

**AN ANALYSIS OF THE RELATIONS BETWEEN AUDIT PARTNER EXPERTISE,
TENURE, AND INDEPENDENCE ON AUDIT QUALITY**

Sarowar Hossain

School of Accounting
Australian School of Business
University of New South Wales
NSW 2052, Australia
Phone: 612 9385 6352
Email: s.hossain@unsw.edu.au

Gopal V. Krishnan*

Department of Accounting & Taxation
Kogod School of Business
American University
Washington, DC 20016
Phone: 202-885-6460
Email: krishnan@american.edu

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*Corresponding author.

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ABSTRACT

We provide empirical evidence on the relation between audit quality and three key attributes of an audit partner – city-specific expertise, tenure, and independence. We use the first-time going concern opinion issued to financially distressed Australian firms to proxy for audit quality. After controlling for firm fixed-effects and other controls, we find that an audit partner's expertise is associated with going concern opinion. Next, the likelihood of issuing a going concern opinion is *decreasing* in audit partner's tenure. However, this finding does not hold after the introduction of mandatory rotation of the engagement partner. We further find that the likelihood of issuing a going concern opinion is higher, not lower for important clients. Finally, our findings suggest that audit partner's expertise matters more for non-big 4 auditors compared to Big 4 auditors.

Key words: audit partner expertise; going concern; auditor tenure; client importance.

Data availability: All data are publicly available from the sources indicated.

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I. INTRODUCTION

Empirical evidence on the relation between attributes of audit partners and audit quality is of fundamental interest to investors, regulators, managers, and auditors. The objectives of this study are as follow. First, we examine whether an audit partner's expertise is associated with the propensity to issue the first-time going concern opinion, our proxy for audit quality. Second, we examine whether an audit partner's tenure is associated with going concern opinion. Third, we study the effect of auditor independence, proxied by client importance and non-audit fees earned on going concern opinion. Finally, we examine whether an audit partner's tenure and independence attenuate the relation between partner expertise and going concern decision.

Our study is motivated by several reasons. First, though there is an extensive literature on the determinants of auditors' going concern opinion, much of this research focuses at the national audit firm level or at the audit office level (see Carson et al. 2013 for a review). Only a handful of empirical studies have focused on audit partner attributes, especially the role of audit partner in going concern decisions.¹ A focus on the audit partner is important because the audit partner is the epicenter of an audit. The audit partner plays a key role in client screening and acceptance, audit fee negotiation, audit planning and execution, resolution of disagreements with the client, rendering the audit opinion, and the decision to continue the relationship with the client. Further, the engagement partner also suffers serious harm as a result of an audit failure. DeFond and Francis (2005) indicate that the unit of analysis can be pushed down (from the audit firm level or the office level) further to an individual partner level to better understand auditor

¹ We summarize the findings from these studies in the next section.

behavior and audit quality. Similarly, Carcello (2005) notes that there is a paucity of research that uses the individual audit partner as the unit of analysis. Our study is a response to their call.

Second, a number of archival studies have explored the link between auditor expertise (specialization) and audit quality and prior research supports the notion that auditor expertise is associated with higher financial reporting quality and audit quality (Krishnan 2003; Behn et al. 2008; Reichelt and Wang 2010; Chi and Chin 2011).² However, there is a paucity of empirical evidence on whether audit partner's expertise is associated with audit quality. Expertise is an important characteristic of the audit partner. Nelson and Tan (2005) state, "Auditors bring to bear on an audit task their individual characteristics, such as knowledge and ability." While one hand, it is reasonable to expect that an audit partner's expertise will affect audit quality, Gul et al. (2013) note that quality control mechanisms instituted by the audit firm, i.e., internal policies and guidelines covering every aspect of an audit as well as duties and responsibilities of audit partners could promote conformance to firm-wide policies and dilute the partner fixed-effect on audit quality.³ Thus, it is an empirical question whether audit partner fixed-effect should matter in the age of standardized policies and other mechanisms in place to conform partners to the firm norm. A related question is whether audit partner fixed-effect varies between the Big 4 audit firms and non-big 4 audit firms. Our study sheds light on these questions.

Third, research on auditor tenure is a timely topic in audit literature. While prior research has extensively examined the link between audit firm tenure and audit quality, the link between audit partner tenure and audit quality has received very little attention in prior research. One exception is Carey and Simnett (2006) who examine the effect of audit partner tenure on going

² A number of experimental studies have also examined the effects of auditor expertise (Bedard and Chi 1993; Solomon et al. 1999; Low 2004. See Nelson and Tan 2005 for a review).

