.35	0.29	0.35	0.42	1,768	0.36	0.29	0.35	0.42
% words by CEO&CFO	11,209	0.72	0.61	0.72	0.83	1,768	0.72	0.61	0.72	0.84
# words CFO/#words CEO	11,216	1.05	0.72	0.95	1.27	1,769	1.08	0.73	0.95	1.26
Tone ( <i>NEG_TONE</i> )	14,502	-0.009	-0.014	-0.009	-0.004	2,294	-0.010	-0.015	-0.010	-0.005
CEO tone ( <i>NEG_TONE_CEO</i> )	10,992	-0.006	-0.010	-0.006	-0.003	1,726	-0.007	-0.011	-0.007	-0.003
CFO tone ( <i>NEG_TONE_CFO</i> )	10,969	-0.005	-0.009	-0.004	0.000	1,720	-0.005	-0.011	-0.005	-0.001
Relative tone ( <i>REL_TONE</i> )	11,216	0.002	-0.002	0.001	0.005	1,769	0.002	-0.003	0.001	0.006

<sup>11</sup> Word & tone analyses by officer use only observations in which both CEO & CFO participate in the conference call.

**Table 7 Speech Tone in Conference Calls**

This table reports results of an OLS analysis 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). Columns 1 and 2 reports results for all conference call participants. Columns 3 and 4 report results for the CFO’s portion of the call and Columns 5 and 6 only for the CFO’s portion of the call. Column 7 reports results for a regression that compares CFO tone negativity with the tone negativity of the CEO of the same firm (REL\_TONE=NEG\_TONE\_CFO-NEG\_TONE\_CEO). All regressions include year- and firm-fixed effects (suppressed). 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 for the two variables (CfoNotOnBoard\*Post), and control variables. The sample include years 2006 to 2012. Year 2009 is excluded from the analysis. 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	Full text		CFO text		CEO text		CFO-CEO
	WORDS	NEG_TONE	WORDS_CFO	NEG_TONE	WORDS_CEO	NEG_TONE	REL_TONE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Post</i>	-3.966*** (-5.07)	-0.002*** (-4.94)	-1.102** (-2.62)	-0.001** (-2.19)	-1.472*** (-3.18)	0.000 (0.49)	-0.001*** (-2.98)
<i>CfoNotOnBoard</i>	0.091 (0.15)	-0.001** (-2.54)	0.029 (0.09)	-0.001** (-2.49)	-0.466 (-1.35)	0.000 (0.69)	-0.001*** (-3.11)
<i>CfoNotOnBoard*Post</i>	-0.338 (-0.51)	0.001** (2.45)	-0.457 (-1.27)	0.002*** (4.25)	0.455 (1.16)	0.000 (-0.24)	0.002*** (4.89)
<i>constant</i>	38.356*** (54.42)	-0.008*** (-25.06)	13.86*** (36.67)	-0.004*** (-8.77)	14.492*** (34.78)	-0.007*** (-21.96)	0.003*** (6.87)
<i>Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i># Obs</i>	16,967	16,796	13,044	12,834	13,833	12,866	12,630