

# Audit Committee Accounting Expertise and Audit Quality – the Case of Going-Concern Opinions

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## Abstract

This study examines whether audit committee accounting expertise and other audit committee characteristics promote or deter the likelihood of receiving going-concern reports from the auditors and whether such characteristics shield auditors from dismissals after the issuance of a going-concern report. The study finds no significant association between the likelihood of a going-concern report and audit committee accounting expertise or other audit committee characteristics. No significant association is also found for auditor dismissals following going-concern reports and audit committee accounting expertise. These results contrast with prior literature that examined data preceding the passage of the Sarbanes-Oxley Act of 2002 (hereafter SOX) or the period immediately thereafter. Additional analysis shows that audit committee accounting expertise is found to improve the information in going-concern audit opinions by reducing Type I errors, however. Overall, these findings shed light on the evolving role of audit committees in overseeing the auditors and have implications for regulators interested in improving audit quality and investors interested in improving the effectiveness of audit committees.

**Keywords:** going-concern, audit committee, accounting expertise, auditor dismissal

## 1. Introduction

The role of audit committees in protecting the credibility of financial reporting and auditor's reporting behavior has been studied extensively in the accounting literature. Carcello and Neal (2000) find that the greater the percentage of affiliated directors on the audit committee, the lower the probability of auditor going-concern opinions. Carcello and Neal (2003) report that audit committees with more independent directors and higher governance expertise, shield auditors from dismissals after the issuance of new going-concern opinions. In a review of the research on auditor going-concern opinions, Carson, Fargher, Geiger, Lennox, Raghunandan, and Willekens (2013) note that the findings on audit committees and auditor reporting behavior pertain to the period before SOX or the period immediately following the passage of SOX. They call for research that examines the role of audit committee characteristics such as financial expertise and tenure, on the auditor going-concern opinions and for a more recent period. This study answers their call by examining whether audit committee characteristics such as the accounting financial expertise of the audit committee promote or deter auditor going-concern opinions and the role of audit committee characteristics in dismissals of auditors following a going-concern opinion for the years 2016-18.

Prior literature has shown that some audit committee characteristics improve the oversight of financial reporting. In particular, several studies have documented that the accounting financial expertise of the committee members is associated with higher financial reporting quality (Dhaliwal, Naiker, & Navissi, 2010, Krishnan & Visvanathan, 2009). Other studies also document a positive association between audit committee characteristics and higher audit quality (Lisic, Myers, Seidel, & Zhou 2019). To assess the role of audit committee characteristics in improving audit quality in a more recent period, this study begins by examining the relationship between audit committee characteristics and auditor going-concern opinions. A similar analysis is also conducted for auditor dismissals following a going-concern opinion. The sample is collected over the period 2016-18 to address the robustness of findings in prior literature pertaining primarily to the period before or surrounding the passage of SOX. The sample consists of financially distressed firms (Carcello & Neal, 2000) as defined in Blay and Geiger (2013). The analyses are conducted by expanding on the models of Carcello and Neal (2000) and Carcello and Neal (2003). While several audit committee characteristics are used, the key variable of interest is the accounting financial expertise of the committee, consistent with its prominent role documented in audit committee literature. The findings indicate that

neither accounting financial expertise nor other key audit committee characteristics are significant in the auditor going-concern model or the auditor dismissal model.

These findings are in contrast to findings in the prior literature. There are several potential explanations for the difference in results. First, as noted before most of the prior studies examined periods before or surrounding the passage of SOX. Second, in contrast to prior studies, the proportion of firms with accounting financial experts on boards is significantly higher indicating that over time more firms appoint such experts on the boards. Third, Newton, Persellin, Wang, and Wilkins (2016) argue that going-concern opinions, in contrast to opinions on internal control weaknesses, are more predictable, and accordingly firms are less likely to engage in auditor opinion shopping in the case of going-concern opinions. This is a possible explanation for the finding in recent years that audit committee characteristics play a significant role in opinions on internal control weaknesses, but the present study finds no such relationship for going-concern opinions. Finally, the study finds accounting financial expertise minimizes Type I errors in going-concern opinions suggesting that accounting expertise improves auditor reporting quality albeit in a manner that is different from documented in prior studies.

Several additional analyses are conducted to address the robustness of the findings. Procedures examining the potential effects of endogeneity produce similar results. Tests examining CEO influence on the audit committee (Lisic et al., 2019) do not indicate any notable differences in the analysis. The results are also unaffected when alternative measures of audit committee expertise, such as the presence or proportion of experts, and the number of experts, are used in the model.

The study makes the following contributions to the literature: first, by answering the call for research on auditor going-concern opinions and audit committee characteristics (Carson et al., 2013), the study finds evidence that differs from prior research underscoring the evolving role of the audit committee characteristics and auditor reporting behavior. Second, the study finds that while accounting financial expertise of the audit committee does not play a role in going-concern opinions and subsequent dismissals of auditors, it improves the information in audit opinions by reducing Type I errors. This finding has not been documented previously and thus extends the literature on the role of audit committees in improving audit quality. Third, the evidence in the study contrasts with evidence on internal control weaknesses and audit committee accounting financial expertise (Lisic et al., 2019) indicating the relative shift in the relationship between audit committees and auditors regarding going-concern opinions. Finally, regulators interested in the oversight role of audit committees should find these results helpful in assessing the effectiveness of requiring a narrow or broader definition of financial expertise from board members.

The rest of the study is organized as follows. Section 2 reviews the prior literature and develops the hypotheses, section 3 describes the methodology, and section 4 presents the empirical results. The final section provides a summary and notes limitations to the study.

## 2. Hypotheses Development

The relationship between audit committee composition and auditor reporting behavior has been of interest to regulators and researchers. The Blue Ribbon Committee made several recommendations to improve the effectiveness of audit committees including the composition and independence of committee members (BRC, 1999). In 2002, SOX introduced several important changes in audit committee composition and responsibilities. Following SOX, audit committee members need to be independent and the audit committee is in charge of the appointment, compensation, and oversight of auditors. SOX underscored the importance of financial expertise on the audit committee by requiring disclosures on whether the committee includes at least one member who is a “financial expert.”

The role of financial expertise on the audit committee in improving financial reporting quality and auditor reporting behavior has been extensively studied in the prior literature (Krishnan, 2005, Zhang, Zhou & Zhou, 2007). Audit committee financial expertise has been found to be associated with lower restatements (Abbott, Parker & Peters, 2004, Agrawal & Chadha, 2005), greater accounting conservatism (Krishnan & Visvanathan, 2008), internal control weaknesses (Krishnan & Visvanathan, 2007), audit fees (Abbott, Parker, Peters & Raghunandan, 2003) and accrual quality (Dhaliwal et al., 2010). The SEC definition of a financial expert includes those who have either direct accounting experience or supervisory experience over accounting personnel (SEC, 2003). Dhaliwal et al. (2010) and Krishnan and Visvanathan (2007) find that supervisory experience is not associated with higher financial reporting quality, unlike specialized accounting experience. Lisic et al. (2019) argue that audit committee members with accounting expertise are likely more ethically aware because members who are accounting professionals must heed the AICPA’s Code of Professional Conduct. This professional impetus likely incentivizes the members to ensure the

quality of financial reporting, encourage the auditors to be diligent, and finally safeguard the auditor in instances of qualified audit opinions.

