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ABSTRACT

After a lengthy and protracted debate, the Public Company Accounting Oversight Board (PCAOB) adopted new rules requiring disclosure of the engagement partner's name and information about other accounting firms on the new PCAOB Form AP, Auditor Reporting of Certain Audit Participants. We investigate the impact of this regulation on auditor behavior in the context of the auditor's going concern report modification propensity. We document an increase in the propensity to issue a going concern report modification in the disclosure regime, accompanied by a corresponding increase in the Type I ('false positives') error rate. Thus, an unintended consequence of Rule 3211 is the potential reduction in the audit report's informativeness. Conceivably, a more significant repercussion is that going concern modifications can hasten bankruptcy for firms since financial institutions may be reluctant to lend money to firms with modified audit reports. An unjustified increase in the going concern modification rate as evinced in our paper may make U.S. capital markets potentially less attractive to young, upstart, albeit financially-distressed, companies.

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1. Introduction

In response to investor concerns surrounding audit quality, the PCAOB proposed publicly disclosing audit engagement partners (PCAOB, 2009). The PCAOB argued that this disclosure would increase transparency and audit partner accountability, motivating audit partners to create stand-alone reputations, apart from their respective audit firms (PCAOB, 2009, 2011). The audit profession countered that existing audit firm structures provided enough accountability and that audit partner identification would have little effect on audit quality (Deloitte 2012; Ernst & Young 2012; KPMG 2012; PwC 2012).¹ Moreover, audit firms asserted that audit partner disclosure could potentially lead investors into 'drawing unwarranted conclusions about the engagement partner or the audit he or she oversees' (PwC 2015). Consequently, audit partner disclosure could exacerbate auditors' tendency towards excessive auditor conservatism (Barron, Pratt, and Stice 2001). This excessive auditor conser-

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¹ The PCAOB received 184 comment letters on Docket 29, "Improving the Transparency of Audits: Rules to Require Disclosure of Certain Audit Participants on a New PCAOB Form and Related Amendments to Auditing Standards" over four rounds of request for comment. The largest six firms and Center for Audit Quality provided letters in each round. In addition, 16 comment letters were received from state associations of CPAs. Review of these letters generally agree with the concerns identified by the Big Four. Differences tend to be matters of emphasis: there do not appear to be disagreements among the responding CPA firms.

vatism exists as auditors (and audit partners) experience losses and gains asymmetrically. That is, auditors experience greater (lower) reputational and litigation-related losses when failing to detect errors or omissions that increase (decrease) net income (Lennox and Kausar, 2017; Barron et al. 2001).

Thus, after a lengthy and protracted debate, the Public Company Accounting Oversight Board (PCAOB) adopted Rule 3211 (PCAOB 2015). Rule 3211 requires the audit engagement partner's name and information about other accounting firms to be disclosed on the PCAOB's website, using Form AP, Auditor Reporting of Certain Audit Participants. For the first time, the new disclosures allow U.S.-based market participants to identify the audit engagement partner (AEP) who opined on a client's financial statements' veracity. In this paper, we examine the impact of Rule 3211 on the propensity to issue a going concern report modification.

Recent research generates contradictory predictions about Rule 3211's potential impact on audit partner conduct. In a behavioral setting, and contrary to the PCAOB's goal of enhancing audit quality, Cianci, Houston, Montague, and Vogel (2017) find that partner identification leads to less conservative decisions. Partner identification negatively impacts partners' self-reported measures of commitment to the profession and, in turn, commitment to the public. Conversely, Carcello and Santore's (2015) theoretical model predicts that audit partners will become excessively conservative when disclosing their identity. Finally, in an experimental market setting, Brown, Gissel, and Vitalis (2018) investigate whether greater transparency incentivizes audit partners to build individual reputations for quality, distinct from their firms. They find that audit quality is higher when the audit partner's identity is publicly known than when it is not.

Current empirical archival research provides inconsistent evidence that Rule 3211 impacted audit quality. Cunningham, Li, Stein, and Wright (2019) utilize difference-in-difference analyses with separate treatment groups, including a control group of companies that disclosed partner identities before Rule 3211. Cunningham et al. (2019) generally fail to document any significant impact of Rule 3211 on various audit quality measures, most notably discretionary accruals. In contrast, Burke, Hoitash, and Hoitash (2019) document a significant increase in audit quality (as proxied by discretionary accruals) using a balanced panel approach in the initial year of Rule 3211 adoption. These inconsistent results may be attributable to different research designs and/or sample selection methodologies. An important distinction is that both studies empirically model the auditor response using accruals, which the auditor and client jointly determine. Our setting, using a sample and control group of firms likely to receive going concern opinion modifications,² may address these conflicting conclusions by identifying a reporting outcome attributable strictly to the auditor.

Notwithstanding the lack of current research on this issue, using the going concern audit report modification setting to provide insights into the impact of Rule 3211 on auditor behavior and audit quality has several distinct advantages. First, responsibility for the going concern reporting decision rests solely with the auditor (DeFond and Zhang 2014).³ Second, going concern audit reporting errors are straightforward to calculate and do not contain *ex post* measurement error (DeFond and Zhang 2014). This is particularly important as the lack of perfect information about audit performance can mute reputation-building incentives (Brozovsky and Richardson 1998). Third, reputation building requires the timely revelation of the audit reporting error (Mayhew 2001).⁴ Fourth, the auditor's report is the most direct and easily observable communication between an audit partner and market participants (DeFond and Zhang 2014). These properties are critical determinants of reputation building and are unique to the auditor reporting decision setting (Datar and Alles 1999; Brozovsky and Richardson 1998).

Finally, during Rule 3211 deliberations many audit partners expressed concern about the potential litigation contagion effect that Rule 3211 could engender. For example, public disclosure of an audit partner responsible for an adverse financial reporting outcome for one audit client could increase the likelihood of litigation on their other clients (Lambert, Luippold, and Stefaniak 2018). Going concern report modifications reduce the likelihood of litigation (Kaplan and Williams 2013). Regardless of its impact on audit opinion accuracy, it would be reasonable to expect audit partners to increase their post-disclosure propensity to modify their audit opinions. More than other measures, going concern report modification exemplifies this auditor behavior as audit report going concern errors are easily measured, publicly available, attributable solely to the identified audit partner, and need not be inferred (DeFond and Zhang 2014). Thus, we argue that auditor reporting represents a powerful test setting to investigate the potential effect of Rule 3211 on auditor behavior.

To examine our research question, we follow prior research and compile a sample of financially-distressed companies between December 31, 2011, and December 31, 2019.⁵ We then investigate whether a significant shift in the propensity to issue a going concern modification corresponds with the implementation of Rule 3211 (January 31, 2017) while controlling for measures of client financial health and auditor characteristics (e.g., auditor size, tenure). During our sample period, the Financial Accounting Standards Board (FASB) issued ASU 2014–15, Disclosure of Uncertainties about an Entity's Ability to Con-

² When the auditor believes there is substantial doubt about the entity's ability to continue as a going concern for a reasonable period of time, AS 2415, the Consideration of an Entity's Ability to Continue as a Going Concern, requires the auditor to add an explanatory paragraph to the auditor's report. For exposition, we refer to the resulting audit report as a "going concern opinion" or modification.

³ It is unlikely management would favor a going concern report modification. Current research documents that going concern report modifications exacerbate financial distress and represent a self-fulfilling prophecy by accelerating impending bankruptcies (Gerakos, Hahn, Kovrijnykh, and Zhou 2016). Bierstaker and DeZoort (2019) find that management has higher 'substantial doubt' thresholds than auditors. Finally, going concern reporting is often used as a proxy for audit quality, specifically as a signal of auditor independence (DeFond and Zhang 2014).

⁴ Restatements represent another discrete, outcome-based measure of audit quality in which audit quality is unequivocally breached (DeFond and Zhang 2014). However, *ex post* disclosure and revelation of the restatements may lag the original error by several years (DeFond and Zhang 2014).

⁵ Distressed firms are those with both negative operating cash flows and negative net income (Berglund, Eshleman, and Guo 2018; Callaghan, Parkash, and Singhal 2009).

tinue as a Going Concern (FASB, 2014). ASU 2014–15 requires that *management* evaluate if there are conditions that raise substantial doubt about the entity's ability to continue as a going concern. Thus, we also control for management's assessment of the firm's ability to continue as a going concern. Even after controlling for management's going concern evaluation, we document a structural increase in the propensity to issue an audit report going concern modification for distressed clients in the post-disclosure, Rule 3211 setting.

To further understand the potential public policy implications of Rule 3211, we next examine going concern report modification reporting errors in the pre- and post-3211 settings. A Type I going concern reporting error occurs when a firm that received a going concern report modification remains in operation twelve months after the effective balance sheet date – i.e., a 'false positive' (Carson, Fargher, Geiger, Lennox, Raghunandan, and Willekens 2013). A Type II going concern reporting error occurs when a firm that did not receive a going concern report modification declares bankruptcy within twelve months of the balance sheet date – i.e., a 'false negative.' We observe a significantly higher Type I error rate for auditors in the post-disclosure period, although we fail to find evidence of a shift in the Type II error rate. Together, these results indicate that audit partners are more cautious and less accurate in the post-disclosure period.

To sharpen inferences, we next test whether the shift in auditor reporting is attributable to increased perceived litigation risk or reputation concerns. Recall that the excessive auditor conservatism arises because auditors face substantial downside losses either from litigation or reputation impairment when they issue 'clean' audit opinions to companies that subsequently go bankrupt. In contrast, the costs of issuing going-concern opinions to companies that survive are far less severe (Lennox and Kausar, 2017). To address this, we create a state litigation rate variable following Anantharaman, Pittman, and Wans (2016). If litigation risk concerns are a primary determinant in the shift in auditor reporting, we would expect a more pronounced shift in excessively conservative auditor reporting in the more litigious states. However, our analysis does not find support for this notion. Because of the unobservability of pre-3211 audit partner identity, our proxy for audit partner reputation is the ratio of an audit engagement's assets divided by the total assets audited by that audit firm's local office. We assume that the larger the individual client within a local office's client portfolio, the greater the engagement partner's reputation. Our analyses reveal a higher likelihood to issue a going concern modification post-3211 for higher reputation partners. Combined, it appears that reputation concerns are the primary determinant in excessively conservative, post-3211 audit partner reporting.

We contribute to the literature by providing initial, U.S.-based evidence that Rule 3211 exacerbated excessive auditor conservatism in the context of auditor reporting. Our focus on auditor reporting is relevant not only because of its inherent advantages in examining how Rule 3211 influences audit partner behavior but because it is an area of interest to regulators as evinced by the enactment of ASU 2014–15. Prior research demonstrates a high degree of persistence in going concern reporting (Knechel, Vanstraelen, and Zerni 2015). Our evidence suggests Rule 3211 was a large, exogenous shock that significantly shifted U.S.-based audit partner reporting styles. An unintended consequence of this shift is potentially less informative audit reports. While excessive auditor conservatism may be viewed positively or negatively (DeFond and Zhang 2014), an unwarranted increase in the likelihood of issuing a going concern report may reduce the modified opinion's value. Further, going concern opinions may have negative implications for companies (i.e., higher interest rates, low credit limits), potentially becoming self-fulfilling prophecies (Gerakos et al. 2016). Thus, the excessive auditor conservatism we document could potentially have longer-lasting, unintended consequences extending beyond financial reporting to the attractiveness of U.S. capital markets.