³ Jeppesen (2007) notes that the primary control mechanism in audit firms is the standardization of skills combined with a tight recruitment, socialization and indoctrination. These policies are intended to foster consistency and quality across staff members.

concern decision in Australia during the period when audit partner tenure was *not* mandatory. They find that the likelihood of issuing a going concern opinion is decreasing in audit partner tenure. We extend Carey and Simnett (2006) by using a more recent data to provide evidence on whether the introduction of mandatory audit partner rotation had an effect on audit quality. Also, prior research on audit partner tenure has not examined the interaction between audit partner expertise and tenure. We study the relation between going concern decisions and audit partner expertise and as well as audit partner tenure to better understand their respective roles on audit quality.

Our fourth and final motivation for the study relates to auditor independence, an issue of paramount importance to users of financial statements. While prior research has extensively examined the effect of non-audit fees and client importance on audit quality, the focus of prior research has been at the audit firm or the audit office level (DeFond et al. 2002; Ashbaugh et al. 2003; Reynolds and Francis 2001; Schneider et al. 2006; Li 2009; and Kanagaretnam et al. 2010). Wallman (1996), a former Commissioner of the SEC, recommends that auditor independence be examined at the audit partner level. This is important because focusing on the audit firm as a whole or even the audit office could mask the underlying threats to auditor independence posed by important clients. For example, a particular client may be more important to the audit partner compared to the audit office. Separately, in a recent review of the going concern literature, Carson et al. (2013) note that recent research based on Australian data suggests impaired auditor independence (lower likelihood of going concern opinion) due to non-audit services and state that these findings are far from conclusive and call more research. We extend prior research by examining whether client importance and non-audit fees earned attenuate the relation between audit partner expertise and audit quality.

We gather data on audit partners and their clients located in Australia where the identity of the engagement partner is publicly available. Our sample consists of more than 5,800 firm-year observations representing years 2003 through 2011. Consistent with Carey and Simnett (2006), we use the auditors' propensity to issue first-time going concern opinions for financially distressed companies as our proxy for audit quality. We test the association between audit quality and three key attributes of an audit partner: city-level expertise (specialization), tenure, and independence. Following Ferguson et al. (2003), we code the audit partner with the highest amount of audit fees at the city-level (Adelaide, Brisbane, Melbourne, Perth, and Sydney) as an expert and code the remaining partners as non-experts.

We estimate a logistic regression of going concern opinions on several potential determinants of going concern decision identified in prior research and audit partner expertise, tenure, and independence. We also include firm (audit client) fixed-effects in our models to isolate the effects of audit partner attributes. We document several key findings. First, an audit partner's expertise is positively associated (significant at the 0.01 level for a two-tailed test) with the propensity to issue first-time going concern opinions for financially distressed companies. Second, the likelihood of issuing a going concern opinion is *decreasing* in audit partner's tenure. However, longer audit partner tenure does not attenuate the relation between audit partner's expertise and going concern opinion. Further, we find that the negative relation between going concern opinion and audit partner tenure holds only for the period *before* the mandatory partner rotation became effective. This finding is important because it suggests that mandatory partner rotation had a favorable effect on audit quality.

Third, the likelihood of issuing a going concern opinion is higher, not lower for important clients, consistent with greater audit partner independence. Further, there is no support for the

notion that audit partner's expertise is attenuated by client importance with regard to first-time going concern opinions. Fourth, there is some support for the notion that higher non-audit fee ratio decreases the likelihood of a first-time going concern opinion. Our results also support the notion that non-audit fee ratio enhances the relation between audit partner's expertise and going-concern opinion. Finally, our findings suggest that audit partner's expertise matters more for non-big 4 auditors compared to Big 4 auditors. Overall, our findings strongly support the notion that audit partner's expertise has a positive impact on audit quality.

The rest of this paper is organized as follows. Section II summarizes related research and develops our hypotheses. Section III explains measurement of audit partner expertise and other variables of interest and the empirical models. Section IV describes the sample selection procedure and descriptive statistics. Section V presents the empirical findings and Section VI concludes.

II. RELATED RESEARCH AND HYPOTHESES DEVELOPMENT

Research on Audit Partner Attributes

While prior research has extensively examined the relation between auditor's expertise and financial reporting quality as well as audit quality, including the propensity to issue going concern opinion, a vast majority of this research has focused on at the national audit firm level or more recently, at the audit office level (see Carson et al. 2013). Only a handful of studies have focused at the audit partner level. We summarize those studies below.