Prior literature examining the role of audit committees and auditor opinions finds differing results based on sample compositions and periods that vary. Carcello and Neal (2000) study financially distressed firms in 1994 and report that auditors of firms with more affiliated directors on the audit committee are less likely to issue a going-concern opinion. Carcello and Neal (2003) examine auditor dismissals following new going-concern opinions for the period 1988-99 and find that audit committees that protect auditors from dismissals are characterized by more independence, more governance expertise, and lower stock ownership. They use a sample of firms that received a new going-concern opinion from a Big-N auditor and subsequently dismissed the auditor. Hoitash and Hoitash (2009) examine data for the year 2004 and find that level of assurance increases and the probability of dismissal decreases with stronger audit committees. Lisic et al. (2019) find that the probability of adverse internal control audit opinions is higher and the likelihood of subsequent auditor dismissals is lower for firms with audit committees having greater accounting expertise. Their data is restricted to accelerated filers over the period 2004-13. In a review of the audit literature, Carson et al. (2013) note that prior research on going-concern opinions and audit committee characteristics pertain to periods before or immediately following the passage of SOX that requires independence as a requirement for all audit committee members. Thus, they call for research examining other audit committee characteristics such as accounting financial expertise, tenure, and background, in the context of auditor going-concern opinions. Following Carson et al.'s (2013) call for research, this study examines the relationship between issuance of going-concern reports and audit committee accounting financial expertise along with other audit committee characteristics.

Carcello and Neal (2000) note that a going-concern audit opinion is often a result of a contentious negotiation among auditors, management, and the audit committee, and given that issuing a going-concern report is a difficult and ambiguous audit task, the auditor is susceptible to management pressure through the potential for dismissal or fee reductions. A strong audit committee may protect the auditor in such instances by mitigating management pressure. This implies that strong audit committees are likely associated with a higher frequency of auditor going-concern reports in instances where such opinions are warranted. In line with this prediction, Carcello and Neal (2000) find evidence showing an inverse relationship between the probability of receiving a going-concern report and the proportion of affiliated i.e., non-independent, directors on the audit committee in the pre-SOX period. Lisic et al. (2019) argue that in the post-SOX period, internal control weaknesses rather than going-concern opinions are a better setting to examine the relationship between audit committee accounting expertise and audit quality as subsequent restatements could be used to verify whether the auditors failed to report an internal control weakness. They note that in the case of going-concern reports, subsequent bankruptcies tend to be few. However, note that Lisic et al. (2019) examine only accelerated filers i.e., firms with greater than \$75 million in public float, in contrast to Carcello and Neal (2000) who examine financially distressed firms, as the latter group is more likely to receive going-concern reports. Thus, it is unclear if Carcello and Neal's (2000) findings continue to apply to the post-SOX setting. Moreover, as discussed before, their findings pertain to audit committee independence which is mandatory after SOX, and they did not study the role of audit committee accounting expertise nor other characteristics of audit committees that have been shown to play a significant role in improving accounting and audit quality (Carson et al., 2013). Thus, the first research question is stated in the null form:

H1: For financially distressed firms, the issuance of an auditor going-concern report is not associated with audit committee accounting expertise.

Prior studies have found that firms that receive a going-concern audit report are likely to change auditors (Geiger, Raghunandan & Rama, 1998). Carcello and Neal (2003) using pre-SOX data examine dismissals of auditors after the issuance of a new going-concern audit report, as it is the responsibility of the audit committee to protect the independence of the auditor to ensure audit quality. They find that audit committees that protect auditors from dismissals are characterized by more independence, more governance expertise, and lower stock ownership. They do not find any significance for the role of the committee's financial expertise. Hoitash and Hoitash (2009) use data for one year after the passage of SOX and find an inverse relation between dismissals and audit committee financial expertise. In the context of dismissals after an audit report on internal control weaknesses, Lisic et al. (2019) find that dismissals after such reports are inversely related to audit committee accounting expertise. Considering the differing evidence reported by prior studies and the sample differences in those studies, it is unclear whether auditor dismissals following the issuance of a going-concern opinion are related to audit committee accounting expertise in periods after SOX. Thus, the second research question is stated in the null form:

H2: Auditor dismissal following the issuance of an auditor going-concern report is not associated with audit committee accounting expertise.

### 3. Research Design

To test hypothesis 1, a going concern model augmented by the audit committee and other governance variables is used. For the going concern model, the study follows DeFond, Lim, and Zang (2016) and for the audit committee and governance variables, the study follows Carcello and Neal (2000) and related literature (Lisic et al., 2019). The model is specified as follows:

$$\begin{aligned}
 GCO_{it} \text{ or } FIRSTGC_{it} = & \beta_0 + \beta_1 AFED_{it} \text{ (or } AFE_{\%it}) + \beta_2 CEOCHAIR_{it} + \beta_3 ACBRDTEN_{it} + \beta_4 GOVEXP_{it} \\
 & + \beta_5 ACOWN_{it} + \beta_6 LAT_{it} + \beta_7 ZSCORE_{it} + \beta_8 BETA_{it} + \beta_9 RET_{it} + \beta_{10} LEV_{it} + \beta_{11} CHLEV_{it} \\
 & + \beta_{12} LLOSS_{it} + \beta_{13} INVEST_{it} + \beta_{14} OCF_{it} + \beta_{15} FUTFIN_{it} + \beta_{16} BIG4_{it} + \beta_{17} BM_{it} \\
 & + \beta_{18} AUSPL_{it} + \beta_{19} TENURE_{it} + \text{Year fixed effects} + \text{Industry fixed effects} + e_{it} \quad (1)
 \end{aligned}$$

where:  $GCO = 1$  if the company receives a going-concern audit opinion, zero otherwise;  $FIRSTGC = 1$  for clients receiving a going concern opinion for the first time, and 0 otherwise;  $AFED = 1$  if the audit committee has at least one accounting expert, zero otherwise. An accounting expert is a director with experience as a certified public accountant, auditor, principal or chief financial officer, controller, or principal or chief accounting officer;  $AFE_{\%}$  = the proportion of audit committee members who are accounting experts, where an accounting expert is defined as above. The definitions for all other variables are provided in the appendix. For the model with  $GCO$  as the dependent variable, prior period going-concern opinion ( $LGCO$ ) is also included in the model. Consistent with Carcello and Neal (2000),  $GCO$  is used as the dependent variable and in line with the recent literature (DeFond et al., 2016),  $FIRSTGC$  is also used as the dependent variable.

The primary variables of interest are  $AFED$  (or  $AFE_{\%}$ ) and other audit committee variables measuring the average board tenure of audit committee members ( $ACBRDTEN$ ), the average number of public company boards on which audit committee members sit ( $GOVEXP$ ), and the average stock ownership of audit committee members ( $ACOWN$ ). Whether the CEO is also the chairman of the board ( $CEOCHAIR$ ), and two auditor characteristics, auditor industry specialization ( $AUSPL$ ) and auditor tenure ( $TENURE$ ) are also included based on prior literature (Lisic et al., 2019). All other variables in model 1 are included as controls as described in DeFond et al. (2016).

To test hypothesis 2, an auditor dismissal model is used, augmented by the audit committee and other governance characteristics. Following Carcello and Neal (2003) and related literature on auditor dismissals (Hoitash & Hoitash, 2009), the following model is specified:

$$\begin{aligned}
 DISMISSAL_{t+1} = & \beta_0 + \beta_1 AFED_{it} \text{ (or } AFE_{\%it}) + \beta_2 FIRSTGC_{it} + \beta_3 CEOCHAIR_{it} + \beta_4 ACBRDTEN_{it} \\
 & + \beta_5 GOVEXP_{it} + \beta_6 ACOWN_{it} + \beta_7 BIG4_{it} + \beta_8 NRREST_{it} + \beta_9 ICMW_{it} + \beta_{10} MGTCHG_{it} \\
 & + \beta_{11} CEOTENU_{it} + \beta_{12} AUSPL_{it} + \beta_{13} TENURE_{it} + \beta_{14} LAT_{it} + \beta_{15} ZSCORE_{it} + \beta_{16} LEV_{it} \\
 & + \beta_{17} ROA_{it} + \beta_{18} NBUS_{it} + \beta_{19} LITRISK_{it} + \beta_{20} ACCR_{it} + \beta_{21} MBR_{it} + \beta_{22} CHFEE_{it} \\
 & + \text{Year fixed effects} + \text{Industry fixed effects} + e_{it} \quad (2)
 \end{aligned}$$

where:  $DISMISSAL = 1$  if the auditor is dismissed in the one-year window following the filing of the annual financial statements, zero otherwise (Lisic et al., 2019). The definitions for all other variables are provided in the appendix. The primary variables of interest are  $AFED$  (or  $AFE_{\%}$ ) and other audit committee variables  $ACBRDTEN$ ,  $GOVEXP$ , and  $ACOWN$ .