The remainder of this paper is organized as follows. Section Two discusses the partner identification ruling's regulatory proceedings, relevant prior research and develops our hypothesis. Section Three presents sample selection and research design, while Section Four discusses the results. Section Five concludes our paper.

2. Regulatory environment, prior research, and hypothesis

2.1. The PCAOB's partner identification requirement

After much deliberation, the PCAOB adopted Rule 3211 (commonly referred to as Form AP) in 2015. This rule requires public accounting firms to submit a Form AP report with the PCAOB for each audit opinion issued (Tysiac 2017).⁶ Each Form AP report, which discloses the audit engagement partner's name and other accounting firms participating in the audit, is accessible in a searchable database on the PCAOB's website. Auditor engagement partner identification rules are effective for audit opinions issued on or after January 31, 2017 (PCAOB 2015).

The PCAOB's proposal relied on two conceptual underpinnings: accountability and transparency (Cole 2014). Accountability is the quality or state that creates an obligation or willingness to accept responsibility or account for one's actions. The PCAOB argued that public disclosure of the partner's name would provide additional incentives for audit partners to increase audit quality. That is, even if there are sufficient incentives to maintain an audit partner's reputation *within* an audit

⁶ There were two predecessor versions of the audit engagement partner (AEP) identification rule. In the original version, the PCAOB proposed inclusion of the AEP's signature in the audit report. The ensuing proposal removed the AEP's signature, but still disclosed the partner's name in the report. The auditing industry, most notably the Big Four audit firms, strenuously opposed both of these proposal versions.

firm, there still exists another layer of accountability to the users of the financial statements. This additional accountability would lead audit partners to exercise greater due professional care (King, Davis, and Mintchik 2012).

The PCAOB also asserted that increased transparency would enable users to better assess audit quality (PCAOB 2015). From the perspective of shareholders, auditing is an opaque process, and audit quality is inherently unobservable. Thus, since auditing is a service-based industry provided by humans, it is reasonable to believe knowledge about *who* provided the service would be informative to shareholders (King et al. 2012). Because users typically rely on brand names and other audit quality proxies, the PCAOB believed that partner identification would provide a better gauge of audit quality for financial statement users.

This combination of accountability and transparency creates the potential for reputation building by individual partners. Without identification, the audit firm's reputation absorbs that of the audit partners, leaving shareholders to rely on audit quality proxies. These proxies may vary at the audit firm, office, or engagement level. Conversely, individual identification allows market participants to assess audit partner audit quality.

In general, the auditing industry disagreed with the partner identification requirement. Several audit firms noted the potential for unintended consequences such as audit partner 'guilt by association' and 'overly defensive auditing with a sub-optimal increase in audit costs and voluntary audit partner turnover' (PCAOB 2015). All Big Four audit firms communicated concerns about additional litigation risk created by partner identification during the rulemaking process. By moving the auditor's name from the audit report to an indirect source (the Form AP), much, but not all, of these litigation-related concerns were alleviated.⁷ This compromise between the PCAOB and the auditing industry still leaves the empirical question of whether audit partners *perceived* that Form AP would affect their personal litigation profile and impact their audit reporting decisions. The PCAOB admitted that while 'the ultimate resolution of...liability is outside of its control,' it did not 'believe any such risks warrant not proceeding with the Form AP approach' (PCAOB 2015).

2.2. Prior partner identification research

Of the twenty largest countries (measured by market capitalization), sixteen have some form of audit partner identification. Data availability in these countries has given rise to a plethora of audit partner identification studies (PCAOB 2015). However, U.S. capital markets are unique in the degree of litigiousness. As King et al. (2012) note, the PCAOB did not, and could not, cite existing empirical U.S.-based evidence to support its position.

In response to the lack of U.S.-based empirical evidence, extant research generally focuses on the two primary channels of influence of partner identification: reputation building and litigation risk. Brown et al. (2018) examine if partner identification incentivizes audit partners to build individual audit quality reputations distinct from their audit firm. They find that partners accept higher-risk clients in the partner identification market and report less aggressively with greater reporting accuracy. The authors reason their results support the PCAOB's position that partner identification may lead partners to create separate reputations for audit quality. Carcello and Santore (2015) develop an analytical model where an identified audit partner determines the level of resources devoted to the audit and whether to report aggressively on financial statements of inconclusive reporting quality. They note identification shifts reputational consequences of reporting decisions from the firm to the partner, potentially causing the partner to become excessively, and sub-optimally, conservative. Other analytical models suggest the impact on audit quality is not straightforward. Lee and Levin (2020) develop a model that suggests that individual audit partners will increase audit quality at the cost of audit firm internal control quality, leading to a net degradation of audit quality. Chen, Jiang, and Zhang (2019) find through their analytical model that changes in audit effort for individual partners depend on the client's underlying financial reporting quality, thus making aggregate conclusions of the impact on audit quality unclear.

For additional insight into the relationship between auditor reputation building and auditor reporting, Mayhew (2001) uses an experimental setting to show that reputation building for audit quality occurs when the market immediately rewards auditor effort.⁸ Interestingly, he also finds that reputation building occurs less when the market has a delayed reward for auditor effort, suggesting that reputation building occurs when there is immediate *external* recognition of the audit effort. This recognition is an important consideration: unlike accruals, audit report going concern errors (Type I or II) will be unambiguously revealed within one year. Brozovsky and Richardson (1998) focus on information availability and its relationship to audit firm reputation. Brozovsky and Richardson (1998) hypothesize that the lack of perfect information about auditor performance critically impedes reputation-building efforts. They find that when market participants (consumers of audit services) must infer the quality of an audit, it is more difficult for auditors to charge incrementally higher fees related to their reputation for audit quality. While audit firms are not the focus of our paper, the results of Brozovsky and Richardson (1998) suggest that

⁷ The PCAOB asserts that "disclosure on Form AP should not raise potential liability concerns under Section 11 of the Securities Act or trigger the consent requirement of Section 7 of that Act because the engagement partner and other accounting firms would not be named in a registration statement or in any document incorporated by reference into one." And "[W]hile the requirement to file Form AP is triggered by the issuance of an auditor's report, the form would not automatically be incorporated by reference into or otherwise made part of the auditor's report." However, the Board recognizes that commenters expressed mixed views on the potential for liability under Exchange Act Section 10(b) and Rule 10b-5 and the ultimate resolution of Section 10(b) liability is outside of its control, the Board nevertheless does not believe any such risks warrant not proceeding with the Form AP approach." (Release No. 2015-008).

⁸ In the experiment, investor participants assign value to reports generated by manager and auditor participants in a repeated game. Auditor participants determine the effort they put into investigating, which proxies for demonstrating a reputation for high quality.

individual auditors will lack the incentive to build a reputation when the market cannot readily assess the quality of services provided.

Combined with Mayhew's (2001) evidence, the results from Brozovsky and Richardson (1998) suggest the difficulty and time delay of determining *ex post* audit quality will influence the auditor's reputation-building incentives and efforts. Audit partner identification corresponding to the issuance of a going concern modification substantially decreases the information asymmetry between auditors and consumers of audit services: Type I and II errors are quickly identified without error (DeFond and Zhang 2014). Awareness of this may motivate audit partners to build a reputation for audit quality. However, if audit partners believe the market will asymmetrically downgrade their reputation for failure to modify a subsequently bankrupt firm's opinion, the audit partner's reporting strategy may become excessively conservative, with a tendency towards issuing unwarranted going concern report modifications.

The other channel through which Rule 3211 may influence audit partner behavior is via litigation risk. Historically, litigation risk has been a singularly important factor in shaping the American auditing industry, regardless of partner identification. At issue is whether Rule 3211 introduced an additional layer of litigation risk among audit partners. Many expressed concerns that potential litigants would use one client's adverse outcomes and transfer those same issues to another client audited by the same partner, i.e., litigation contagion. Along these lines, Lambert et al. (2018) use a hypothetical 'contaminated' company and ask participants how likely they would be to invest in another uncontaminated company audited by the same partner. Lambert et al. (2018) find that investors are less likely to invest their resources into a company linked to a contaminated firm when the link is through a shared audit partner than when the link is established only through a shared audit firm. Their evidence supports an information transfer to investors about an audit partner's audit quality, warranted or not. Moreover, the evidence is consistent with Rule 3211, introducing an *incrementally stronger* linkage or information transfer about *poor* audit quality.

The manipulated contamination in Lambert et al. (2018) was a restatement of the financials. Restatements, like incorrect going concern report modifications, are not prone to measurement error and are easily observable (DeFond and Zhang 2014). Along these lines, it is important to note that there are two primary observable outcomes of the audit process: the audit report, which is directly under the auditor's control, and the client's audited financial statements, which are the responsibility of the client but are also affected by the audit process (Antle and Nalebuff 1991; Gibbins et al. 2001). Unlike restatements, we posit that going concern audit report modifications provide a superior measure for assessing the impact of partner disclosure on audit partner behavior because they are not directly affected by the client's report system. For example, a high-quality financial reporting system (i.e., strong internal controls, highly trained personnel, effective audit committees) will produce accurate financial statements regardless of the quality of the audit. Because financial reporting quality and audit quality are intertwined, it is difficult to disentangle the effects of audit partner disclosure on financial reporting quality without being able to accurately measure/hold constant auditee characteristics. Our test setting seeks to isolate audit partner identification's effects on audit partner behavior as audit report errors can be attributed solely to the audit partner.

Indeed, an audit report error is the sole responsibility of the audit partner, quickly and precisely measured, and revealed in a timely manner. This is not to imply that auditor reporting is a simple task. Auditor reporting requires predicting a future outcome, often based on a constrained set of information to date. As a result, audit report errors do occur, and the aforementioned characteristics also make these errors attractive targets for plaintiff attorneys. However, the litigation penalties surrounding auditor reporting errors are also asymmetric (Carson et al. 2013; Kaplan and Williams 2013). Failure to modify the opinion of a subsequently bankrupt company (Type II error) triggers far greater litigation than if a 'going concern' company remains in operation a year past the balance sheet date (Type I error).

Two factors may create audit partner incentives to adopt an overly conservative reporting style. If audit partners perceive that market participants (a) incorrectly use reporting outcomes to assess audit quality at the partner level, and (b) are incrementally more likely to project this audit quality assessment onto other clients. In other words, by being excessively conservative with the reporting of their financially distressed audit clients, partners can defuse potential litigation and/or reputational damage pertaining to their non-financially distressed clients. Consistent with this view, Francis and Michas (2013) find a contagion effect suggesting that offices with clients who restate their financials tend to have other clients with lower audit quality signs. In effect, offices appear to overcompensate with conservatism in anticipation of market participants using an occurrence of a restatement to project audit quality onto other unrelated within-office clients. Lambert et al. (2018) suggest that this contagion effect incrementally increases in the Rule 3211 environment. Given these findings, it is reasonable to infer that the contagion effect may also apply to individual partners and that partners may correspondingly become excessively conservative in the post-3211 reporting environment.