We first discuss studies that use Taiwanese data since several studies that focus at the audit partner level examine Taiwanese firms where audit partner identity is publicly available. Chi and Huang (2005) were the first to examine the relation between audit partner tenure in addition to audit firm tenure and audit quality. Using discretionary accruals to proxy for earnings

quality, they find that longer audit partner tenure is associated with lower earnings quality. Similar to Chi and Huang (2005), Chen et al. (2008) examine the relation between audit partner tenure, audit firm tenure and discretionary accruals and find that discretionary accruals decrease with audit partner tenure. This finding is the opposite of the findings in Chi and Huang (2005). Chin and Chi (2009) examine the relation between accounting restatements and auditor expertise, measured at both partner-level and audit firm-level and find that differential likelihood of restatements is primarily due to audit partner rather than the audit firm. Next, Chi and Chin (2011) examine the relation between the likelihood of modified audit opinions and audit firm expertise and audit partner expertise and find that both are associated with modified opinions. A recent study, Chi et al. (2012) examine the effect of client importance on auditor independence, i.e., the propensity to issue modified opinions. They find some evidence that non-big N audit partners compromise independence for important clients but this finding does not hold for audit partners of Big N audit firms. However, studies that use Taiwanese data face several challenges. First, in Taiwan audit reports must be audited and signed by two auditors as well as by the audit firm and the audit reports do not disclose which partner is responsible for maintaining the auditor-client relationship (Chen et al. 2008). Thus, it is very difficult to determine the audit partner fixed-effect on audit quality. Second, Chen et al. (2008) note that in Taiwan audit firms must be formed as unlimited liability partnerships or proprietorships whereas in the U.S., U.K., and Australia audit firms are formed as limited liability partnerships. Third, Chen et al. (2008) note that the legal enforcement mechanism in Taiwan is weaker relative to those in Western countries. The above factors suggest that findings observed in Taiwanese settings may not generalize to other countries.

Two recent studies using Chinese data also examine the relation between auditors and audit quality. Chen et al. (2010) find that at the individual auditor level, the propensity to issue modified audit opinions is negatively related to client importance during 1995 through 2000. However, after institutional reforms were introduced, a positive relation between modified opinions and client importance is observed, consistent with auditors responding to changes in the institutional environment. Recently, Gul et al. (2013) examine individual auditor characteristics, such as educational background, Big N audit firm experience, and rank explain variations in audit quality.

Finally, our study is closely related to Carey and Simnett (2006) who examine the relation between audit partner tenure and audit quality for a sample of 1,021 Australian firms. They focus on year 1995 which was before the introduction of mandatory requirements on audit partner tenure. Carey and Simnett (2006) use three measures of audit quality: propensity to issue going concern opinion, abnormal working capital accruals, and meeting or beating of earnings benchmarks. Their findings indicate that the propensity to issue going concern opinion diminishes over audit partner's tenure, suggesting a reduction in audit quality, particularly for non-big 6 auditors. Unlike Chi and Huang (2005), Carey and Simnett (2006) do not find a significant relation between abnormal accruals and audit partner tenure and there is some evidence of benchmark beating for long tenure observations. A recent study, Ye et al. (2011) re-examine the relation between going concern opinion and audit firm tenure, audit partner tenure, and non-audit fees for the year 2002. They find that while audit firm tenure is not related to going concern opinion, longer the engagement partner tenure, lower is the likelihood of issuing a going concern opinion. This finding is consistent with Carey and Simnett (2006). Ye et al. (2011)

also find that the ratio of non-audit fees to total fees is negatively related to going concern opinion, suggesting impaired auditor independence.

We extend Carey and Simnett (2006) in several ways. First, we examine a more recent time period that reflects a change in audit partner rotation policy in Australia.⁴ This is a response to their call for research on the impact of such a policy change on audit quality. Thus, our findings are important to understand the potential benefits of limiting audit partner tenure. Second, one argument in support of longer auditor tenure is that over time, auditors can gain firm-specific expertise which helps them to understand the client's business and rely less on management estimates (Myers et al. 2003). Similarly, Wallman (1996) argues that periodic rotation of audit firms is contrary to the notion of learning as much as possible about the audit client. One unexplored question is do expertise and experience has similar effect on audit quality? We consider both audit partner tenure and expertise on audit quality and our design sheds light on which of these two attributes has a greater impact on audit quality. Further, we provide evidence on the interaction effect of audit partner tenure and expertise on audit quality. Finally, in addition to audit partner tenure, we also examine the effect of other threats to audit partner independence, client importance and the extent of non-audit fees earned as well as their interactions with audit partner expertise.