### 4. Sample Description and Empirical Results

The sample is collected for the 3 years 2016-18. The sample period covers a recent period while the restriction of 3 years is because some of the audit committee variables such as accounting expertise need hand collection and verification. The sample collection procedure begins by considering all firms in Compustat for the years 2016-18. Firms in SIC codes 6000-6999 are excluded following prior studies (DeFond et al., 2016). As the focus is on the likelihood of receiving a going-concern report, the sample is restricted to financially distressed firms defined as firms with both negative income and cash flow from operations in the same year (Blay & Geiger, 2013). Auditor variables are collected from Audit Analytics. Audit committee and board variables are collected from BoardEx. While BoardEx has data on the educational background and professional experience of audit committee directors, this data is either missing or incomplete for several companies or directors. Moreover, several databases identify as the financial expert, the director designated as such by the company and as noted previously, firms can designate even those with supervisory experience as financial experts. The available data in BoardEx on education and experience

was verified with the proxy filings and in numerous instances, BoardEx data was incomplete to assess the accounting experience of the directors. Thus, the accounting experience variable (*AFED*) was primarily collected directly from the proxy filings on the SEC EDGAR database. Table 1 details the sample selection procedure that yields 2,101 firm-years as the final sample. The sample is distributed across all major industry groups as classified in Frankel, Johnson, and Nelson (2002): Durable manufacturers, Transportation, Utilities, Retail, Services, and Computers (distribution not tabulated).

Table 1. Sample Selection

# Firm-years in Compustat in 2016-18	22350
Less: # Firm-years in SIC 6000-6999	(7788)
# Firm-years with Income or cash flow from operations >0	(9642)
# Firm-years for which stock return in CRSP and required Compustat data not available	(2163)
# Firm-years for which audit committee data not available	(656)
# Firm-years in sample	2101

Table 2 provides descriptive statistics for the primary variables used in the study. The mean of *GCO* suggests that 22 percent of the sample received a going-concern opinion while the mean of *FIRSTGC* indicates that 7.95 percent of the sample firms received a first-time going-concern opinion i.e., they did not receive a going-concern opinion in the prior year. While the overall going-concern percentage is lower than the 37 percent reported for the year 1994 in Carcello and Neal (2000), the first time going-concern percent is similar to the 8.4 percent reported in DeFond et al. (2016) for a longer period (1999-2009). The mean for *DISMISSAL* shows that 5.57 percent of the sample firms dismissed their auditors in the subsequent year, which falls in the range of 3.4 percent reported in Lisic et al., (2019) and 7.3 percent reported in Hoitash and Hoitash (2009). The mean value of *AFED* and *AFE\_%* are 77.6 and 29.3 percent respectively, indicating that less than one-fourth of the firms do not have an accounting expert on the audit committee and for firms with an accounting expert, accounting experts constitute slightly less than a third of the committee. The numbers for *AFED* are substantially higher than the 41.1 percent reported in Lisic et al. (2019) and the 21 percent reported for the proportion of accounting members by Hoitash and Hoitash (2009). At least two sample composition differences are to be noted in considering these numbers: the sample in the current study is more recent compared to these studies and only financially distressed firms are considered in the current study in contrast to all accelerated filers (Lisic et al., 2019) or all firms (Hoitash & Hoitash, 2009). Moreover, Ashraf, Michas, and Russomanno (2019), using more recent data, report a mean value of 74 percent for the *AFED* variable, consistent with this study. The descriptive statistics for other variables are in line with prior literature (DeFond et al., 2016).

Table 2. Descriptive Statistics

<b>Variables</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>
<i>GCO</i>	0.220	0.414	0.000	0.000	0.000
<i>FIRSTGC</i>	0.079	0.270	0.000	0.000	0.000
<i>DISMISSAL</i>	0.557	0.229	0.000	0.000	0.000
<i>AFED</i>	0.776	0.416	1.000	1.000	1.000
<i>AFE_%</i>	0.215	0.623	0.200	0.333	0.333
<i>CEOCHAIR</i>	0.288	0.453	0.000	0.000	1.000
<i>ACBRDTEN</i>	4.457	3.772	1.700	3.400	6.200
<i>GOVEXP</i>	1.786	0.755	1.250	1.670	2.250
<i>ACOWN</i>	0.331	0.142	0.400	0.400	0.400
<i>LAT</i>	4.404	1.523	3.307	4.378	5.348
<i>ZSCORE</i>	1.003	4.373	-1.674	-0.107	2.081
<i>BETA</i>	1.219	0.870	0.843	1.000	1.661
<i>RET</i>	-0.166	0.630	-0.551	-0.256	-0.024
<i>LEV</i>	0.499	0.458	0.183	0.390	0.679
<i>CHLEV</i>	-0.066	0.651	-0.072	0.024	0.130
<i>LLOSS</i>	0.936	0.243	1.000	1.000	1.000
<i>INVEST</i>	0.519	0.331	0.196	0.541	0.847
<i>OCF</i>	-0.416	0.522	-0.537	-0.267	-0.092
<i>FUTFIN</i>	0.923	0.266	1.000	1.000	1.000
<i>BIG4</i>	0.529	0.499	0.000	1.000	1.000
<i>BM</i>	0.369	0.933	0.119	0.293	0.622
<i>AUSPL</i>	0.121	0.326	0.000	0.000	0.000
<i>TENURE</i>	5.870	5.046	2.000	4.000	8.000
<i>NRREST</i>	0.016	0.129	0.000	0.000	0.000
<i>ICMW</i>	0.043	0.203	0.000	0.000	0.000
<i>MGTCHG</i>	0.333	0.471	0.000	0.000	1.000
<i>CEOTENU</i>	0.452	1.313	-0.511	0.642	1.395
<i>ACCR</i>	-0.139	0.225	-0.194	-0.089	-0.025
<i>MBR</i>	5.282	12.493	0.996	2.447	5.109
<i>CHAFEE</i>	0.269	1.114	-0.121	0.035	0.290
<i>NBUS</i>	1.005	0.079	1.000	1.000	1.000
<i>LITRISK</i>	0.628	0.483	0.000	1.000	1.000

N=2101

Table 3 presents Pearson correlations. The univariate correlations indicate that going-concern opinions and subsequent auditor dismissals are positively correlated. Most of the audit committee variables are negatively related to going-concern opinions. Whether this relationship holds after controlling for other determinants of going-concern opinions or dismissals needs to be explored in the multivariate analysis. Other correlations among the control variables are consistent with prior literature.