To date, there are two U.S.-based studies on the effect of Rule 3211 on audit partner behavior, Cunningham et al. (2019) and Burke et al. (2019). While both use accruals-based measures as their primary proxy for audit quality and document a reduction in discretionary accruals in the initial Rule 3211 period, the papers arrive at different conclusions concerning Rule 3211's impact on audit quality. Burke et al. (2019) show a post-3211 reduction in accruals and conclude that Rule 3211 changed audit partner behavior and enhanced audit quality. Alternatively, Cunningham et al. (2019) identify a group of firms that voluntarily disclosed audit partner identity before Rule 3211 and use this as a control group (vis-à-vis a group of firms that disclosed partner identity due to Rule 3211) for year-over-year comparisons in output-based measures of audit quality. These authors then compare changes in output-based measures of audit quality between the two groups. After accounting for year-over-year differences in output-based measures of audit quality, Cunningham et al. (2019) find that both groups exhibited a decrease in abnormal accruals and – more importantly – that the difference in the difference/decrease was

not statistically significant. [Cunningham et al. \(2019\)](#) posit this indicates Rule 3211 did not change audit partner behavior nor audit quality.

Both [Cunningham et al. \(2019\)](#) and [Burke et al. \(2019\)](#) empirically model the audit quality response using accruals, which the auditor and client jointly determine. Thus, the year-over-year change in financial reporting quality (i.e., accruals) exhibited by the [Cunningham et al. \(2019\)](#) control group may reflect changes in client behavior rather than audit partner behavior. A test setting using going concern opinions may address the aforementioned conflicting conclusions by identifying a reporting outcome attributable strictly to a change in audit partner behavior. Thus, the outcome variable (auditor reporting) used to measure the effect of the treatment (Rule 3211) is a variable that only the audit partner (the intended target of Rule 3211) can control.

2.3. Going concern reporting and related research

Auditing Standard AU 341 ([PCAOB 2010](#)) requires an auditor to modify their audit report when there is substantial doubt about the client's ability to continue as a going concern for twelve months past the balance sheet date. However, AU 341 does not explicitly define the term 'going concern.' Thus, the audit partner's decision to modify a financially distressed audit opinion involves a great deal of professional judgment. Moreover, there are potential consequences for incorrectly modifying or not modifying an audit opinion. Failure to modify an opinion for a firm that later goes bankrupt may result in litigation against an auditor ([Kaplan and Williams 2013](#); [Carson et al. 2013](#)). Issuing a going concern opinion for a firm that does not subsequently enter bankruptcy may result in client losses for the auditor ([Carson et al. 2013](#)). For these reasons, auditor going concern decision-making involves economic trade-offs, such as the expected cost of third-party lawsuits, lost clients, and potential damage to the auditor's and audit firm's reputation ([Louwers 1998](#); [Watts and Zimmerman 1986](#)).

Prior research has documented that *changes* in the audit report going concern modification rate are sensitive to *regulatory oversight changes* and perceived litigation risk. In the U.S., [Gramling, Krishnan, and Zhang \(2011\)](#) find that triennially inspected auditors receiving unfavorable PCAOB inspection reports are more likely to issue going concern audit reports following their inspections. [Geiger and Raghunandan \(2001\)](#) posit the Private Securities Litigation Reform Act of 1995 (PSLRA) reduced the threat of litigation against auditors. They find the proportion of bankrupt companies receiving a prior going concern report modification was 59 (45) percent in the periods before (after) the PSLRA. In sum, the extant, U.S.-based literature suggests going concern report modification rates are sensitive to real or perceived changes in regulation and litigation risk.

The study that most closely resembles ours is [Carcello and Li \(2013\)](#). These authors investigate the impact of requiring the engagement partner to sign the United Kingdom audit reports. [Carcello and Li \(2013\)](#) document a significant increase in the incidence of *qualified* audit reports and interpret this – in combination with other outcome-based measures of financial reporting quality – as an increase in audit quality. Our examination differs from [Carcello and Li \(2013\)](#) in two important aspects. First, our setting of the United States has a significantly different litigation risk profile. Second, our variable of interest is going concern opinion modifications rather than qualified opinions. [Carcello and Li \(2013\)](#) examine qualified audit opinions for U.K. companies but not for U.S. companies because qualified audit opinions are not available for U.S. companies.⁹ Resistance to a qualified opinion from management is likely to be less forceful than a going concern modification ([DeFond and Zhang 2014](#)). Moreover, there is much reputational damage for failing to add an explanatory paragraph to the auditor's report of a subsequently bankrupt company because these errors are easily and precisely measured, publicly available, attributable solely to the identified audit partner, and need not be inferred.

2.4. Hypothesis development

The PCAOB's AEP regulation is premised on the precepts of accountability and transparency. The PCAOB argued that AEP disclosure creates an additional layer of partner accountability to shareholders and that, in the absence of transparency, the additional layer of accountability is impaired, if not eliminated. Both precepts are preconditions to the creation of audit partner reputation. Conversely, the auditing industry countered that there already exists partner accountability in a non-AEP disclosure regime and that the AEP disclosure regulation may create perverse incentives such as overly conservative auditor reporting.

A review of prior research generates conflicting predictions concerning the impact of AEP disclosure on audit quality. The prior research generally hinges on the impact of AEP disclosure on audit partner reputation and litigation risk. Moreover, U.S.-based, empirical studies on AEP disclosure utilize audit quality proxies that are confounded by client reporting characteristics.

The auditor reporting context is a uniquely powerful setting to investigate the impact of AEP disclosure regulation on audit partner behavior. Because auditor reporting accuracy is unambiguously attributable to the audit partner, incorrect auditor reporting represents an excellent proxy for how AEP disclosure affects accountability (to shareholders) and trans-

⁹ As discussed in [DeFond and Zhang \(2014\)](#), "[going concerns] are the only modified opinions accepted in public company filings with the SEC, although U.S. auditing standards allow 'qualified' opinions (for scope limitations), or 'adverse/disclaimer' opinions (for deviations from GAAP or the absence of evidence to form an opinion) for private firms." Unlike firms in the U.K., firms in the United States cannot issue financial statements to the public if the auditor issues a qualified opinion ([SEC 2019](#)). Thus, there would virtually no variation in this particular variable for U.S. firms. In contrast, approximately six percent of audit opinions in the U.K. are qualified ([Carcello and Li 2013](#)).

parency. Conversely, these same attributes may make audit reporting accuracy a simple heuristic for plaintiff attorneys; thus creating the potential for AEP disclosure regulation to introduce additional litigation risk. As auditor reporting errors are precisely and unambiguously revealed within twelve months of the balance sheet date to all market participants, it stands to reason that audit reporting accuracy also reflects the impact of AEP disclosure regulation on the building of audit partner reputation.

The importance of the AEP disclosure regulation on U.S. capital markets and the mixed empirical evidence and conflicting predictions for AEP disclosure's impact on audit partner behavior motivate our research question. If the dominant effect is one of perceived litigation risk, we would expect an increase in the propensity to issue a going concern report modification for financially distressed companies. However, if the dominant effect is one of reputation, there are divergent predictions. We may witness an increase in the propensity to issue a going concern report modification if audit partners perceive that their reputation may be asymmetrically impacted by Type I versus Type II reporting errors. Conversely, we may witness a decrease in the propensity to issue a going concern report modification if audit partners believe that they can establish a reputation for audit partner reporting accuracy since prior research established that auditors are pre-disposed to 'over qualify' audit opinions. The unique auditor reporting context allows for a heretofore unexplored yet excellent test setting to investigate whether and to what extent AEP disclosure affects auditor reporting. This leads to our hypothesis (stated in the null form):

Hypothesis. *Disclosure of the audit engagement partner's identity on Form AP will not influence the partner's propensity to issue a going concern report modification.*

3. Sample selection and research design

3.1. Sample selection

Table 1, Panel A, provides details regarding the sample selection process. Our initial sample contains all observations in the Compustat database with fiscal year-ends between December 31, 2011, and December 31, 2019, yielding a sample size of 98,753. Given that partner identification was already available in many foreign jurisdictions, we exclude 28,948 observations with foreign incorporation. Consistent with prior research (Chung, Sonu, Zang, and Choi 2019), we also remove 33,462 companies in the financial services industry (SIC code 6000–6999) and utilities (SIC code 4900–4999). To ensure that the companies in our sample are financially distressed and can reasonably be expected to receive a going concern opinion, we limit our analysis to observations with both negative net income and negative operating cash flows for the year (Berglund, Eshleman, and Guo 2018; Callaghan, Parkash, and Singhal 2009). This reduces our sample by 22,646 observations.

We identify going concern audit report modifications using the Audit Analytics audit opinion database. We require companies in the sample to have an audit opinion for both period t and period $t-1$ because the decision to modify the audit opinion is strongly influenced by decisions made in the prior year (Knechel et al. 2015; Blay and Geiger 2013). We exclude 3,995 observations missing an audit opinion for either period t or period $t-1$. We further exclude 4,400 observations not found in the CRSP database, which is necessary for certain control variables. Finally, to avoid problems attributable to scaling by small denominators, we exclude 102 observations with missing asset values or companies that report total assets of less than \$1 million at the end of the fiscal year. The final sample consists of 5,200 financially distressed firm-year observations from December 31, 2011, through December 31, 2019.

Table 1, Panel B, provides the distribution of observations by industry in both sample periods. Industry representation is similar across both periods, with pharmaceutical companies representing the largest portion of the sample, followed by durable goods and computer companies. The results show that mining, textile, extraction, retail, and computer companies represent the largest portion of companies in the pre-disclosure sample. In contrast, pharmaceutical companies represent a larger portion of the companies in the post-disclosure period. We include industry indicator variables in our multivariate regression model to address concerns that industry factors drive our results.

4. Research design

We investigate whether AEP disclosure will impact a partner's decision to issue a going concern report modification. To test this assertion, we model the likelihood of a firm receiving a going concern report modification conditional on whether the AEP is identified in the PCAOB database. The logistic regression model is:

$$P(\text{GoingConcern}_{i,t} = 1) = \beta_0 + \beta_1 \text{AEPdisclose}_{i,t} + \text{Controls}_{i,t} + \varepsilon \quad (1)$$

Our dependent variable is an indicator variable coded '1' if the auditor issued an audit report containing a going concern report modification for the firm, and '0' otherwise. Our variable of interest is an indicator variable labeled *AEPdisclose*, coded '1' for firm-year observations during the disclosure period (i.e., audit reports issued on or after January 31, 2017) and '0' for observations preceding the disclosure period. A statistically significant positive (negative) coefficient on *AEPdisclose* suggests the likelihood of issuing a going concern audit report modification increased (decreased) once AEP identification was required, which would support rejection of the null hypothesis.

Table 1
Sample selection and industry statistics.