Hypotheses

Recent audit quality frameworks proposed by the U.K. Financial Reporting Council (2008) and Knechel et al. (2013) indicate that audit partner skills, knowledge, and expertise are important drivers of audit quality. Prior research on auditor expertise finds that industry

⁴ The Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004 (the CLERP 9 Act) requires rotation of the lead engagement and review partners every five years and a two-year time-out period before the partner can again be involved in the audit of a client. This policy became effective on July 1, 2006.

experience of an auditor is associated with enhanced ability to detect fraud and materials errors (e.g., Bedard and Biggs 1991; Johnson et al. 1991; Maletta and Wright 1996; and Wright and Wright 1997). Solomon et al. (1999) find that specialist auditors have more accurate non-error frequency knowledge than non-specialists. O’Keefe et al. (1994) provide evidence that increased compliance with generally accepted auditing standards associated with specialist auditors relative to non-specialists. Krishnan (2003) posits that a specialist auditor is more likely to develop databases detailing industry-specific best practice, risks and errors, unusual transactions, all of which enhance auditor knowledge about the industry and increase overall audit effectiveness. Consistent with this argument, he finds that specialist auditors constrain earnings management more than non-specialists. Carcello and Nagy (2004) find that fraudulent financial reporting is less likely when the auditor is an industry specialist. Extending this line of argument and focusing on audit offices, later studies find evidence that earnings quality is higher for auditors who are city-level specialists (Ferguson et al. 2003; Francis et al. 2005; and Reichelt and Wang 2010).

With the exception of Chin and Chi (2009) discussed earlier, a vast majority of archival evidence on auditor expertise is based on audit firm level or the audit office level. Do the findings based on audit firm level analysis extend to the audit partner level? There is a paucity of research evidence on whether audit partner expertise varies within the same audit firm located in each of the five city-level audit markets in Australia. Further, the control mechanisms in place in audit firms (enforcement of standardized policies and guidelines), particularly in Big 4 firms are intended to ensure consistency and quality across staff members. This could increase homogeneity across partners and thus, on average, the effect of an audit partner’s expertise on

going concern opinion may not be significant. In light of these arguments, we propose our first hypothesis in null form as follows:

H1: *An auditor partner's expertise is not associated with the going concern opinion.*

Our next hypothesis relates to audit partner tenure. As discussed earlier, this study extends Carey and Simnett (2006). Using data from 1995, they document a negative relation between audit partner tenure and going concern opinion. A subsequent Australian study, Ye et al. (2011) also document a negative relation between engagement partner tenure and going concern opinion, consistent with Carey and Simnett (2006). However, both studies focus on a time period that was before the introduction of restrictions on audit partner tenure and therefore, it is not clear whether their findings would apply to the current era, i.e., after the passage of CLERP 9 Act which requires a mandatory rotation of the lead partner every five years. If the above regulation has been effective, then the negative relation observed by Carey and Simnett (2006) and Ye et al. (2011) may have been weakened or eliminated or audit partner tenure might even exhibit a positive effect on audit quality. In light of these arguments, we propose the following null hypothesis to test the relation between audit partner tenure and going concern opinion:

H2: *An auditor partner's tenure is not associated with the going concern opinion.*

We also propose the following null hypothesis to test the effect of audit partner tenure on the relation between audit partner expertise and going concern opinion.

H3: *An audit partner's tenure does not attenuate the association between an auditor partner's expertise and going concern opinion.*

The rest of our hypotheses relate to threats to auditor independence due to economic dependence on the audit client. There is a long line of research on this issue (Mautz and Sharaf 1961). Prior research measures economic dependence by using client size or the extent of non-audit fees earned (Craswell et al. 2002; Reynolds and Francis 2001; Hunt and Lulseged 2007; Li 2009; and Ye et al. 2011). The underlying idea is that larger clients may have greater influence on the auditor relative to smaller clients. Similarly, clients that pay more fees may pose a greater threat to auditor independence relative to less important clients. In general, the findings of prior research do not appear to impair auditor going concern decisions in the U.S. (Carson et al. 2013). As before, we test the effect of auditor independence on the relation between audit partner expertise and going concern opinion. Thus, we propose the following null hypotheses to test the relation between auditor independence and going concern opinion:

H4: *Client importance is not associated with the going concern opinion.*

H5: *Client importance does not attenuate the association between an auditor partner's expertise and going concern opinion.*

H6: *Non-audit fee ratio is not associated with the going concern opinion.*

H7: *Non-audit fee ratio does not attenuate the association between an auditor partner's expertise and going concern opinion.*

III. RESEARCH DESIGN

Prior research (Reynolds and Francis 2001; DeFond et al. 2002; Carey and Simnett 2006; Li 2009; Chi et al. 2012) use auditors' propensity to issue going concern opinions as proxy for audit quality. In particular, we focus on the auditors' propensity to issue first-time going concern opinions since this is considered a complex decision (Kida 1980). In this section, we first

describe our variables of interest followed by a description of our empirical models. As stated in the hypotheses section, we identify four variables of interest – audit partner expertise, audit partner tenure, client importance, and the extent of non-audit services provided to the client.