Table 3. Correlations

VARIABLE S	GCO	FIRST GC	DISMI SSAL	AFED	AFE_ %	CEOC HAIR	ACBR DTEN	GOVE XP	ACOW N	LAT	ZSCOR E	BETA	RET	LEV
GCO	1													
FIRSTGC	<b>0.552</b>	1												
DISMISSAL	<b>0.069</b>	0.022	1											
AFED	<b>-0.065</b>	-0.023	-0.016	1										
AFE_%	<b>-0.069</b>	<b>-0.047</b>	-0.036	<b>0.729</b>	1									
CEOCHAIR	-0.013	0.002	-0.000	-0.013	0.041	1								
ACBRDTEN	<b>-0.059</b>	-0.000	-0.000	-0.014	0.012	<b>-0.045</b>	1							
GOVEXP	<b>-0.125</b>	-0.040	<b>-0.096</b>	<b>0.092</b>	<b>0.089</b>	<b>-0.139</b>	-0.036	1						
ACOWN	<b>-0.045</b>	-0.024	0.010	-0.036	0.003	0.005	0.003	0.021	1					
LAT	<b>-0.400</b>	<b>-0.164</b>	<b>-0.064</b>	<b>0.145</b>	<b>0.135</b>	<b>-0.076</b>	<b>0.079</b>	<b>0.279</b>	-0.000	1				
ZSCORE	<b>0.430</b>	<b>0.216</b>	<b>0.057</b>	<b>-0.066</b>	<b>-0.065</b>	<b>0.056</b>	<b>-0.043</b>	<b>-0.108</b>	-0.006	<b>-0.357</b>	1			
BETA	<b>-0.061</b>	0.003	-0.011	<b>0.043</b>	0.010	<b>-0.074</b>	-0.004	<b>0.110</b>	0.026	<b>0.221</b>	-0.003	1		
RET	<b>-0.192</b>	<b>-0.115</b>	-0.018	<b>0.044</b>	0.026	-0.033	0.024	<b>0.054</b>	0.031	<b>0.141</b>	<b>-0.133</b>	0.003	1	
LEV	<b>0.260</b>	<b>0.142</b>	<b>0.057</b>	-0.028	-0.018	0.026	<b>0.088</b>	<b>-0.103</b>	-0.005	-0.030	<b>0.788</b>	0.012	<b>-0.076</b>	1
CHLEV	0.036	<b>0.107</b>	-0.043	0.018	0.026	-0.012	<b>0.159</b>	0.038	-0.020	<b>0.050</b>	<b>0.218</b>	<b>0.076</b>	-0.031	<b>0.292</b>
LLOSS	<b>0.085</b>	0.031	-0.006	-0.029	-0.034	0.002	<b>-0.128</b>	<b>0.049</b>	0.022	<b>-0.139</b>	<b>0.087</b>	<b>0.043</b>	0.015	-0.015
INVEST	<b>-0.055</b>	-0.034	<b>-0.081</b>	-0.026	<b>-0.072</b>	<b>-0.046</b>	<b>-0.232</b>	<b>0.281</b>	<b>0.125</b>	<b>-0.147</b>	0.004	<b>0.075</b>	0.042	<b>-0.253</b>
OCF	<b>-0.414</b>	<b>-0.193</b>	-0.007	<b>0.081</b>	<b>0.095</b>	-0.031	<b>0.116</b>	0.033	-0.004	<b>0.517</b>	<b>-0.711</b>	-0.006	<b>0.163</b>	<b>-0.305</b>
FUTFIN	0.012	<b>-0.043</b>	-0.033	0.020	0.010	-0.001	<b>-0.177</b>	<b>0.100</b>	0.028	<b>0.097</b>	<b>0.080</b>	<b>0.068</b>	0.029	<b>0.064</b>
BIG4	<b>-0.201</b>	<b>-0.067</b>	<b>-0.046</b>	<b>0.154</b>	<b>0.119</b>	<b>-0.112</b>	0.002	<b>0.383</b>	0.001	<b>0.525</b>	<b>-0.103</b>	<b>0.206</b>	<b>0.070</b>	0.007
BM	<b>-0.071</b>	<b>-0.045</b>	0.010	-0.008	-0.015	-0.032	<b>0.087</b>	-0.015	-0.029	-0.007	<b>-0.346</b>	-0.025	<b>-0.076</b>	<b>-0.419</b>
AUSPL	<b>-0.080</b>	-0.038	0.012	<b>0.067</b>	0.037	-0.030	-0.031	<b>0.111</b>	<b>-0.051</b>	<b>0.251</b>	<b>-0.085</b>	<b>0.072</b>	<b>0.046</b>	-0.035
TENURE	<b>-0.075</b>	-0.001	-0.006	0.037	0.031	<b>-0.060</b>	<b>0.454</b>	<b>0.048</b>	<b>-0.068</b>	<b>0.140</b>	0.016	0.036	0.031	<b>0.095</b>
NRREST	<b>0.047</b>	<b>0.044</b>	<b>0.006</b>	0.016	0.014	<b>0.073</b>	-0.016	<b>-0.087</b>	0.018	-0.042	0.014	<b>-0.065</b>	-0.011	0.005
ICMW	-0.020	0.034	<b>0.093</b>	0.016	0.021	-0.035	<b>0.047</b>	-0.036	-0.036	<b>0.135</b>	0.014	0.034	-0.006	<b>0.075</b>
MGTCHG	<b>0.050</b>	<b>0.043</b>	<b>0.043</b>	<b>-0.053</b>	<b>-0.068</b>	<b>-0.075</b>	<b>-0.204</b>	<b>-0.045</b>	-0.023	-0.028	0.014	-0.040	-0.039	-0.016
CEOTENU	<b>-0.066</b>	-0.038	<b>-0.053</b>	<b>0.048</b>	<b>0.085</b>	<b>0.091</b>	<b>0.379</b>	0.037	0.001	0.044	-0.022	0.014	<b>0.048</b>	0.012
ACCR	<b>-0.204</b>	<b>-0.097</b>	<b>-0.055</b>	0.025	0.022	<b>-0.049</b>	<b>0.120</b>	<b>0.107</b>	0.025	<b>0.242</b>	<b>-0.524</b>	0.028	0.037	<b>-0.212</b>
MBR	0.025	0.015	0.008	0.012	0.016	0.028	<b>-0.051</b>	0.021	<b>0.045</b>	-0.041	<b>0.107</b>	-0.023	<b>0.132</b>	0.037
CHAFEE	-0.013	-0.015	0.010	-0.008	-0.013	0.000	<b>-0.135</b>	0.039	<b>0.062</b>	<b>0.066</b>	<b>-0.073</b>	-0.021	0.023	<b>-0.077</b>
LITRISK	-0.016	0.025	<b>-0.066</b>	-0.039	<b>-0.050</b>	-0.041	<b>-0.129</b>	<b>0.191</b>	<b>0.130</b>	-0.020	0.004	<b>0.084</b>	-0.017	<b>-0.090</b>
NBUS	-0.035	-0.019	0.010	0.021	-0.020	0.024	0.040	<b>-0.046</b>	0.003	<b>0.059</b>	-0.017	0.030	0.005	0.011

Table 3 continued

VARIABLES	CHLEV	LLOSS	INVEST	OCF	FUTFIN	BIG4	BM	AUSPL	TENURE	NRRE ST	ICMW	MGTCH G	CEOTE NU	ACCR
CHLEV	<b>1</b>													
LLOSS	-0.037	<b>1</b>												
INVEST	<b>-0.112</b>	<b>0.174</b>	<b>1</b>											
OCF	<b>-0.131</b>	<b>-0.145</b>	<b>-0.299</b>	<b>1</b>										
FUTFIN	-0.032	0.030	<b>0.142</b>	<b>-0.057</b>	<b>1</b>									
BIG4	<b>0.048</b>	0.007	<b>0.206</b>	<b>0.110</b>	<b>0.104</b>	<b>1</b>								
BM	<b>-0.098</b>	<b>-0.045</b>	<b>-0.048</b>	<b>0.144</b>	<b>-0.105</b>	<b>-0.045</b>	<b>1</b>							
AUSPL	0.007	-0.037	<b>0.049</b>	<b>0.081</b>	<b>0.062</b>	<b>0.347</b>	-0.017	<b>1</b>						
TENURE	<b>0.172</b>	<b>-0.079</b>	<b>-0.101</b>	0.037	-0.029	<b>0.194</b>	-0.012	<b>0.052</b>	<b>1</b>					
NRREST	<b>-0.060</b>	-0.012	<b>-0.046</b>	-0.001	0.009	<b>-0.056</b>	0.011	-0.003	<b>-0.059</b>	<b>1</b>				
ICMW	<b>0.055</b>	-0.043	<b>-0.124</b>	<b>0.069</b>	-0.019	0.013	-0.014	0.023	0.033	<b>0.119</b>	<b>1</b>			
MGTCHG	<b>-0.224</b>	-0.007	-0.001	0.002	0.029	<b>-0.043</b>	-0.026	0.001	<b>-0.159</b>	0.042	<b>0.072</b>	<b>1</b>		
CEOTENU	<b>0.193</b>	-0.016	0.013	-0.017	<b>-0.051</b>	<b>0.044</b>	0.019	0.018	<b>0.254</b>	-0.035	<b>-0.051</b>	<b>-0.833</b>	<b>1</b>	
ACCR	<b>-0.067</b>	<b>-0.068</b>	0.006	<b>0.237</b>	-0.012	<b>0.141</b>	<b>0.100</b>	<b>0.064</b>	<b>0.091</b>	-0.038	-0.013	<b>-0.045</b>	<b>0.053</b>	<b>1</b>
MBR	-0.017	<b>0.065</b>	<b>0.061</b>	<b>-0.073</b>	<b>0.079</b>	0.035	<b>-0.088</b>	0.020	0.006	-0.005	-0.005	-0.029	<b>0.049</b>	<b>-0.121</b>
CHAFEE	<b>-0.079</b>	0.009	<b>0.108</b>	<b>0.049</b>	<b>0.070</b>	<b>0.055</b>	-0.016	0.003	<b>-0.120</b>	0.035	<b>0.074</b>	<b>0.202</b>	<b>-0.174</b>	0.020
LITRISK	-0.016	<b>0.093</b>	<b>0.489</b>	<b>-0.146</b>	<b>0.106</b>	<b>0.177</b>	<b>-0.044</b>	<b>0.062</b>	<b>-0.053</b>	-0.031	<b>-0.113</b>	-0.018	<b>0.051</b>	<b>0.047</b>
NBUS	0.016	<b>-0.083</b>	<b>-0.064</b>	<b>0.044</b>	-0.026	-0.022	0.037	0.012	0.016	-0.008	<b>0.076</b>	-0.034	-0.001	0.005