Panel A. Sample attrition					Sample
Observation in Compustat with fiscal year ends between 12/31/2011 and 12/31/2019.					98,753
Less: Non-U.S. companies					(28,948)
Less: Financial (SIC codes 6000–6999) and utility companies (SIC codes 4900–4999)					(33,462)
Less: Companies with positive net income or positive operating cash flows for period t					(22,646)
Less: Companies not in Audit Analytics*					(3,995)
Less: Companies not in CRSP					(4,400)
Less: Companies with missing asset values or reported total assets of less than \$1 million for period t					(102)
Final Sample					5,200
Panel B. Industry statistics					Difference
	Pre-Disclosure		Post-Disclosure		t-value
	N	Percent of Sample	N	Percent of Sample	
Agriculture	5	0.19%	2	0.08%	1.14
Mining	98	3.78%	47	1.80%	4.33***
Food	33	1.27%	22	0.84%	1.51
Textile	32	1.23%	14	0.54%	2.68***
Chemical	30	1.16%	35	1.34%	0.61
Pharmaceuticals	1,006	38.78%	1,365	52.38%	9.94***
Extraction	92	3.55%	50	1.92%	3.60***
Durable Goods	507	19.55%	465	17.84%	1.57
Transportation	45	1.73%	45	1.73%	0.02
Retail	125	4.82%	69	2.65%	4.13***
Service	132	5.09%	123	4.72%	0.62
Computers	470	18.12%	354	13.58%	4.48***
Other	19	0.73%	15	0.58%	0.70
Total	2,594		2,606		

See Appendix One for variable description and calculations. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels (two-tailed), respectively.

* We exclude any company that does not have an audit opinion in Audit Analytics for periods t and t-1.

Controls is a vector of control variables known to influence the propensity to receive a going concern report modification. [Anantharaman et al. \(2016\)](#) find that variation in state-level auditor liability is positively associated with the likelihood that an auditor will modify their audit opinion. Following [Anantharaman et al. \(2016\)](#), we create *ThirdPartyLit*, an integer-based variable that captures variation across state-level common law in two aspects of auditor liability. First, the extent to which auditors can be held liable by third parties for negligence, and second, rules for apportioning liability across multiple defendants. To control for the differential propensity to modify audit opinions between Big Four and non-Big Four auditors ([Blay and Geiger 2013](#)), we include an indicator variable for observations with a Big Four auditor (*Big4*). Prior research suggests that companies receiving a going-concern modification in the prior year are more likely to receive the same opinion in the current year ([Mutchler 1985](#)). To capture this effect, we include the prior year's audit opinion (*Prior GC*) that takes a value of '1' if the firm received a going-concern modification in period t-1 and '0' otherwise. [Carey and Simnett \(2006\)](#) find that a longer auditor–client relationship is associated with a lower propensity to issue a going concern. To control for differences in auditor tenure, we include two variables: an indicator variable which takes a value of '1' if this is the initial year of the audit engagement (*NewAuditor*) and the natural logarithm of the number of years the auditor has been auditing the firm (*LnTenure*).

Several client-specific characteristics are consistently demonstrated to influence the going concern report modification decision. We include Altman's Z-Score, a predictor variable for the probability a firm will enter bankruptcy within two years ([Altman 1968](#)) since financial distress is a primary driver of a going concern report modification. However, we convert this continuous measure into decile rankings to reduce outliers' influence (*Z_Score*). The natural logarithm of total assets (*LnTA*) is included in the model because larger companies are more likely to avoid bankruptcy through negotiation with creditors ([Read and Yezegel 2016](#); [Blay, Moon, and Paterson 2016](#)). The natural logarithm of the company's age (*Age*) as younger companies are more likely to fail ([Dopuch, Holthausen, and Leftwich 1987](#)).

To control for the financial health of the firm, we include *Leverage*, the change in leverage (*Cleverage*), *Liquidity*, the book-to-market ratio (*BTM*), and an indicator variable if the company reported negative earnings in the prior year (*LLoss*). Negative equity (*NegEquity*) suggests prolonged financial distress and should be positively associated with a going concern modification report ([Li 2009](#)). Operating cash flows (*Cashflow*) influence the likelihood of a going concern report modification ([Blay et al. 2016](#); [Chung et al. 2019](#)). As these measures indicate financial health, we expect that the likelihood of a going concern report increases as these measures worsen. *Default*, an indicator variable if the firm is in default, is included as defaults are highly predictive of a going concern modification ([Read and Yezegel 2016](#)).

To capture audit engagement-specific factors, we control for the disclosure of material weakness in internal controls over financial reporting (*MatWeakness*) as Goh, Krishnan, and Li (2013) find that clients with internal control weaknesses are more likely to receive going concern opinions. Due to the hypothesized link between the payment of nonaudit service (NAS) fees and lower levels of going concern report modifications, we include the ratio of NAS fees to audit fees (*FeeRatio*) (DeFond, Raghunandan, and Subramanyam 2002). Since literature suggests that going concerns are associated with market measures (Blay et al. 2016; Blay and Geiger 2013; DeFond et al. 2002), we include the firm's annual stock market return for the fiscal year (*Ret*) and return volatility of the firm's stock (*Volatility*). As previously discussed, we include industry fixed effects, with industry defined at the two-digit SIC code level. Finally, partners at the same firm are likely to exhibit similar tendencies due to standardized audit methodologies and training practices (Francis, Pinnuck, and Watanabe 2014). Therefore, we cluster standard errors by audit firm, consistent with Blay, Moon, and Paterson (2018).¹⁰ Appendix One presents all variable definitions.

5. Results

5.1. Univariate results

Table 2 reports descriptive statistics. Variable values are presented in both mean and median form and as inter-sample differences in the mean (median) value of the variables. The going concern report modification rate is 14% in the pre-disclosure regime and 24% in the post-disclosure regime, which is slightly higher than the 21% going-concern rate reported in Chung et al. (2019). We find a significant increase between the pre-disclosure and post-disclosure periods, suggesting that disclosure of the audit partner's name led to a greater propensity to issue a going concern modification. In the post-disclosure period, there are relatively fewer audit engagements located in high litigation states, suggesting that the increase in the going concern modification rate is not attributable to an increased presence of post-disclosure audit engagements in higher litigation states. We also note a slight decrease between sample periods in the presence of Big Four auditors and an increase in the prior year going concern opinions. Table 2 shows a statistically significant, albeit slight, reduction in the presence of first-year audit engagements in the post-3211 reporting regime from 5% to 4% of audit engagements. Auditor tenure increases slightly across the two sample periods, even as company age decreases.

Concerning company financial health, Table 2 shows that sample companies report negative operating cash flows of -32% (-42%) of total assets in the pre- (post-) disclosure period, supporting our sample selection goal of identifying financially distressed companies. Comparing the pre- to post- disclosure periods, we find several areas of difference. First, companies in the post-disclosure period appear to be more distressed than those in the pre-disclosure period. They have significantly lower operating cash flows (*Cashflow*), a lower Altman Z-score (*Z_Score*), and were more likely to have reported a loss in the prior year (*Lloss*) relative to companies in the pre-disclosure period. In addition, market conditions appear to be significantly worse in the post-disclosure period relative to the pre-disclosure period. In the post-disclosure period, companies had significantly lower returns (*Ret*) and higher stock volatility (*Volatility*). Finally, the level of non-audit fees paid to the audit firm significantly decreased (*FeeRatio*). While we find some differences across the two periods, the overall measures are relatively similar across the two periods, suggesting no systematic differences in characteristics between the pre- and post-disclosure samples.

Table 3 presents the Pearson correlation matrix for the variables used in the study. Consistent with our univariate results, the propensity to issue a going concern modification is positively correlated with *AEPdisclose*, our indicator for the post-disclosure period. The issuance of a going concern modification is also positively associated with prior going concerns (*Prior GC*), a new auditor (*NewAuditor*), higher debt (*Leverage*), an increase in debt (*Cleverage*), a loss in the prior period (*Lloss*), negative equity (*NegEquity*), a default on debt (*Default*), a material weakness in internal controls (*MatWeakness*), and stock price volatility (*Volatility*). A going concern report modification is negatively associated with a Big Four auditor (*Big4*), a higher Altman Z-score (*Z_Score*), the size (*lnTA*), company age (*LnAge*), *Liquidity*, cash flows from operations (*Cashflow*), and returns (*Ret*). Thus, control variable correlations are in the predicted directions. While several variables are highly correlated ($\rho > 0.50$), tests for multicollinearity indicate that variance inflation factors (VIF) never exceed 10, and in most cases, are <2. Consequently, multicollinearity does not appear to be a significant problem in any of our models.

5.2. Multivariate results

Table 4 presents our logistic regression results for the estimation of Equation (1). Recall that our dependent variable is coded '1' for a going concern audit report modification and otherwise '0.' The positive and significant coefficient on *AEPdisclose* (p-value < 0.01) indicates a higher likelihood of going concern modifications with the disclosure of the AEP's informa-

¹⁰ One of the assumptions of a logistic regression model is that observations are independent of each other. However, if multiple observations for the same company are included in the dataset (e.g., 2013 fiscal year, 2014 fiscal year), this assumption may be violated leading to understated standard errors and inflated t-statistics. Clustering adjusts for this violation and thus provides robust standard errors.

Table 2
Descriptive statistics.

Variable	Sample Means			Sample Medians		
	Pre-Disclosure	Post-Disclosure	Difference t-stat	Pre-Disclosure	Post-Disclosure	Difference Wilcoxon z-score
<i>Going Concern</i>	0.14	0.24	8.47***	0.00	0.00	8.41***
<i>ThirdPartyLit</i>	4.17	4.03	3.36***	4.00	4.00	3.52***
<i>Big4</i>	0.55	0.53	1.71*	1.00	1.00	1.71*
<i>Prior GC</i>	0.13	0.21	7.77***	0.00	0.00	7.72***
<i>NewAuditor</i>	0.05	0.04	1.79*	0.00	0.00	1.79*
<i>Tenure (years)</i>	5.45	5.56	0.88	4.00	4.00	1.26
<i>Z_Score</i>	5.20	4.96	3.22***	6.00	5.00	2.95***
<i>TA (millions)</i>	285.20	283.00	0.11	75.66	85.61	2.45**
<i>Age (years)</i>	13.25	11.72	5.25***	10.01	7.01	7.11***
<i>Leverage</i>	0.46	0.47	0.37	0.41	0.41	0.26
<i>Cleverage</i>	−0.04	−0.03	1.02	0.01	0.02	1.79*
<i>Liquidity</i>	0.41	0.44	2.21**	0.46	0.50	2.53**
<i>BTM</i>	0.49	0.47	1.32	0.30	0.28	1.67*
<i>Lloss</i>	0.90	0.93	4.85***	1.00	1.00	4.84***
<i>NegEquity</i>	0.09	0.10	1.35	0.00	0.00	1.35
<i>Cashflow</i>	−0.32	−0.42	8.07***	−0.20	−0.29	8.97***
<i>Default</i>	0.02	0.02	0.31	0.00	0.00	0.31
<i>MatWeakness</i>	0.07	0.11	4.86***	0.00	0.00	4.85***
<i>FeeRatio</i>	0.17	0.12	7.18***	0.07	0.03	11.45***
<i>Ret</i>	−0.04	−0.30	13.67***	−0.17	−0.42	17.84***
<i>Volatility</i>	0.04	0.06	20.56***	0.04	0.05	19.24***
<i>Observations</i>	2,594	2,606		2,594	2,606	

***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels (two-tailed), respectively.

tion. Our regression model does a reasonably good job of predicting a going concern decision: the area under the ROC curve is approximately 0.94, suggesting excellent discrimination (Hosmer and Lemeshow 2000) and a pseudo R^2 of 50.07%.¹¹

The coefficient estimates for our control variables are generally in the predicted direction when significant.¹² The likelihood of receiving a going concern report modification is positively associated with third-party litigation risk (*ThirdPartyLit*), a going concern report modification in the prior year (*Prior GC*), initial year audit engagements (*NewAuditor*), increased debt (*Cleverage*), higher book-to-market ratio (*BTM*), default on the firm's debt (*Default*), material weakness in the internal controls over financial reporting (*MatWeakness*), and client stock price volatility (*Volatility*). The likelihood of receiving a going concern decreases for companies that are larger (*lnTA*) and older (*lnAge*). It also decreases for companies with a higher Altman Z-score (*Z_Score*), greater liquidity (*Liquidity*), larger operating cash flows (*Cashflow*), low non-audit fees (*FeeRatio*), and higher returns (*Ret*).