Audit Partner Expertise

This is our primary variable of interest. Building on prior research that measures audit firm or office level expertise using audit fees, we identify audit partner experts as follows. First, we require each audit office to have at least ten clients for each year. Next, we calculate city-level audit partner expertise for Big 4 audit firms by year. We code the audit partner with the highest amount of audit fees at the city-level (Adelaide, Brisbane, Melbourne, Perth, and Sydney) as an expert and code the remaining partners as non-experts.⁵ We refer to this indicator variable as *PARTEXP*. We repeat the above process for non-Big 4 audit firms. Consistent with Ferguson et al. (2003), we identify audit partner expertise separately for the Big 4 and non-big 4 auditors because Big 4 auditors always have higher audit fees in each of city-level compared to non-Big 4.

Audit Partner Tenure

Our second variable of interest is audit partner tenure which is the number of years an audit partner has been engaged with the current client. We refer to this variable as *APTENURE*.

Client Importance

We use two proxies to measure auditor independence. First is the importance of the audit client to the audit partner and the audit firm. As before, we require at least ten clients per office for

⁵ We exclude Canberra, Hobart and Darwin because of very few audit firms have headquarters in those cities and expertise cannot be calculated due to not having a required number of clients at the city-level. This classification is consistent with Ferguson et al. (2003).

each year. Following prior research (Li 2009), we measure client importance at the office level by first calculating the ratio of total audit fees paid by a client divided by total fees earned by that particular audit office that served the client.⁶ Next, we partition client at the median value of the above ratio for each office and code *CLIENTIMP* as 1 for values above the median (more important clients) and 0 for clients below the median (less important clients).

Non-audit Fee Ratio

Our second measure of auditor independence is the extent of non-audit services provided to the audit client. We calculate non-audit fee ratio (*NAFEERATIO*) at the audit office level by dividing the total non-audit fees paid by a client divided by total audit and non-audit fees earned by a particular audit office.⁷

Empirical Models

Since our objective is to isolate the effects of attributes of the audit partner on going concern opinion from attributes of the audit client, we include firm (audit client) fixed-effects in our models. In addition, we include a variety of firm attributes that are known to be associated with the going concern opinion. We develop our empirical models following prior research on going concern opinion (Reynolds and Francis 2001; DeFond et al. 2002; Carey and Simnett 2006; Li 2009; Chen et al. 2010 and Chi et al. 2012). Consistent with prior literature, we focus on financially distressed firms since the going concern decision is more relevant for these firms (Hopwood et al. 1994). Also, we examine first-time going concern opinions (*GC*) since issuing the first opinion is likely to be a challenging decision for the audit partner (Kida 1980 and Mutchler 1984).

⁶ We also measure *CLIENTIMP* at the audit partner level and those results are discussed in a later section.

⁷ We also measure *NAFEERATIO* at the audit partner level and those results are discussed in a later section.

Following prior research, we include several potential determinants of going concern decision (DeFond et al. 2002 and Carey and Simnett 2006). We include client (firm) size (*LTA*) and age (*LAGE*) and prior research finds that the likelihood of issuing a going concern opinion is lower for larger and older firms. We also include the following measures of audit risk: probability of bankruptcy (*PBANK*), leverage (*LEVERAGE*), change in leverage (*CLEVERAGE*), performance (*ROA* and *LOSS*), cash flow (*CFO*), non-diversifiable risk (*BETA*), stock returns (*RETURN*), stock returns volatility (*VOLATILITY*), and investments (*INVESTMENTS*). We predict a positive association between going concern opinion and *LEVERAGE*, *CLEVERAGE*, *LOSS*, *BETA*, and *VOLATILITY*. A negative association is predicted for *ROA*, *INVESTMENTS*, *CFO*, and *RETURN*. We include auditor type (*BIG4*) and prior research finds that the Big 4 auditors are more likely to issue a going concern opinion than non-big 4 auditors and thus, predict a positive association. In addition, we include two indicator variables to represent local (*LOCAL*) firms and those in the mining industry (*MINING*). We predict a negative association between going concern opinion and *LOCAL* and offer no predictions for *MINING*. Finally, we include indicator variables for the years and firm fixed-effects.