Table 3 continued

VARIABLES	MBR	CHAFEE	LITRISK	NBUS
MBR	<b>1</b>			
CHAFEE	0.024	<b>1</b>		
LITRISK	0.040	0.036	<b>1</b>	
NBUS	-0.021	-0.010	<b>-0.049</b>	<b>1</b>

Pearson correlations are reported for variables used in the analyses. Significant correlations at  $p$ -value < 0.05 are bolded.  $N=2101$ .

Table 4 presents results from estimating model 1 with dependent variables defined as either going-concern opinion (*GCO*) or first-time going concern opinion (*FIRSTGC*) and audit committee accounting expertise defined as a dummy variable (*AFED*) or as a proportion (*AFE\_%*). The results show that after controlling for variables that influence the likelihood of receiving a going-concern opinion, there is no significant association between the probability of receiving a going-concern opinion and the presence of an accounting expert on the audit committee. A similar lack of significant associations also obtains for the *AFE\_%* variable and in the model that uses only first-time going-opinions. This evidence suggests that accounting experts on audit committees do not play a significant role (by either encouraging or dissuading the auditors) in the auditors' decision to provide a going-concern opinion. The results show that other audit committee characteristics such as governance expertise (*GOVEXP*), the tenure of audit committee members (*ACBRDTEN*), and audit committee directors' share ownership (*ACOWN*) also do not play a significant role in the reporting of going-concern opinions. Among all governance variables, *CEOCHAIR* is the only significant variable though only in specifications where the dependent variable is the going-concern opinion. The results show that control variables that influence the likelihood of going-opinion are mostly in line with prior literature (*LAT*, *ZSCOREZ*, *CUMRET*, *CHLEV*, and *INVEST* are significant with expected signs as specified in DeFond et al., 2016). Overall, the results indicate none of the key audit committee characteristics play a role in the going-concern decision of auditors and the null is not rejected. Note that Carcello and Neal (2000) propose and find a significant role for the audit committee in supporting the auditor's going concern decision. Their results are based



solely on the variable measuring the independence of the audit committee which is now a requirement for all firms in the post-SOX period.

Table 4. Estimation of Logistic Regression Model – Dependent Variable is *Going Concern Opinion*

<i>VARIABLES</i>	<i>Predicted Sign</i>	<i>DV is GCO</i>	<i>DV is GCO</i>	<i>DV is FIRSTGC</i>	<i>DV is FIRSTGC</i>
<i>LGCO</i>	+	2.785***	2.784***	-	-
<i>AFED</i>	?	0.029	-	-0.007	-
<i>AFE_%</i>	?	-	-0.160	-	-0.600
<i>CEOCHAIR</i>	?	-0.350**	-0.346**	-0.111	-0.098
<i>ACBRDTEN</i>	?	-0.011	-0.011	-0.005	-0.004
<i>GOVEXP</i>	?	-0.025	-0.023	0.05	0.058
<i>ACOWN</i>	?	-0.066	-0.068	0.141	0.164
<i>LAT</i>	-	-0.502***	-0.499***	-0.305***	-0.298***
<i>ZSCORE</i>	+	0.095*	0.094*	0.100**	0.101**
<i>BETA</i>	+	0.012	0.011	0.133	0.128
<i>RET</i>	-	-0.818***	-0.817***	-0.727***	-0.736***
<i>LEV</i>	+	0.458	0.454	-0.291	-0.315
<i>CHLEV</i>	+	0.387***	0.391***	0.478***	0.484***
<i>LLOSS</i>	+	0.141	0.139	0.232	0.231
<i>INVEST</i>	-	-2.003***	-2.012***	-0.788**	-0.833**
<i>OCF</i>	-	-0.852***	-0.857***	0.117	0.114
<i>FUTFIN</i>	-	-0.246	-0.244	-0.543*	-0.535*
<i>BIG4</i>	+	0.244	0.251	0.065	0.098
<i>BM</i>	-	0.091	0.090	0.045	0.042
<i>AUSPL</i>	?	0.153	0.155	0.026	0.031
<i>TENURE</i>	?	-0.038**	-0.039**	-0.005	-0.006
<i>Observations</i>		2101	2101	2101	2101
<i>Pseudo R<sup>2</sup></i>		0.460	0.461	0.122	0.123

This table reports the estimation of regression equation (1) using the conditional logit model for all firms. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Logistic regression is run clustered by firm (DeFond et al., 2016). Intercept, year, and industry fixed effects are included.

Table 5 presents the results for model 2. The dependent variable is auditor dismissals, and the model uses only new going-concern opinions following Carcello and Neal (2003). The focus of hypothesis 2 is whether dismissals following a new going-concern opinion are associated with audit committee accounting expertise. Thus, the variables of interest are the interactions between *AFED\*FIRSTGC* or *AFE\_%\*FIRSTGC*. Other audit committee variables are also interacted with *FIRSTGC* to assess their role in auditor dismissals. The results in table 5 show that none of the audit committee variables, except for *GOVEXP* interacted with *FIRSTGC*, are significant. While *GOVEXP* and the interaction *GOVEXP\*FIRSTGC* are significant, the combined coefficient is not significant in a joint test (p-value 0.25 not reported in the table). This evidence indicates that audit committee characteristics do not play a significant role in the dismissal of auditors after a new going-concern opinion in contrast to the results in Carcello and Neal (2003) in the pre-SOX period. The insignificance of the accounting expertise interaction is consistent with Hoitash and Hoitash (2009), however.

Table 5. Estimation of Logistic Regression Model – Dependent Variable is *Dismissal*

<i>VARIABLES</i>	<i>Predicted Sign</i>	<i>Coefficient</i>	<i>Coefficient</i>
<i>FED</i>	?	-0.228	-
<i>AFE_%</i>	?	-	-0.779
<i>FIRSTGC</i>	+	-2.039	-1.628
<i>AFED*FIRSTGC</i>	?	0.763	-
<i>AFE_%*FIRSTGC</i>	?	-	0.580
<i>CEOCHAIR</i>	?	-0.154	-0.135
<i>ACBRDTEN</i>	?	-0.018	-0.018
<i>ACBRDTEN*FIRSTGC</i>	?	0.107	0.101
<i>GOVEXP</i>	?	-0.628***	-0.614***
<i>GOVEXP*FIRSTGC</i>	?	0.995**	1.025**
<i>ACOWN</i>	?	0.660	0.724
<i>ACOWN*FIRSTGC</i>	?	-1.694	-1.722
<i>BIG4</i>	-	0.186	0.210
<i>NRREST</i>	+	0.680	0.709
<i>ICMW</i>	+	1.138***	1.154***
<i>MGTCHG</i>	+	-0.116	-0.106
<i>CEOTENU</i>	?	-0.163	-0.157
<i>AUSPL</i>	?	0.584*	0.574*
<i>TENURE</i>	-	0.005	0.005
<i>LAT</i>	-	-0.231**	0.231**
<i>ZSCORE</i>	?	0.171	0.174
<i>LEV</i>	+	-0.593	-0.601
<i>ROA</i>	-	1.087**	1.111**
<i>NBUS</i>	?	0.125	0.072
<i>LITRISK</i>	?	-0.481**	-0.487***
<i>ACCR</i>	?	0.907*	0.940*
<i>MBR</i>	-	0.003	0.002
<i>CHFEE</i>	+	0.031	0.030
<i>Observations</i>		2101	2101
<i>Pseudo R<sup>2</sup></i>		0.101	0.102

This table reports the estimation of regression equation (2) using the conditional logit model for all firms. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Logistic regression is run clustered by firm (DeFond et al., 2016). Intercept, year, and industry fixed effects are included.