In sum, our regression model appears to be well-specified, increasing the evidence's persuasiveness to reject the null hypothesis of no shift in auditor reporting. The results of Table 4 are consistent with U.S. audit partner's increasing their propensity to issue a going concern modification upon the public disclosure of their identities.

5.3. Supplemental analyses

Our supplemental analyses focus on four additional issues: (1) the impact of Rule 3211 on auditor reporting accuracy, (2) determinants of the increase in conservative auditor reporting, (3) comparison of U.S. auditor behavior to the behavior of auditors in countries where auditor partner information was available before Rule 3211, and (4) the impact of management's assessment of the going concern assumption (ASU 2014–15) on auditor behavior. We discuss each separately in the following paragraphs.

5.4. Going concern modification reporting accuracy

Our primary analysis indicates that Rule 3211 increased the going concern report modification rate for financially distressed companies. To examine the audit quality implications of such a shift in auditor reporting, we compare Type I and Type II error rates across the two sample periods. Recall, Type I reporting errors occur when the auditor issues a going concern report modification, but the company is still in operation twelve months after the balance sheet date. Type II reporting errors occur when an auditor fails to modify the opinion for the going concern uncertainty, but the company declares bank-

¹¹ While our ROC curve is high, it is consistent with other studies in this area (Blay et al. 2016; Read and Yezegel 2016). Our pseudo R^2 also compares favorably to Chung et al. (2019), whose regressions exhibit a pseudo R^2 of approximately 57%.

¹² The two exceptions are the book-to-market ratio (*BTM*) and negative equity (*NegEquity*). However, neither variable is significant at p-value thresholds of 5%.

Table 3

Correlation matrix.

	Going_Concern	AEpdisclose	ThirdPartyLit	Big4	PriorGC	NewAuditor	lnTenure	Z_Score	lnTA	lnAge	Leverage	Cleverage	Liquidity	BTM	LLoss	NegEquity	Cashflow	Default	MatWeakness	FeeRatio	Ret
AEpdisclose	0.12																				
ThirdPartyLit	0.02	-0.05																			
Big4	-0.19	-0.02	-0.03																		
Prior GC	0.57	0.11	0.02	-0.18																	
NewAuditor	0.06	-0.02	0.01	-0.16	0.05																
lnTenure	-0.05	0.02	-0.01	0.29	-0.10	-0.47															
Z_Score	-0.43	-0.04	-0.01	0.16	-0.29	-0.05	-0.08														
lnTA	-0.36	0.03	0.04	0.51	-0.33	-0.07	0.17	0.38													
lnAge	-0.06	-0.10	0.06	-0.12	-0.12	0.01	0.44	-0.20	0.05												
Leverage	0.24	0.01	0.02	-0.01	0.11	0.02	0.10	-0.55	0.07	0.17											
Cleverage	0.10	0.01	0.01	-0.06	-0.13	0.01	0.22	-0.33	-0.01	0.34	0.38										
Liquidity	-0.29	0.03	-0.08	0.17	-0.14	-0.06	-0.02	0.38	-0.02	-0.18	-0.57	-0.26									
BTM	-0.02	-0.02	0.08	-0.08	-0.05	0.03	0.03	0.00	0.08	0.17	-0.21	0.01	-0.07								
LLoss	0.09	0.07	0.00	0.00	0.11	0.00	-0.09	-0.10	-0.13	-0.18	0.00	-0.04	0.07	-0.14							
NegEquity	0.21	0.02	0.02	0.01	0.14	0.02	0.04	-0.33	-0.04	0.04	0.57	0.15	-0.37	-0.27	0.05						
Cashflow	-0.42	-0.11	0.04	0.12	-0.31	0.00	0.03	0.47	0.51	0.13	-0.15	-0.11	0.02	0.23	-0.17	-0.24					
Default	0.14	0.00	0.03	-0.03	0.03	-0.01	0.01	-0.08	-0.05	0.01	0.06	0.01	-0.14	0.02	0.02	0.06	-0.03				
MatWeakness	0.15	0.07	-0.01	-0.15	0.14	0.07	-0.10	-0.07	-0.11	-0.10	0.09	0.02	-0.17	-0.03	0.02	0.07	-0.04	0.04			
FeeRatio	0.00	-0.10	-0.02	-0.05	0.05	-0.01	-0.04	0.01	-0.04	-0.03	0.00	-0.06	-0.04	0.00	-0.03	0.00	0.00	0.00	0.02		
Ret	-0.19	-0.19	-0.02	0.06	-0.08	-0.01	0.01	0.26	0.08	0.03	-0.07	-0.09	0.10	-0.22	0.02	-0.05	0.14	-0.01	-0.06	0.06	
Volatility	0.26	0.27	0.00	-0.13	0.27	0.00	-0.09	-0.18	-0.23	-0.18	0.01	-0.09	-0.02	0.03	0.14	0.08	-0.22	0.04	0.09	-0.05	-0.24

See Appendix One for variable description and calculations. All continuous variables are winsorized at the top and bottom 1%. Pearson correlations significant at p-value less than or equal to 0.10 are in bold.

Table 4

Logistic regression estimating the likelihood of a going concern opinion.

Variable Name	Predicted Sign	Coefficient Estimate	T-statistic
Intercept	(?)	2.134	3.12***
AEPdisclose	(?)	0.313	2.72***
ThirdPartyLit	(+)	0.056	1.30*
Big4	(?)	0.149	0.70
Prior GC	(+)	2.862	20.66***
NewAuditor	(?)	0.624	2.34**
LnTenure	(?)	0.138	1.35
Z_Score	(-)	-0.155	-5.36***
LnTA	(-)	-0.432	-6.96***
LnAge	(-)	-0.331	-3.96***
Leverage	(+)	0.229	0.75
Cleverage	(+)	1.055	4.45***
Liquidity	(-)	-1.822	-7.38***
BTM	(-)	0.287	2.83***
Lloss	(+)	0.130	0.73
NegEquity	(+)	-0.043	-0.19
Cashflow	(-)	-0.804	-6.09***
Default	(+)	1.678	7.31***
MatWeakness	(+)	0.274	1.55*
FeeRatio	(-)	-0.354	-1.61*
Ret	(-)	-0.633	-4.74***
Volatility	(+)	3.059	1.48*
Control for Industry	Yes		
Pseudo R ²	0.51		
Area under the ROC	0.94		
Going Concern N	986		
No Going Concern N	4,214		
Total N	5,200		

Equation (1): $\text{Going_Concern}_{i,t} = \alpha_0 + \beta_1 \text{AEPdisclose}_{i,t} + \beta_2 \text{ThirdPartyLit}_{i,t} + \beta_3 \text{Big4}_{i,t} + \beta_4 \text{PriorGC}_{i,t} + \beta_5 \text{NewAuditor}_{i,t} + \beta_6 \text{LnTenure}_{i,t} + \beta_7 \text{Z_Score}_{i,t} + \beta_8 \text{LnTA}_{i,t} + \beta_9 \text{Leverage}_{i,t} + \beta_{10} \text{LnAge}_{i,t} + \beta_{11} \text{Leverage}_{i,t} + \beta_{12} \text{Cleverage}_{i,t} + \beta_{13} \text{Liquidity}_{i,t} + \beta_{14} \text{BTM}_{i,t} + \beta_{15} \text{Lloss}_{i,t} + \beta_{16} \text{NegEquity}_{i,t} + \beta_{17} \text{Cashflow}_{i,t} + \beta_{18} \text{Default}_{i,t} + \beta_{19} \text{MatWeakness}_{i,t} + \beta_{20} \text{FeeRatio}_{i,t} + \beta_{21} \text{Volatility}_{i,t} + \Sigma \text{Industry} + \varepsilon$.

Dependent variable ($\text{Going_Concern}_{i,t}$) coded '1' for going concern audit report modification, otherwise '0.' All variables are defined in Appendix One. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (one-tailed if in predicted direction, two-tailed otherwise).

ruptcy. We obtain bankruptcy data from the Audit Analytics bankruptcy notification database. Table 5 presents univariate statistics for both types of errors across the two sample periods. Since we need at least one full year following the fiscal year-end to compute Type I and Type II errors, we exclude all observations with fiscal year ends after December 31, 2018, for this analysis. This requirement decreases our sample by 695 observations.

In Table 5, Panel A, we examine the Type I error rate for a total of 4,441 financially distressed company-year observations whereby the company did not go bankrupt within 12 months of the balance sheet date. In the pre-disclosure sample period, 348 of these audit engagements received a going concern report modification, corresponding to a Type I error rate of 13.64%. For the post-disclosure sample period, 418 of these audit engagements received a going concern report modification, corresponding to a Type I error rate of 22.12%. The increase in the Type I error rate is significant at a p-value of <0.01. Table 5, Panel A, indicates that the more conservative post-3211 reporting style is accompanied by an increased Type I error rate.

In Panel B, we examine the Type II error rate across both sample periods. For the 64 companies that declared bankruptcy in the pre-disclosure sample period, 18 did not receive a going concern report modification, computing to a Type II error rate of 41.86%. For the 21 companies that declared bankruptcy in the post-disclosure sample period, seven did not receive a going concern report modification, computing to a Type II error rate of 33.33%. While there is a decrease in the Type II error rate in the post-disclosure setting, the Type II error rate's inter-period difference is not significantly different from zero.

To address whether the post-3211 increase in the Type I error rate is a function of client characteristics, we employ a logistic regression analysis similar to that of Chung et al. (2019).¹³ The model's dependent variable is coded '1' in instances where the audit engagement results in a Type I error, and otherwise '0.' The model is specified:

$$P(\text{TypeI}_{i,t} = 1) = \beta_0 + \beta_1 \text{AEPdisclose}_{i,t} + \text{Controls}_{i,t} + \varepsilon \quad (2)$$

In the interest of brevity, we note a substantial overlap in control variables between Eq. (1) and Equation (2). The primary test variable in Chung et al. (2019) is *ACH*, a dichotomous variable coded '1' in instances of an auditor dismissal in time t-1 for firm *i*, and otherwise '0,' and included in our controls. Chung et al. (2019) include three variables (*LOSS*, *RESTATE*, and *FOR-EIGN*) that are excluded from our analysis due to sample design choices. We include them in this supplemental analysis and

¹³ Chung et al. (2019) also develop a logistic regression model to predict the likelihood of Type II errors. We replicate the model using our sample. The results (unreported) show that no variable is significantly associated with the likelihood of a Type II error. We attribute our results to the small number of bankruptcies in our sample.

Table 5
Type I and Type II error rate analysis.