We estimate several logistic regression models and the model below tests hypothesis 1 on the relation between going concern decision and *PARTEXP*:

$$\begin{aligned}
 GC_{it} = & \chi_0 + \chi_1 PARTEXP_{it} + \chi_2 LTA_{it} + \chi_3 PBANK_{it} + \chi_4 LAG_{it} + \chi_5 LEVERAGE_{it} \\
 & + \chi_6 CLEVERAGE_{it} + \chi_7 ROA_{it} + \chi_8 LLOSS_{it} + \chi_9 INVESTMENTS_{it} + \chi_{10} CFO_{it} \\
 & + \chi_{11} BIG4_{it} + \chi_{12} LOCAL_{it} + \chi_{13} MINING_{it} + \chi_{14} RETURN_{it} + \chi_{15} BETA_{it} \\
 & + \chi_{16} VOLATILITY + Year\ effects + Firm\ fixed\ effects + \epsilon_{it}
 \end{aligned} \tag{1}$$

See Appendix for definitions of variables.

[Insert Appendix about Here]

We also estimate the following model that includes other variables of interest, *CLIENTIMP*, *APTENURE*, *NAFEERATIO* as well as their interactions with *PARTEXP*:

$$\begin{aligned}
GC_{it} = & \chi_0 + \chi_1 PARTEXP_{it} + \chi_2 CLIENTIMP + \chi_3 CLIENTIMP \times PARTEXP \\
& + \chi_4 APTENURE + \chi_5 APTENURE \times PARTEXP + \chi_6 NAFEERATIO \\
& + \chi_7 NAFEERATIO \times PARTEXP + \chi_8 LTA_{it} + \chi_9 PBANK_{it} + \chi_{10} LAG_{it} + \chi_{11} LEVERAGE_{it} \\
& + \chi_{12} CLEVERAGE_{it} + \chi_{13} ROA_{it} + \chi_{14} LLOSS_{it} + \chi_{15} INVESTMENTS_{it} + \chi_{16} CFO_{it} + \chi_{17} BIG4_{it} \\
& + \chi_{18} LOCAL_{it} + \chi_{19} MINING_{it} + \chi_{20} RETURN_{it} + \chi_{21} BETA_{it} + \chi_{22} VOLATILITY \\
& + Year\ effects + Firm\ fixed\ effects + \epsilon_{it}
\end{aligned} \tag{2}$$

Coefficients χ_2 through χ_7 , respectively, test hypothesis 2 through 7.

IV. SAMPLE

Our sample search begins with an initial sample of 14,821 observations representing firms listed on ASX for the years 2003 through 2011. We obtain financial data from the *AspectHuntley FinAnalysis* database. We hand collect data on audit fee, audit firm, audit partner name, name of the city, and audit opinion directly from companies' annual reports using *Connect4* and *AspectHuntley DatAnalysis* databases. We exclude 950 observations due to missing data. To calculate the audit partner's expertise measure, we require a minimum of 10 clients for each audit office for each year (see Carey and Simnett 2006). Therefore, we exclude 2,665 observations representing offices with less than 10 clients. We also exclude 1,421 observations for which stock return, beta, and volatility information are unavailable. Finally, following prior research, our sample is restricted to financially distressed firms receiving first-time going concern opinions and thus, we exclude 3,950 observations that are not financially distressed. We define a distressed company if a company reported negative net profit after tax or negative cash flow from operations in the current financial year. The final sample comprised

5,835 firm-year observations that have required data in estimating first-time going concern opinion.

Descriptive Statistics

Table 1 provides descriptive statistics for the variables used in model (1). On average, 9.30 percent of the sample received first-time going concern opinions. About 8.2 percent of the audit partners are specialists at the office level. About 42 percent of the sample comprises important clients, i.e., clients that pay a higher proportion of the total fees earned by a particular office. The mean value of audit partner tenure is about 2.73 years. The mean *NAFEERATIO* is 2 percent, indicating that the proportion of nonaudit fees paid by a client over total fees earned by the office, including nonaudit fees is quite small. The mean value of *LTA* is 16.82. The mean *ROA* is about -40 percent and more than 80 percent of the sample reported a loss in the prior year. This is not surprising since we focus on firms that are financially distressed. About 48 percent of the sample firms were audited by Big 4 auditors. About 42 percent of the observations are from metal and mining industry. Finally, the mean value of *BETA* is 1.59.