The lack of association between either going-concern opinions or dismissals with audit committee accounting expertise or other audit committee characteristics raises the issue of whether audit committees play any role in improving audit quality through the auditor's decision to report going-concern opinions. While prior literature (Carcello and Neal 2000, 2003) approached this issue by viewing the audit committee's role as an unbiased intermediary between the firm's management and the auditor in the case of going-concern opinions, the role may have shifted post-SOX. Newton et al. (2016) argue that in the post-SOX era, in contrast to opinions on internal control weaknesses, going-concern opinions are more predictable and thus no more a significant factor in a firm's decision to keep or dismiss an auditor. In line with this reasoning, they find evidence that auditor opinion shopping is

significant for internal control weaknesses but not for going-concern opinions. Their evidence is potentially why the results in this study do not find an association between audit committee variables and going-concern opinions or auditor dismissals. While the role of audit committees may have shifted away from protecting the auditor with respect to going-concern reporting decisions, audit committee accounting experts can still play a role in ensuring that the going-concern opinion is appropriate and thus is informative to investors and other stakeholders. That is, by ensuring that the going-concern opinion is warranted by underlying business fundamentals, audit committees can help minimize errors in the opinions and thus improve audit quality. To assess whether audit committee accounting expertise improves the accuracy of the going-concern reporting, the following models are adapted from Geiger and Rama (2006) and Berglund, Eshelman, and Guo (2018):

$$Pr (BANKRUPT_{i,t+1} = 1 | GCO_{i,t} = 1) = \beta_0 + \beta_1 AFED_{it} \text{ (or } AFE\_ \%_{it}) + \beta_2 ACBRDTEN_{it} + \beta_3 GOVEXP_{it} + \beta_4 ACOWN_{it} + \beta_5 LAT_{it} + \beta_6 ZSCORE_{it} + \beta_7 OCF_{it} + \beta_8 BIG4_{it} + \beta_9 REPORTLAG_{it} + \text{Year fixed effects} + \text{Industry fixed effects} + e_{it} \quad (3a)$$

Model 3a assesses the Type I error rate of going-concern opinions and is estimated for firms that received a going-concern opinion. *REPORTLAG* is the natural log of the number of days between the fiscal year-end and the earnings announcement date. The dependent variable *BANKRUPT* is an indicator variable that equals 1 if firms file for bankruptcy within 1 year following the fiscal year-end date and is 0 otherwise. A positive coefficient on *AFED* (or *AFE\_ %*) would indicate low Type I errors i.e., firms that receive a going-concern opinion tend to file for bankruptcy subsequently.

$$Pr (GCO_{i,t} = 1 | BANKRUPT_{i,t+1} = 1) = \beta_0 + \beta_1 AFED_{it} \text{ (or } AFE\_ \%_{it}) + \beta_2 ACBRDTEN_{it} + \beta_3 GOVEXP_{it} + \beta_4 ACOWN_{it} + \beta_5 LAT_{it} + \beta_6 ZSCORE_{it} + \beta_7 OCF_{it} + \beta_8 BIG4_{it} + \beta_9 REPORTLAG_{it} + \text{Year fixed effects} + \text{Industry fixed effects} + e_{it} \quad (3b)$$

Model 3b assesses the Type II error rate of going-concern opinions and is estimated for firms that go bankrupt within 12 months following the fiscal year-end date. A positive coefficient on *AFED* (or *AFE\_ %*) would indicate low Type II errors i.e., firms that file for bankruptcy received a going-concern opinion in the prior year. Bankruptcy data is collected from the Bankruptcy Notification dataset in Audit Analytics.

Table 6. Estimation of Logistic Regression Models – Going Concern Accuracy Tests

PANEL A: TYPE I Error Test - Dependent Variable is *Bankrupt*

<i>VARIABLES</i>	<i>Predicted Sign</i>	<i>Coefficient</i>	<i>Coefficient</i>
<i>AFED</i>	?	1.276*	-
<i>AFE_ %</i>	?	-	2.917**
<i>ACBRDTEN</i>	?	-0.074	-0.092
<i>GOVEXP</i>	?	-0.267	-0.172
<i>ACOWN</i>	?	0.433	-0.004
<i>LAT</i>	+	1.003***	1.127***
<i>ZSCORE</i>	+	0.108*	0.103*
<i>OCF</i>	?	0.727	0.550
<i>BIG4</i>	?	-1.293	-1.147
<i>REPORTLAG</i>	+	-0.100	-0.112
<i>Observations</i>		441	441
<i>Pseudo R<sup>2</sup></i>		0.31	0.32

This panel reports the estimation of equation (3a). \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Intercept, year, and industry fixed effects are included.

PANEL B: TYPE II Error Test - Dependent Variable is *Going Concern Opinion*

<i>VARIABLES</i>	<i>Predicted Sign</i>	<i>Coefficient</i>	<i>Coefficient</i>
<i>AFED</i>	?	-3.731	-
<i>AFE_%</i>	?	-	-7.707
<i>ACBRDTEN</i>	?	-1.519	-1.005
<i>GOVEXP</i>	?	-1.378	-0.305
<i>ACOWN</i>	?	-1.170	4.111
<i>LAT</i>	-	-1.223	-1.272
<i>ZSCORE</i>	+	0.385*	0.926*
<i>OCF</i>	?	3.957	6.875
<i>BIG4</i>	+	7.611	3.184
<i>REPORTLAG</i>	+	-0.090	-0.121
<i>Observations</i>		48	48
<i>Pseudo R<sup>2</sup></i>		0.12	0.12

This panel reports the estimation of equation (3b). \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively. Intercept, year, and industry fixed effects are included.

Panel A of Table 6 presents the results for estimating model 3a. The coefficients on the audit committee accounting expertise variables are positive and significant (*AFED* at 10 percent level and *AFE\_%* at 5 percent level) indicating that Type I errors are lower for firms with accounting experts on the audit committee. Coefficients on other audit committee variables are not significant. Panel B of Table 6 presents results for estimating model 3b. Neither of the coefficients on audit committee expertise variables is significant nor are the coefficients on other audit committee variables. This evidence indicates that audit committee characteristics do not play a significant role in minimizing Type II errors. This finding should be considered in the context of the small sample size in panel B, as it considers only firms that file for bankruptcy following the issue of going-concern opinions. Overall, the evidence in Table 6 suggests that when auditors provide a going-concern opinion, audit committees with accounting experts ensure the accuracy of such opinions while in cases where no going-concern opinions are given by the auditor, the audit committees do not appear to question the auditor as to whether a going-concern opinion is warranted. In this narrow sense, accounting experts on audit committees promote audit quality in the post-SOX period.

#### 4.1 Supplemental Analyses

Several additional analyses are performed to assess the robustness of the results.

The number of accounting experts: The variables used to represent accounting experts on the audit committee (*AFED* and *AFE\_%*) do not consider the actual number of experts on the committee. To address the effect of having multiple experts on the audit committee, the analyses are conducted by using indicator variables that measure having only one accounting expert or more than one accounting expert. The results (not reported) show that having a single or multiple accounting experts does not alter the main results reported.