Panel A. Companies that did not go bankrupt (Type I errors)		
	Received a Going Concern	Did Not Receive a Going Concern
Pre-Disclosure	348 (13.64%)	2,203 (86.36%)
Post-Disclosure	418 (22.12%)	1,472 (77.88%)
Panel B. Companies that went bankrupt (Type II errors)		
	Received a Going Concern	Did Not Receive a Going Concern
Pre-Disclosure	25 (58.14%)	18 (41.86%)
Post-Disclosure	14 (66.66%)	7 (33.33%)
Panel C. Logistic regression of Type I errors		
Variable Name	Coefficient	T-statistic
Intercept	2.257	3.89***
AEPdisclose	0.619	5.99***
ACH	0.062	0.31
LnTA	−0.603	−9.72***
Leverage	1.243	3.94***
Cleverage	−0.139	−0.51
Liquidity	−1.749	−7.02***
BTM	0.230	2.43**
FFinance	0.092	0.99
Cashflow	−0.899	−5.38***
Big4	0.206	1.31
Ret	−0.554	−4.86***
Instown	−1.562	−6.02***
Volatility	9.124	4.00***
InvRec	−1.231	−2.99***
Seg	−0.343	−2.94***
Control for Industry	Yes	
Pseudo R ²	0.37	
Area under the ROC	0.90	
Error	766	
No Error	3,675	
Total	4,441	

Difference (two-tailed p-value) < 0.01.

Difference (two-tailed p-value) = 0.23.

***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

add control variables, *FFinance*, *Instown*, *Invrec*, *Seg* (Chung et al. 2019), described in more detail in Appendix One.¹⁴ Panel C shows that *AEPdisclose* is significantly and positively related to the presence of a Type I reporting error. With the evidence provided in Table 4, our results indicate that audit partners have adopted a more conservative – if not excessively conservative – reporting strategy in the post-3211 period. Given that auditors have been historically overly conservative in issuing going concern report modifications (Carson et al. 2013), this evidence suggests that Rule 3211 affected auditors' reporting behavior and in a direction that may potentially concern regulators. In particular, if going concern report modifications become excessively conservative, users of financial information may find less informational value in the reports as they pertain to a firm's impending failure (Carson et al. 2013).

5.5. Litigation avoidance or reputation management?

Our results are consistent with AEP disclosure exacerbating excessive auditor conservatism. The excessive auditor conservatism is a function of the asymmetric auditor loss function for auditor reporting errors: failing to modify the opinion of a subsequently bankrupt company causes greater reputational and litigation losses than modifying the opinion of a firm that does not declare bankruptcy within the year (Lennox and Kausar, 2017). This section examines which of the two effects

¹⁴ *LOSS* is excluded since all the observations in our sample experience net losses. *RESTATE* is excluded because restatements are sensitive to temporary differences in the sample (i.e., more recent observations are less likely to have reported restatements) and *FOREIGN* is excluded since we limit the sample to U.S.-based audit engagements.

(reputation or litigation) drives our results. We address this issue in a stepwise fashion by addressing whether and to what extent the post-3211 shift is a function of litigation risk factors, followed by a similar analysis for reputation-related factors.

To investigate the potential relationship between litigation risk and the shift in auditor reporting, we segregate our pre- and post-3211 samples into audit engagements located in states above and below the median *ThirdPartyLit* value of four. Table 6, Panel A, presents a two-by-two table comparing the inter-temporal shift in the going concern modification rate across the two time periods for the two sub-samples. In both disclosure regimes, higher litigation states have higher going concern modification rates. There is also a statistically significant, inter-temporal increase in the modification rate for both sub-samples, suggesting that partner disclosure had a pervasive effect on audit partner behavior [from 12% (19%) modification rate to 22% (26%) for the low litigation (high litigation) subsample]. However, contrary to litigation risk concerns driving the shift in auditor reporting, the shift in conservative auditor reporting is far more pronounced in the low litigation sub-sample than in the high litigation sub-sample. In the post-period, the low litigation sub-sample's modification rate significantly increases and becomes more similar to that of the high-litigation's sub-sample modification rate. Relative to the pre-period, the difference between the subsamples is reduced by 40% in the post-period.

We modify Equation (1) by creating an interactive term, $AEPdisclose * ThirdPartyLit$, to include in our revised regression model. Table 6, Panel B reports the results of this specification. The coefficient estimates for *AEPdisclose* and *ThirdPartyLit* are both positive and statistically significant, while the coefficient estimate for the interactive term $AEPdisclose * ThirdPartyLit$ is negative and significant. If the perceived increase in post-3211 litigation risk drives the increased modification rate, we would expect this effect would be more pronounced in high litigation states. The negative coefficient for $AEPdisclose * ThirdPartyLit$ found in Table 6, Panel B is inconsistent with this notion.

We next investigate the potential impact of audit partner reputation on the shift in conservative auditor reporting. Similar to Bills, Cunningham, and Myers (2016), we construct a proxy for audit partner reputation based upon the relative magnitude of the audit engagement compared to the office's portfolio of publicly held clients (*ClientImport*).¹⁵ The rationale for (*ClientImport*) is twofold. First, it allows for the calculation of a pre-3211 audit partner reputation value. Second, consistent with prior research, it would appear reasonable that higher reputation partners would be assigned higher profile audit engagements (Dodgson et al. 2019; Aobdia, Lin, and Petacchi 2015). For example, Taylor (2018) finds that the largest clients have insider knowledge of partner quality/prestige and the market power to select the partner, indicating a matching of high profile client with high reputation audit partner.

As in our litigation risk analysis, we segregate our pre- and post- 3211 samples into audit engagements above and below the median *ClientImport* value. Table 7, Panel A, presents a two-by-two table comparing the inter-temporal shift in the going concern modification rate across the two time periods for the two sub-samples. Both sub-samples exhibit a statistically significant increase in the going concern modification rate. However, Table 7, Panel A, reveals that the increase is far more dramatic for high-importance audit engagements. There is a 3.25% difference between high and low importance clients in the pre-period, while in the post-period, the difference is 8.42% (a 250% increase). Broadly consistent with Carcello and Santore (2015), this suggests that high reputation audit partners are more conservative in their reporting style, but only when their identity is publicly known.

Next, we modify Equation (1) by creating an interactive term, $AEPdisclose * ClientImport$, for our revised regression model. We present the results of this specification in Table 7, Panel B. The *HighClientImport* variable is significantly negative, suggesting clients of significant importance to the audit office manipulated audit partners in the pre-period to avoid receiving a going concern modification. However, clients' ability to influence partners' decisions appears significantly diminished in the post-period. We find no significant difference in the likelihood of receiving a going concern modification between high and low importance clients in the post-period ($HighClientImport + AEPdisclose * HighClientImport = 0.1005$; p-value = 0.64). These results are consistent with higher reputation audit partners magnifying the effects of AEP identification on excessive auditor conservatism.

The totality of Tables 6 and 7 is consistent with reputational concerns rather than enhanced litigation, causing the post-3211 shift towards excessively conservative auditor reporting. The shift appears to be driven by higher reputation audit partners recognizing the asymmetric reputational loss in cases where they fail to modify a subsequently bankrupt company's opinion. The failure to modify the opinion of a subsequently bankrupt company has a greater reputation-impairing effect than the issuance of a going concern modification of a surviving company.

5.6. Comparison of U.S. Auditor behavior to the behavior of auditors in countries where auditor partner information was available before rule 3211

A significant concern about our analysis is that our baseline specifications may be contaminated by changes in economic conditions or other events that occurred between the pre- and post-period (Abadie 2005; Atanasov and Black 2016). One way to mitigate this concern is to compare U.S. audit engagements subject to partner disclosure for the first time to a control group of audit engagements that do not experience the same treatment. Since countries such as China, Australia, and the

¹⁵ The magnitude of the audit engagement is measured using client audit fees. We exclude observations with missing audit fees in Audit Analytics which decreases our sample by 421 observations.

Table 6

The moderating effect of litigation risk on the relation between partner identification and auditor reporting.

Panel A. Univariate Statistics Modification Rates for subsamples stratified by litigation risk			
	Before 3211	After 3211	T-value
Audit Engagements located in states with ThirdPartyLit value ≤ 4	12.44%	22.47%	8.28***
	(217 ÷ 1,773)	(425 ÷ 1,891)	
Audit Engagements located in states with ThirdPartyLit > 4	19.00%	26.29%	3.40***
	(156 ÷ 821)	(188 ÷ 715)	
T-value	4.29***	2.00**	
Panel B. Multivariate Results			
Variable Name	Predicted Sign	Coefficient Estimate	T-statistic
Intercept	(?)	2.227	3.17***
AEPdisclose	(?)	0.461	3.13***
HighThirdPartyLit	(+)	0.379	2.04**
AEPdisclose*HighThirdPartyLit	(?)	-0.419	-2.36**
Big4	(?)	0.146	0.69
Prior GC	(+)	2.862	20.75***
NewAuditor	(?)	0.637	2.39**
InTenure	(?)	0.146	1.46
Z_Score	(-)	-0.157	-5.34***
InTA	(-)	-0.430	-7.18***
InAge	(-)	-0.335	-3.88***
Leverage	(+)	0.239	0.77
Cleverage	(+)	1.045	4.60***
Liquidity	(-)	-1.802	-7.29***
BTM	(-)	0.292	2.83***
Lloss	(+)	0.138	0.78
NegEquity	(+)	-0.039	-0.17
Cashflow	(-)	-0.797	-5.92***
Default	(+)	1.680	7.28***
MatWeakness	(+)	0.284	1.61*
FeeRatio	(-)	-0.350	-1.59*
Ret	(-)	-0.627	-4.64***
Volatility	(+)	3.013	1.43*
Control for Industry	Yes		
Test: HighThirdPartyLit + AEPdisclose*HighThirdPartyLit > 0			p = 0.79
Pseudo R ²	0.50		
Area under the ROC	0.94		
Going Concern N	986		
No Going Concern N	4,214		
Total N	5,200		

Dependent variable equals '1' for going concern report modification, otherwise '0.' All variables are defined in Appendix One. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (one-tailed if in predicted direction, two-tailed otherwise).

United Kingdom required audit partner identification before Rule 3211, companies audited by partners whose identities were previously disclosed provide a natural control group to test our results.

Using the sample selection process reported in Table 1, we identify 398 companies audited by firms located in a country that provided partner identification before January 31, 2017.¹⁶ In the first set of columns of Table 8, we report results for the 398 companies audited by partners whose identities were known before Rule 3211.¹⁷ The coefficient on *AEPdisclose* is negative and insignificant, suggesting that for partners whose identity was public before January 31, 2017, Rule 3211 did not change auditor behavior. In the second set of columns, we include companies audited by both U.S.-based auditors and international auditors. The coefficient on *AEPdisclose* remains significantly positive, suggesting that partner identification increased the likelihood of a going concern modification. However, the interaction between *AEPdisclose* and *International* is significantly negative, indicating that Form AP's effects were limited to U.S. partners whose identities were previously unknown before Rule 3211. This finding supports our conclusion that Rule 3211 led to an increase in U.S. audit partner reporting conservatism.

¹⁶ We use the Audit Analytics Audit Opinion file to identify companies whose audit partners were known prior to January 31, 2017. The identities of the audit partner should have been available to the public prior to Rule 3211 if the company is audited by firm whose office is located in Australia, Austria, Belgium, China, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Slovakia, Spain, Sweden or the United Kingdom.