[Insert Table 1 about Here]

Correlation Coefficients

Table 2 presents the Pearson correlations between *GC* and test and control variables. Audit partner's city-level expertise (*PARTEXP*) is positively correlated with *GC* (significant at the 0.05 level), indicating that the likelihood of issuing a first-time going concern opinion is higher when the audit partner is a specialist. We find a strong negative correlation between *APTENURE* and *GC*, indicating that longer audit partner tenure lowers the likelihood of issuing going concern opinions. Correlations between *GC* and *CLIENTIMP* and *NAFEERATIO* are not

significant. None of the interaction variables are significant. Turning to control variables, client size (*LTA*), client age (*LAGE*), *ROA*, *INVESTMENTS*, and *CFO* are significantly and negatively correlated with *GC*. *LEVERAGE* is negatively correlated with *GC*. Consistent with prior research, *PBANK* and *LOSS* are positively correlated with *GC* (significant at the 0.01 level).

[Insert Table 2 about Here]

V. RESULTS

Relation between Going Concern Opinion and Partner Expertise and Tenure

Results of hypotheses 1 and 2 on the relation between the likelihood of a first-time going concern opinion and an audit partner's expertise (*PARTEXP*) and tenure (*APTENURE*) are in Table 3. We include both year fixed-effects and firm (audit client) fixed-effects in the model. The pseudo R^2 is 9.88% and the Wald Chi-square statistic is highly significant, indicating that the model overall, has explanatory power. We find that after controlling for several client-level characteristics, the coefficient on *PARTEXP* is 0.817 and significant at the 0.01 level for a two-tailed test. This indicates that the likelihood of issuing a first-time going concern opinion is *increasing* in audit partner's expertise. This finding rejects null hypothesis 1.

The coefficient on *APTENURE* is -0.060 and significant at the 0.10 level, indicating that the likelihood of issuing a first-time going concern opinion is *decreasing* in audit partner's tenure. This finding rejects null hypothesis 2. Finally, the coefficient on *APTENURE*×*PARTEXP* is not significant, suggesting that longer audit partner tenure does not attenuate the audit partner's expertise. Thus, null hypothesis 3 is not rejected.

Turning to control variables, we find positive associations (significant at the 0.01 level) between going concern opinion and *PBANK*, *BIG4*, and *VOLATILITY*, indicating that the

likelihood of issuing a first-time going concern opinions is higher for firms with higher likelihood of bankruptcy, firms audited by Big 4 auditors, and firms with volatile stock returns. We also find negative associations (significant at the 0.01 level) between going concern opinion and *LTA*, *LAGE*, *INVESTMENTS*, and *RETURN*, indicating that the likelihood of issuing a first-time going concern opinion is lower for larger and older firms, firms with investments, and firms with high stock returns. Contrary to our expectation, we find a significant negative relation between *LEVERAGE* and going concern opinion.⁸ We do not find a significant relation between going concern opinions and *CLEVERAGE*, *ROA*, *LOSS*, and *CFO*.

[Insert Table 3 about Here]

Next, we provide some evidence on the impact of the mandatory rotation of the lead engagement partner every five years introduced in Australia by the Corporate Law Economic Reform Program Act (the CLERP 9 Act) on audit quality. This rule became effective on July 1, 2006. We partition our sample into the pre-mandatory rotation period (years 2003 through 2006) and post-mandatory period (years 2007 through 2011) and re-estimate the model in Table 3 and the results are in Table 4. We present the results for two specifications. The first specification includes only *APTENURE* and the second specification includes both *PARTEXP* and *APTENURE*. The key finding is that *APTENURE* is negative and significant at the 0.05 level (for both specifications) during the pre-mandatory rotation period, consistent with the results in Table 3. Interestingly, *APTENURE* is insignificant (for both specifications) during the post-mandatory rotation period. These findings are important since they suggest that audit partner tenure does not impact going concern decisions after the mandatory rotation of the engagement

⁸ This finding does not appear to be due to multicollinearity between *LEVERAGE* and *PBANK* or other variables.

partner was required. Also, consistent with the results in Table 3, *PARTEXP* continues to be positive and significant.

[Insert Table 4 about Here]

Relation between Going Concern and Partner Expertise and Client Importance

Table 5 provides the logistic regression results of the associations between the likelihood of a first-time going concern opinion and *PARTEXP* and client importance (*CLIENTIMP*). We find that the coefficient on *PARTEXP* is 0.649 and significant at the 0.01 level. This finding is consistent with the results in Table 3. The coefficient on *CLIENTIMP* is 0.313 (significant at the 0.01 level), indicating that client importance actually *increases* the likelihood of a first-time going concern opinion. This finding rejects null hypothesis 4. The coefficient on *CLIENTIMP*×*PARTEXP* is negative but insignificant indicating that the relation between audit partner's expertise and the likelihood of a first-time going concern opinion is not significantly lower for important clients. Thus, we fail to reject null hypothesis 5.