Supervisory financial expertise: Prior literature on audit committee accounting expertise (Krishnan & Visvanathan, 2008) also considers the role of supervisory financial expertise, defined as experience as the chief executive officer or as president of a for-profit corporation. When *AFED* is replaced by the presence of a supervisory financial expert, the results are similar. Note that in general, prior literature has not found significant associations with supervisory financial expertise in contexts where accounting expertise was found to be significant.

CEO influence: Lisic et al. (2019) examine whether CEO influence over the audit committee compromises its oversight role of auditors. They build upon the evidence in Cassell, Myers, Schmardabeck, and Zhou (2018) who argue that less co-opted audit committees are more effective at monitoring, and Coles, Daniel, and Naveen (2014) who argue that directors who join the board after CEO assumed office are less likely to be good monitors. Based on these studies, CEO influence is measured as the proportion of audit committee members who joined the board after the CEO taking office. The sample is partitioned into above and below the median values of the CEO influence variable and the analyses are conducted on the partitioned sample. The results (not reported) show that there is no significant difference in the coefficients on audit committee variables between the two partitions. One potential

explanation for the lack of significance for CEO influence is monitoring by other executives. For example, Li (2014) finds beneficial effects of mutual monitoring by No. 2 executive for firms with weak corporate governance.

Endogeneity: Factors that influence the decision to have an accounting expert on the audit committee are likely correlated with factors influencing the auditors' decision to issue a going-concern opinion or the audit committee's decision to protect the auditor from dismissal. Thus, there is a potential endogeneity issue in studying audit committee accounting expertise and auditor going-concern opinions. To address the endogeneity concerns on audit committee accounting expertise, Krishnan and Visvanathan (2008) propose a procedure to first estimate a model using determinants of audit committee accounting expertise and then using the predicted value from this first-stage model instead of *AFED* or *AFE\_%*. Their model however includes several variables that are likely correlated with the decision to issue a going-concern opinion such as profitability, earnings volatility, age, and sales growth. Instead, the following governance variables are identified as instrumental variables, namely board size, audit committee size, and the number of public company boards on which the audit committee members sit, as these have no theoretical relationship with the decision to issue a going-concern opinion. With the substitution of these variables, the first-stage model is estimated by using *AFED* as the dependent variable. In this model, all the instrumental variables are significant. When the predicted value from the first-stage model is used instead of *AFED* in the analyses in tables 4-6, the results (not reported) are similar. Note that the procedure described here addresses the endogeneity issue specific to the context of accounting expertise in the audit committee. More broadly, unobservable firm and executive characteristics may drive the endogeneity problem in empirical models that use corporate governance variables (Coles and Li, 2020).

## 5. Conclusion

This study revisits the relationship between going-concern opinions and audit committee characteristics including accounting expertise. The study finds no significant association either between the likelihood of a going-concern report or dismissals following such a report and audit committee accounting expertise and other audit committee characteristics. The methodology uses financially distressed firms for a recent period (2016-18) and considers board, audit committee, and auditor characteristics in addition to audit committee accounting expertise. There are several explanations for why the results of the study differ from the findings in prior studies. First, prior studies (Carcello & Neal 2000, 2003) examined periods before the passage of SOX or the period immediately following SOX (Hoitash & Hoitash, 2009). Second, the sample composition of studies that find a significant role for accounting expertise of audit committees (Lisic et al., 2019, Hoitash & Hoitash, 2009) is not restricted to financially distressed firms only as is the case for studies examining going-concern opinions. Third, Carcello & Neal (2000) do not include several board and audit committee characteristics that have been found to enhance accounting and audit quality by subsequent literature. Finally, as noted in Newton et al. (2016), in recent years firms are less likely to engage in opinion shopping for going-concern opinions, implying that audit committees do not need to intervene to "protect" the auditors in such cases as was argued in prior literature.

In contrast to prior studies, the results also show that while audit committees do not appear to play a significant role in the auditor's decision in not issuing a going-concern report or subsequent auditor dismissals, the accounting expertise of the committee improves the accuracy of the going-concern opinion by reducing Type I errors. That is, audit committees do play a role in improving audit quality but through a different channel than what was found in prior studies. In sum, the results in the study further our understanding of how audit committee accounting expertise promotes audit quality by showing how this relationship differs based on sample composition and period.

The study is subject to the following limitations. First, while the sample considers a recent period, it encompasses only 3 years. Though the size of the sample is reasonable in comparison to prior studies (Carcello & Neal, 2000), a longer period and a larger sample may yield additional insights. Second, the endogeneity model considered in the study could not rule out all sources of endogeneity endemic to models that use corporate governance variables. Third, the study does not consider other external monitoring mechanisms that may substitute for or accentuate the role of corporate governance, such as product market competition (Giroud and Mueller, 2011) and stock compensation (Core and Guay, 1999). Future research can examine whether the significance of accounting experts in audit committees varies based on the competitive nature of the industry. Finally, Accounting Standards Update (ASU) 2014-15 issued by the Financial Accounting Standards Board (FASB) in 2014 requires management of companies to evaluate whether there is substantial doubt about the entity's ability to operate as a going concern and to make required disclosures. While early evidence on disclosures under this rule (Visvanathan, 2021) indicates that management disclosures generally accord with auditor going-concern opinions, with more years and data, future

research can explore if audit committees play a pivotal role in cases where the disclosures by management and auditor going-concern opinions are not aligned.

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### References

- Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice and Theory*, 22(2), 17-32. <https://doi.org/10.2308/aud.2003.22.2.17>
- Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 23(1), 69-87. <https://doi.org/10.2308/aud.2004.23.1.69>
- Agrawal, A., & Chadha, S. (2005). Corporate governance and accounting scandals. *Journal of Law and Economics*, 48(2), 371-406. <https://doi.org/10.1086/430808>
- Ashraf, M., Michas, P. N., & Russomanno, D. (2019). The impact of audit committee information technology expertise on the reliability and timeliness of financial reporting. *The Accounting Review*, 95(5), 23-56. <https://doi.org/10.2308/accr-52622>
- Berglund, N. R., Eshelman, J. D., & Guo, P. (2018). Auditor size and going concern reporting. *Auditing: A Journal of Practice & Theory*, 37(2), 1-25. <https://doi.org/10.2308/ajpt-51786>
- Blay, A. D., & Geiger, M. A. (2013). Auditor fees and auditor independence: Evidence from going concern reporting decisions. *Contemporary Accounting Research*, 30(2), 579-606. <https://doi.org/10.1111/j.1911-3846.2012.01166.x>
- Blue Ribbon Committee (BRC). (1999). Report and recommendations of the Blue-Ribbon Committee on improving the effectiveness of corporate audit committees. New York: NYSE and National Association of Securities Dealers.
- Carcello, J. V., & Neal, T. L. (2000). Audit committee composition and auditor reporting. *The Accounting Review*, 75(4), 453-67. <https://doi.org/10.2308/accr.2000.75.4.453>
- Carcello, J. V., & Neal, T. L. (2003). Audit committee characteristics and auditor dismissals following "new" going-concern reports. *The Accounting Review*, 78(1), 95-117. <https://doi.org/10.2308/accr.2003.78.1.95>
- Carson, E., Fargher, N. L., Geiger, M. A., Lennox, C. S., Raghunandan, K., & Willekens, M. (2013). Audit reporting for going-concern uncertainty: A research synthesis. *Auditing: A Journal of Practice & Theory*, 32(1), 353-384. <https://doi.org/10.2308/ajpt-50324>
- Cassell, C., Myers, L. A., Schmardebeck, R., & Zhou, J. (2018). The monitoring effectiveness of co-opted audit committees. *Contemporary Accounting Research*, 35(4), 1732-65. <https://doi.org/10.1111/1911-3846.12429>
- Coles, J. L., Daniel, N. D., & Naveen, L. (2014). Co-opted boards. *Review of Financial Studies*, 27(6), 1751-96. <https://doi.org/10.1093/rfs/hhu011>
- Coles, J., & Li, Z. F. (2020). Managerial attributes, incentives, and performance. *The Review of Corporate Finance Studies*, 9(2), 256-301. <https://doi.org/10.1093/rcfs/cfaa004>
- Core, J., & Guay, W. (1999). The use of equity grants to manage optimal equity incentive levels. *Journal of Accounting and Economics*, 28, 151-184. [https://doi.org/10.1016/S0165-4101\(99\)00019-1](https://doi.org/10.1016/S0165-4101(99)00019-1)
- DeFond, M., Lim, C. Y., & Zang, Y. (2016). Client conservatism and auditor-client contracting. *The Accounting Review*, 91(1), 69-98. <https://doi.org/10.2308/accr-51150>
- Dhaliwal, D. S., Naiker, V., & Navissi, F. (2010). The association between accruals quality and the characteristics of accounting experts and mix of expertise on audit committees. *Contemporary Accounting Research*, 27(3), 787-827. <https://doi.org/10.1111/j.1911-3846.2010.01027.x>
- FASB. (2014). Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern [Accounting Standards Codification (ASC) 205-40]. Retrieved 6/23/2021 [https://www.fasb.org/jsp/FASB/Document\\_C/DocumentPage?cid=1176164329772&acceptedDisclaimer=true](https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176164329772&acceptedDisclaimer=true)
- Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review*, 77(4), 71-105. <https://doi.org/10.2308/accr.2002.77.s-1.71>