¹⁷ We exclude *ThirdPartyLit* from our analysis as we do not have a comparable metric for international firms as it is a state-level variable. In an untabulated analysis, we interact our test variables with a dichotomous, country-level variable 'CommonLaw' coded '1' in instances where the country of the audit firm is a 'Common Law' country and '0' (Khurana and Raman 2004). Inclusion of this variable as a stand-alone and interactive variable did not substantively affect our results reported in Table 8.

Table 7

The moderating effect of client importance on the relationship between partner identification and auditor reporting.

Panel A. Modification Rates for subsamples stratified by audit partner reputation			
	Before 3211	After 3211	T-value
Audit Engagements of Low Importance	12.71%	17.58%	3.24***
	(158 ÷ 1,243)	(186 ÷ 1,058)	
Audit Engagements of High Importance	15.96%	26.00%	6.12***
	(212 ÷ 1,328)	(300 ÷ 1,050)	
T-value	2.36**	4.82***	
Panel B. Multivariate Results			
Variable Name	Predicted Sign	Coefficient Estimate	T-statistic
Intercept	(?)	2.437	3.30***
AEPdisclose	(?)	0.068	0.39
HighClientImport	(-)	-0.268	-1.81**
AEPdisclose*HighClientImport	(+)	0.368	1.89**
TPL	(+)	0.053	1.30*
Big4	(?)	0.077	0.36
Prior GC	(+)	2.873	17.13***
NewAuditor	(?)	0.628	2.61***
lnTenure	(?)	0.128	1.17
Z_Score	(-)	-0.154	-4.56***
lnTA	(-)	-0.465	-7.57***
lnAge	(-)	-0.333	-4.20***
Leverage	(+)	0.439	1.27*
Cleverage	(+)	1.003	4.11***
Liquidity	(-)	-1.665	-6.43***
BTM	(-)	0.320	2.97***
LLoss	(+)	0.154	0.80
NegEquity	(+)	-0.196	-0.85
Cashflow	(-)	-0.869	-5.20***
Default	(+)	1.799	8.31***
MatWeakness	(+)	0.371	2.11**
FeeRatio	(-)	-0.342	-1.53*
Ret	(-)	-0.635	-4.48***
Volatility	(+)	0.850	0.34
Control for Industry	Yes		
Test: HighClientImport + AEPdisclose*HighClientImport < 0			p = 0.64
Pseudo R ²	0.50		
Area under the ROC	0.94		
Going Concern N	855		
No Going Concern N	3,924		
Total N	4,779		

Dependent variable equals '1' for going concern report modification, otherwise '0.' All variables are defined in Appendix One. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (one-tailed if in predicted direction, two-tailed otherwise).

5.7. Management's assessment of the going concern assumption

In 2014, the Financial Accounting Standards Board (FASB) issued ASU 2014–15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. ASU 2014–15 requires *management* to evaluate whether there are conditions that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date the financial statements are issued. Suppose there is substantial doubt about the entity's ability to continue as a going concern. In that case, management is to disclose whether it has a plan to mitigate the doubt and whether the successful implementation of that plan is probable. If it is improbable that management will be able to implement its plan effectively or that the plan will not mitigate the conditions that gave rise to the substantial doubt, the company should also disclose that there is substantial doubt about its ability to continue as a going concern. The effective date of implementation was for fiscal year ends occurring after December 15, 2016. Consequently, ASU 2014–15 represents a potential omitted, correlated variable. More specifically, should management disclose doubts about its going concern status before the audit report date, the audit partner may be pre-emptively compelled to issue a going concern audit report modification. The excessively conservative auditor reporting documented in Table 4 could be attributable to ASU 2014–15 rather than Rule 3211.

ASU 2014–15 suggests that management's disclosure of its assessment of the going concern assumption could influence auditor reporting. However, two observations buttress our contention that the going concern report modification decision remains solely that of the auditor and the audit partner – in the post-3211 setting. First, the audit report title remains intact, namely the 'Report of the Independent Registered Public Accounting Firm.' Within the standard audit report, the verbiage 'the financial statements are the responsibility of management' is omnipresent, as is 'our responsibility is to express an opinion on the Company's consolidated financial statements.' The report title and responsibilities wording in the audit report indicates a clear distinction in responsibilities and remains unaffected by ASU 2014–15. Second, the FASB issued ASU 2014–15, and the PCAOB did *not* update its auditing standards to incorporate ASU 2014–15. If there were any effect of

Table 8

Logistic regression estimating the likelihood of a going concern opinion for International companies with partner identification prior to Form AP.

Variable	Predicted sign	International Companies		U.S. and International Companies	
		Estimate	t-value	Estimate	t-value
<i>Intercept</i>	(?)	4.289	0.01	2.082	3.11***
<i>AEPdisclose</i>	(?)	−0.714	−1.27	0.302	2.64***
<i>International</i>	(?)			0.399	1.84*
<i>AEPdisclose*International</i>	(?)			−1.203	−3.94***
<i>Big4</i>	(?)	0.246	0.29	0.098	0.50
<i>Prior GC</i>	(+)	2.769	4.40***	2.885	24.98***
<i>NewAuditor</i>	(?)	0.146	0.09	0.572	2.24**
<i>lnTenure</i>	(?)	0.294	0.45	0.122	1.13
<i>Z_Score</i>	(−)	−0.286	−1.12	−0.161	−6.07***
<i>lnTA</i>	(−)	−0.163	−0.79	−0.366	−7.58***
<i>lnAge</i>	(−)	−0.146	−0.22	−0.312	−3.76***
<i>Leverage</i>	(+)	0.234	0.19	0.133	0.46
<i>Cleverage</i>	(+)	−0.611	−0.53	1.055	4.21***
<i>Liquidity</i>	(−)	−5.527	−4.84***	−1.958	−7.96***
<i>BTM</i>	(−)	−0.017	−0.12	0.184	2.36**
<i>Lloss</i>	(+)	0.460	0.58	0.200	1.19
<i>NegEquity</i>	(+)	−0.569	−0.61	−0.115	−0.59
<i>Cashflow</i>	(−)	−2.436	−2.87***	−0.859	−6.29***
<i>Default</i>	(+)	0.717	0.48	1.644	7.41***
<i>MatWeakness</i>	(+)	0.651	1.04	0.308	1.97**
<i>FeeRatio</i>	(−)	0.159	0.53	−0.142	−1.02
<i>Ret</i>	(−)	−0.572	−1.62*	−0.637	−4.98***
<i>Volatility</i>	(+)	−8.045	−1.17	2.301	1.29*
<i>Control for Industry</i>		Yes		Yes	
<i>Test: AEPdisclose + International + AEPdisclose*International > 0</i>					<i>p</i> = 0.89
Pseudo R ²			0.52		0.37
Area under the ROC			0.94		0.90
Going Concern N			63		1,049
No Going Concern N			335		4,549
N			398		5,598

Dependent variable equals '1' if going concern audit report modification, otherwise '0.' All variables are defined in Appendix One. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (one-tailed if in predicted direction, two-tailed otherwise).

ASU 2014–15 on the audit partner's decision to modify the audit opinion, one would expect the PCAOB to update the auditing standards to reflect this additional consideration.

Despite our contention that ASU 2014–15 would not affect our results, we investigate this possibility empirically. ASU 2014–15 requires companies to include going concern disclosures and assessments in their *unaudited* 10-Q quarterly reports and audited 10-K annual reports. To eliminate the possibility that management going concern disclosures drive our results, we exclude observations whereby the company's third-quarter 10-Q includes a management disclosure indicating management's doubt about its going concern status. We also require that these observations received a 'clean' audit opinion in the prior year. We do so to ensure that (a) the management disclosure was not driven by the prior audit report and (b) this disclosure was endogenous to the company (rather than the auditor).¹⁸

To identify these observations, we use DirectEdgar software to search for the term "going concern" in our sample's third-quarter filings. If the company included the term "going concern" in the filing, we manually reviewed the 10-Q to assess whether management believed substantial doubt existed regarding the company's viability. It is important to note the rarity of these occurrences. Of the 5,200 observations included in Table 4, we find that only 199 observations did not have a prior year, going concern audit report opinion, while simultaneously including a going concern disclosure in their third-quarter 10-Q.¹⁹ After excluding these 199 observations, we re-conducted our regressions and report these results in Table 9. The first set of columns report the results without any interaction. Consistent with our earlier findings, the coefficient on *AEPdisclose* is positive. However, it is not significant at traditional levels (*p*-value = 0.12). In the second and third sets of columns, we separate the sample based on litigation risk and client importance. Consistent with our earlier findings, low litigation risk companies were more likely to receive a going concern modification in the post-period. Further, important clients were more likely to receive a going concern modification in the post-period. These results support our earlier finding that audit partner identification changed auditor behavior, and the change is due to audit reputation rather than a change in perceived litigation risk.

¹⁸ For example, assume a firm received a 'clean' audit report for the year ended December 31, 2016. This same firm's management then issued a third-quarter statement expressing their confidence in the firm's ability to continue as a going concern. We assume that management is more likely to issue a third-quarter going concern statement if the auditor included a going concern audit report modification in period *t*-1. In this case, management's going concern disclosure is likely driven by the auditor rather than an independent management assessment.

¹⁹ 62 observations met these requirements in the pre-3211 period (as these firms voluntarily adopted the 2014–15 in the year prior to its effective date of implementation). 137 observations were in the post-3211 period.

Table 9

Logistic regression estimating the likelihood of a going concern opinion exclude management driven going concern opinions.

Variable Name	Predicted Sign	Without Interactions		High Litigation Risk		Client Importance	
Intercept	(?)	2.112	2.95***	2.144	2.90***	2.219	2.67***
AEpdisclose	(?)	0.236	1.58	0.369	1.96**	0.002	0.01
HighThirdPartyLit	(+)			0.302	1.57*		
AEpdisclose*HighThirdPartyLit	(?)			−0.380	−2.02**		
HighClientImport	(−)					−0.272	−1.90**
AEpdisclose*HighClientImport	(+)					0.350	1.73**
Controls:							
ThirdPartyLit	(+)	0.030	0.60			0.036	0.75
Big4	(?)	0.283	1.16	0.282	1.17	0.126	0.53
Prior GC	(+)	3.253	23.05***	3.254	23.15***	3.260	18.93***
NewAuditor	(?)	0.520	1.65*	0.529	1.69*	0.542	1.92*
InTenure	(?)	0.036	0.30	0.044	0.38	0.056	0.43
Z_Score	(−)	−0.123	−4.01***	−0.124	−3.91***	−0.133	−4.28***
InTA	(−)	−0.488	−6.97***	−0.489	−7.12***	−0.467	−6.29***
InAge	(−)	−0.302	−3.10***	−0.305	−3.04***	−0.298	−3.24***
Leverage	(+)	0.263	0.75	0.279	0.80	0.387	1.05
Cleverage	(+)	1.232	4.20***	1.224	4.31***	1.148	3.80***
Liquidity	(−)	−1.617	−6.79***	−1.602	−6.80***	−1.545	−6.32***
BTM	(−)	0.147	1.69*	0.150	1.68*	0.144	1.48
Lloss	(+)	0.234	0.98	0.237	1.00	0.118	0.49
NegEquity	(+)	−0.056	−0.25	−0.062	−0.27	−0.197	−0.69
Cashflow	(−)	−0.808	−5.79***	−0.797	−5.61***	−0.878	−5.62***
Default	(+)	1.813	7.51***	1.801	7.47***	1.929	8.35***
MatWeakness	(+)	0.291	1.28*	0.304	1.36*	0.388	1.74**
FeeRatio	(−)	−0.275	−1.23	−0.275	−1.22	−0.265	−1.15
Ret	(−)	−0.746	−5.07***	−0.740	−5.03***	−0.711	−4.75***
Volatility	(+)	0.137	0.07	0.027	0.01	−1.546	−0.66
Control for Industry		Yes		Yes		Yes	
Pseudo R ²		0.54		0.5427		0.5406	
Area under the ROC		0.95		0.9469		0.9471	
Going Concern N		4,156		4,156		3,877	
No Going Concern N		845		845		737	
N		5,001		5,001		4,614	

Dependent variable equals '1' if going concern audit report modification, otherwise '0.' All variables are defined in Appendix One. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (one-tailed if in predicted direction, two-tailed otherwise).