- Geiger, M., Raghunandan, K., & Rama, D. V. (1998). Costs associated with going concern modified audit opinions: an analysis of auditor changes, subsequent opinions, and client failures. *Advances in Accounting*, 16(1), 117-39.
- Geiger, M. A., & Rama, D. V. (2006). Auditor size and going-concern reporting accuracy. *Accounting Horizons*, 20(1), 1-17. <https://doi.org/10.2308/acch.2006.20.1.1>
- Giroud, X., & Mueller, H. M. (2011). Corporate governance, product market competition, and equity prices. *Journal of Finance*, 66(2), 563-600. <https://doi.org/10.1111/j.1540-6261.2010.01642.x>
- Hoitash, R., & Hoitash, U. (2009). The role of audit committees in managing relationships with external auditors after SOX. *Managerial Auditing Journal*, 24(4), 368-97. <https://doi.org/10.1108/02686900910948206>
- Krishnan, G., & Visvanathan, G. (2008). Does the SOX definition of an accounting expert matter? The association between audit committee directors' expertise and conservatism. *Contemporary Accounting Research*, 25(3), 827-58. <https://doi.org/10.1506/car.25.3.7>
- Krishnan, G. V., & Visvanathan, G. (2007). Reporting internal control deficiencies in the post-Sarbanes- Oxley era: The role of auditors and corporate governance. *International Journal of Auditing*, 11(2), 73-90. <https://doi.org/10.1111/j.1099-1123.2007.00358.x>
- Krishnan, G. V., & Visvanathan, G. (2009). Do auditors price audit committee's expertise? The case of accounting versus nonaccounting financial experts. *Journal of Accounting, Auditing and Finance*, 24(1), 115-44. <https://doi.org/10.1177/0148558X0902400107>
- Krishnan, J. (2005). Audit committee effectiveness and internal control: An empirical analysis. *The Accounting Review*, 80(2), 649-75. <https://doi.org/10.2308/accr.2005.80.2.649>
- Li, Z. F. (2014). Mutual monitoring and corporate governance. *Journal of Banking and Finance*, 45, 255-69. <https://doi.org/10.1016/j.jbankfin.2013.12.008>
- Lisic, L. L., Myers, L. A., Seidel, T. A., & Zhou, J. (2019). Does audit committee accounting expertise help to promote audit quality? Evidence from auditor reporting of internal control weaknesses. *Contemporary Accounting Research*, 36(4), 2521-2553. <https://doi.org/10.1111/1911-3846.12517>
- Newton, N. J., Persellin, J. S., Wang, D., & Wilkins, M. S. (2016). Internal control opinion shopping and audit market concentration. *The Accounting Review*, 91(2), 603-23. <https://doi.org/10.2308/accr-51149>
- SEC. (2003). Disclosure required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002. Securities and Exchange Commission, Release Nos 33-8177; 34-47235. Retrieved 6/23/2021 <https://www.sec.gov/rules/final/33-8177.htm>
- Visvanathan, G. (2021). Is information in deferred tax valuation allowance useful in predicting the firm's ability to continue as a going concern incremental to MD&A disclosures and auditor's going concern opinions? Forthcoming *International Journal of Disclosure and Governance*. <https://doi.org/10.1057/s41310-021-00107-3>
- Zhang, Y., Zhou, J., & Zhou, N. (2007). Auditor quality, audit committee quality, and internal control weakness. *Journal of Accounting and Public Policy*, 26(3), 300-27. <https://doi.org/10.1016/j.jaccpubpol.2007.03.001>

### Appendix

<i>GCO</i>	= 1 if the company receives a going-concern audit opinion, zero otherwise;
<i>FIRSTGC</i>	= 1 for clients receiving a going concern opinion for the first time, and 0 otherwise;
<i>DISMISSAL</i>	= 1 if the auditor is dismissed in the one-year window following the filing of the annual financial statements, zero otherwise;
<i>AFED</i>	= 1 if the audit committee has at least one accounting expert, zero otherwise. An accounting expert is a director with experience as a certified public accountant, auditor, principal or chief financial officer, controller, or principal or chief accounting officer;
<i>AFE_%</i>	= the proportion of audit committee members who are accounting experts, where an accounting expert is defined as above;
<i>CEOCHAIR</i>	= 1 if the CEO is also the chairman of the board of directors, zero otherwise;
<i>ACBRDTEN</i>	= the average board tenure of audit committee members;
<i>GOVEXP</i>	= the average number of directorship positions audit committee members hold in other public companies;
<i>ACOWN</i>	= the average stock ownership of audit committee members;
<i>LAT</i>	= log of total assets;
<i>ZSCORE</i>	= Zmijewski's (1984) bankruptcy score;
<i>BETA</i>	= the slope coefficient of a regression of daily stock returns on equally weighted market returns over the fiscal year;
<i>RET</i>	= stock return compounded over the fiscal year;
<i>LEV</i>	= total liabilities over total assets;
<i>CHLEV</i>	= change in <i>LEV</i> during the year;
<i>LLOSS</i>	= 1 if the firm reports a loss for the previous year, and 0 otherwise;
<i>INVEST</i>	= cash, cash equivalents, and short- and long-term investment securities deflated by total assets;
<i>OCF</i>	= operating cash flows deflated by total assets;
<i>FUTFIN</i>	= 1 if long-term debt or number of shares increased by at least 10% in the following year, and 0 otherwise;
<i>BIG4</i>	= 1 if the firm's auditor is a Big N auditor, and 0 otherwise;
<i>BM</i>	= book-to-market ratio;
<i>AUSPL</i>	= 1 if the auditor's market share based on audit fees in the year is highest in the client's 2-digit SIC industry, zero otherwise;
<i>TENURE</i>	= the length of the auditor-client relationship to date in consecutive years;
<i>NRREST</i>	= One if the company announces an Item 4.02 non-reliance restatement during the year, zero otherwise;
<i>ICMW</i>	= One if a company receives an adverse internal control opinion, zero otherwise;
<i>MGTCHG</i>	= One if there is CEO and/or CFO turnover in the current or prior year, zero otherwise;
<i>CEOTENU</i>	= log of CEO tenure in years;
<i>ACCR</i>	= total accruals, measured as income before extraordinary items less operating cash flows, all divided by total assets;
<i>MBR</i>	= market value of equity divided by book value of equity;



*CHAFEE* = the percentage change in audit fees from the prior year to the current year;  
*NBUS* = the number of business segments;  
*LITRISK* = 1 if the company operates in a high litigation risk industry (SIC codes 2833–2836, 3570–3577, 3600–3674, 5200–5961, and 7370), zero otherwise.

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