We observe perfect unison between the auditor and management in assessing a company's going concern status in management's fourth-quarter ASU 2014–15 disclosures. That is, for all 2,606 post-3211 observations, we do not observe any instances where either management disclosed doubts about the company's ability to continue as a going concern and the auditor issued a clean opinion or that management expressed that the company would continue as a going concern and the auditor issued a going concern report modification. Managers face more severe consequences than auditors (e.g., loss of employment, compensation) by disclosing substantial doubt about the company's viability (Gerakos et al. 2016; DeFond and Zhang 2014). In addition, Bierstaker and DeZoort (2019) document that managers have a higher 'substantial doubt' threshold than auditors. Therefore, we believe it highly improbable that management would prefer a going concern report modification and, by extension, a more conservative auditor reporting strategy. As such, we believe it unlikely the more conservative, post-3211 auditor report modification evidence would be attributable to ASU 2014–15.

5.8. Sensitivity analysis

Sensitivity analysis centers on three issues: 'new' going concern report modifications, first-year audit engagements, and individual audit firm effects. We discuss each separately.

Blay et al. (2016) argue that the decision to issue an initial going concern audit report modification is fundamentally different from the decision to 'renew' a prior going concern report modification. To address this, we re-estimate Equation (1), omitting observations with a going concern report modification for period $t-1$ (*PriorGC*). Initial going concern report modifications represent less than half (41%) of the total going concern report modifications in our sample. Table 10 presents the results of our logistic regression. Despite the reduction in observations, *AEpdisclose* continues to be positively associated with the issuance of a going concern audit report modification.

Carey and Simnett (2006) find that a lack of client familiarity increases the propensity to issue a going concern modification. Conversely, Chung et al. (2019) argue that clients can successfully 'opinion shop' and avoid first year going concern modifications. To the extent that our results are a function of either effect, our inferences could be jeopardized. Accordingly, we delete all first-year audit engagements, 102 (128) pre-3211 (post-3211) observations. Our results are substantively identical to those in Tables 4 – 8.

Table 10

Logistic regression results: New going concerns.

Variable Name	Predicted Sign	Coefficient Estimate	T-statistic
Intercept	(?)	1.646	1.84*
AEpdisclose	(?)	0.293	2.65***
ThirdPartyLit	(+)	0.011	0.22
Big4	(?)	0.131	0.61
NewAuditor	(?)	0.767	2.51**
lnTenure	(?)	0.068	0.55
Z_Score	(-)	-0.213	-4.39***
lnTA	(-)	-0.401	-5.72***
lnAge	(-)	-0.265	-2.43***
Leverage	(+)	0.382	1.09
Cleverage	(+)	0.893	2.97***
Liquidity	(-)	-1.648	-4.92***
BTM	(-)	0.4900	4.52***
Lloss	(+)	0.174	0.80
NegEquity	(+)	0.172	0.66
Cashflow	(-)	-0.654	-3.65***
Default	(+)	1.849	7.69***
MatWeakness	(+)	0.405	1.67**
FeeRatio	(-)	-0.360	-1.13
Ret	(-)	-0.653	-3.66***
Volatility	(+)	8.463	3.27***
Control for Industry	Yes		
Pseudo R ²	0.33		
Area under the ROC	0.90		
Going Concern N	383		
No Going Concern N	3,936		
Total N	4,319		

Dependent variable equals '1' if going concern audit report modification, otherwise '0'. All variables are defined in Appendix One. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (one-tailed if in predicted direction, two-tailed otherwise).

Finally, our results may be audit firm-specific. Each of the Big Four audit firms has enough observations to potentially alter our results. Using only the observations for each of the Big Four firms, we conducted four different regressions (untableted). This analysis suggests that our results are not driven by one individual firm.

6. Conclusion

We investigate whether, and to what extent, the Rule 3211 mandated disclosure of audit partners' identities changed their reporting behavior. The research question is motivated by the protracted and contentious regulatory process surrounding Rule 3211's passage. While proponents (generally the PCAOB) expressed a desire for greater accountability and transparency, opponents (generally the auditing lobby) voiced concerns about whether the regulation would impact – or suboptimally impact – audit partner behavior.

Our research question is examined in the context of the audit partner's propensity to issue a going concern report modification for financially distressed firms. We argue that this research setting provides several advantages to address the partner identification issue's competing sides. Namely, auditor reporting is solely the auditor's responsibility; going concern report modifications provide a precise, timely and unambiguous measure of auditor accuracy, which is relatively straightforward for capital market participants to *observe and gauge* audit partner accuracy. Moreover, audit partners are cognizant of the uniquely observable and measurable aspect of audit reporting outcomes and errors.

We find that Rule 3211 altered audit reporting as audit partners became more conservative in the post-3211 environment. Specifically, tests reveal that both the audit report modification rate and incidence of Type I errors ('false positives') increased. We do not observe an increase in Type II errors ('false negatives') – i.e., the failure to modify a subsequently bankrupt company's opinion. A more detailed examination reveals that the primary reason for the change in audit partner behavior is audit partner reputation rather than litigation risk. More specifically, our evidence indicates that the asymmetric reputational punishment for the failure to qualify the opinion of a subsequently bankrupt (vis-à-vis qualifying the audit opinion for a firm that remains viable one year after the balance sheet date) is the primary driver of our results. Our results are robust to a battery of sensitivity tests, including management's assessment of its going concern status. The totality of the evidence indicates that there is not an increase in auditor reporting accuracy and that Rule 3211 exacerbates excessive auditor conservatism.

Our results indicate that Rule 3211 did not enhance audit quality to the extent that these results proxy for audit quality. Thus, an unintended consequence of Rule 3211 is the potential reduction in the audit report's informativeness. Conceivably, a more serious repercussion pertains to the potential self-fulfilling prophecy aspect of going concern decisions. More specifically, going concern modifications can hasten bankruptcy for firms as financial institutions may be reluctant to lend money

to firms with a modified audit report. An unjustified increase in the going concern modification rate as evinced in our paper may make U.S. capital markets potentially less attractive to young, upstart, albeit financially-distressed, companies.

As is the case with many studies, our paper has limitations, of which two merit additional discussion. One limitation of our study is that we cannot directly observe the audit partner going concern reporting process. As such, we infer audit partner behavior using a setting that only uses the auditing process's output, namely the audit report. Prior research almost universally adopted a research design similar to the one employed in the current study. The audit partner going concern reporting process, therefore, remains somewhat of a 'black box.' Second, our study only speaks to the change in auditor reporting and concomitant increase (decrease) in Type I (II) error rates. We do not examine whether investors found the partner disclosures relevant. Prior international research addresses this issue with mixed results.

While our study is the first to provide evidence on the auditor reporting effect of partner identification on U.S.-based audit partners, we recognize that our paper represents only a fraction of the research needed to fully understand the consequences, costs, and benefits of audit partner identification in the United States. We hope that our paper provides an impetus for future research in this area.

Data availability

All data is publicly available.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix One. Variable definitions

Variable	Definition
Dependent Variables	
Going_Concern	Indicator variable equal to '1' for audit reports containing a going concern audit report modification, otherwise '0.'
Type I	Indicator variable equal to '1' for Type I errors, otherwise '0.' Type I errors occur when auditor issues a going concern report modification and the company does not file for bankruptcy within twelve months after the balance sheet date.
Type II	Indicator variable equal to '1' for Type II errors, otherwise '0.' Type II errors occur when the auditor fails to issue a going concern report modification for a company that declares bankruptcy within 12 months of the balance sheet date.
Variables of Interest	
AEPdisclose	Indicator variable equal to '1' for company-year observations with an audit report of January 31, 2017, or later, otherwise '0.'
ThirdPartyLit	Measures the extent to which auditors can be held liable for negligence by non-client third parties. The index scales from 1 to 9, with 1 (9) representing the most restrictive (most expansive) definition of third parties who can hold the auditor liable for negligence.
HighThirdPartyLit	Indicator variable equal to '1' for firm-year observations with a ThirdPartyLit score > 4, otherwise '0.'
ClientImport	The ratio of client audit fees to total audit fees generated by the corresponding office for year t .
Control Variables	
Big4	Indicator variable equal to '1' for firm-year observations with a Big Four auditor, otherwise '0.'
InTenure	Natural log, in years, of the auditor-client relationship.
Z_Score	The likelihood of corporate failure, proxied by Altman's Z-Score (Altman 1968). Z-Score values are converted into deciles from 0 to 9.
InTA	The natural log of total assets for the company (Compustat AT).
InAge	The natural log of the age, in years, of the company.
Leverage	Leverage, calculated as the ratio of total liabilities to total assets (maximum value of one).
Cleverage	Change in leverage, calculated as the change in leverage from year $t-1$ to t .
Liquidity	Working capital (current assets minus current liabilities) divided by lagged total assets
Lloss	An indicator equal to 1 for company-year observations with negative earnings in the prior fiscal year ($t-1$), and otherwise '0.'
NegEquity	An indicator equal to 1 for company-year observations with a negative value for total equity, and otherwise '0.'
Cashflow	Operating cash flows, scaled by total assets.
Default	An indicator equal to 1 for company-year observations in which the company is in default (if the company had long-term debt in period $t-1$, zero long-term debt in period t , and an increase in long-term in current liabilities for period t), and otherwise '0.'

Appendix (continued)

Variable	Definition
MatWeakness	An indicator equal to 1 for company-year observations in which the company received a material weakness, and otherwise '0.'
FeeRatio	The proportion of fees attributable to non-audit services, calculated as non-audit fees scaled by total fees.
Ret	The company's stock return over the fiscal year.
Volatility	Standard deviation of the residual from the market model over the fiscal year.
Additional Control Variables For the Type I/Type II error analyses	
ACH	Indicator variable that equals '1' if the company dismisses its auditor in t-1, and otherwise '0.'
FFinance	Indicator variable that equals '1' if the company issues equity or debt in the subsequent year, and otherwise '0.'
Instown	The percentage of the company's shares owned by institutional owners.
Invrec	Sum of inventories and receivables divided by total assets.
Seg	Natural logarithm of the number of business segments

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