[Insert Table 5 about Here]

Relation between Going Concern Opinion and Partner Expertise and Non-audit Fee Ratio

Results of hypotheses 6 and 7 on the relation between the likelihood of a first-time going concern opinion and the non-audit fee ratio (*NAFEERATIO*) are in Table 6. We find that *PARTEXP* continues to be positive and significant at the 0.01 level and *NAFEERATIO* is negative and significant at the 0.10 level. This finding rejects null hypothesis 6. Thus, there is some support for the notion that higher non-audit fee ratio decreases the likelihood of a first-time going concern opinion. Note this finding is consistent with Ye et al. (2011) who also find a

negative relation between non-audit fee ratio and going concern opinion. Turning to hypothesis 7, we find that the coefficient on $NAFEERATIO \times PARTEXP$ is 3.473 and significant at the 0.10 level, indicating that non-audit fee ratio does not attenuate the audit partner's expertise. On the contrary, there is some support that non-audit fee ratio enhances the relation between audit partner's expertise and going-concern opinion, consistent with greater audit partner independence. Thus, null hypothesis 7 is rejected. Finally, while both $NAFEERATIO$ and $CLIENTIMP$ are commonly used to proxy for auditor independence, we note they exhibit opposite relations with going concern opinion, suggesting that client importance and non-audit fees may capture different threats to auditor independence.

[Insert Table 6 about Here]

Next, we present the results of the model that includes all four variables of interest and their interactions in Table 7. We find that the coefficients on $PARTEXP$ and $CLIENTIMP$ are positive (significant at the 0.01 level), indicating that the likelihood of issuing a first-time going concern opinion is increasing in audit partner's expertise and client importance.⁹ On the other hand, the coefficients on $APTENURE$ and $NAFEERATIO$ are negative (significant at the 0.10 level or better), indicating that the likelihood of issuing a first-time going concern opinion is decreasing in audit partner tenure and the extent of non-audit services provided. Among the interaction variables, only $NAFEERATIO \times PARTEXP$ is significant (at the 0.05 level). This is consistent with the results in Table 6 and supports the notion that the extent of non-audit services provided strengthens the effect of audit partner's expertise on the likelihood of issuing a going concern opinion.¹⁰

⁹ The marginal effect of $PARTEXP$ on going concern decision is 2.23% and appears to be economically significant.

¹⁰ The marginal effect of $NAFEERATIO \times PARTEXP$ on going concern decision is 36.16%.

[Insert Table 7 about Here]

Big 4 vs. Non-big 4 Auditors

Next, we estimate the model separately for clients served by the Big 4 and non-big 4 auditors. The objective of this analysis is to probe whether the effect of audit partner's expertise on first-time going concern opinions varies between auditor type. Also, to examine whether the interactions between audit partner's expertise and audit partner tenure, client importance, and non-audit fee ratio vary between auditor type. The results are in Table 8. There are three key findings. First, while the coefficient on *PARTEXP* is not significant for the Big 4 auditors, it is highly significant for non-big 4 auditors. In other words, our results indicate that on average, a non-big 4 audit partner's expertise increases the likelihood of issuing a first-time going concern opinion. On the other hand, a Big 4 audit partner's expertise does not have a significant impact on going concern opinion. These findings suggest that audit partner's expertise matters more for non-big 4 auditors compared to Big 4 auditors. We observe that for our sample, the mean number of partners for the Big 4 and non-big 4 auditors are, respectively, 8.88 and 6.93 (not reported). This suggests that there is more competition among partners within each of the Big 4 auditor offices relative to non-big 4 auditor offices. Also, the mean value of *PARTEXP* for non-big 4 auditors (0.12) is three times the mean value of *PARTEXP* for the Big 4 auditors (0.04). This may explain why *PARTEXP* is significant for non-big 4 auditors but not for the Big 4 auditors. We also note a second explanation. It is likely that Big 4 audit firms have more detailed mechanisms in place to encourage conformity among audit partners as part of their efforts to maintain consistent quality and minimize risk of deviation by a particular partner. For non-big 4

audit firms such detailed mechanisms may be limited thus, allowing more variability among audit partner expertise.

Second, the coefficient on *CLIENTIMP* is positive (significant at the 0.05 level) for both Big 4 auditors and non-big 4 auditors, indicating that the likelihood of issuing a first-time going concern opinion is higher for important clients relative to less important clients. This finding is important because it suggests that auditors in general, are not influenced by important clients when it comes to issuing going concern opinion. However, the coefficient on *CLIENTIMP*×*PARTEXP* is negative and marginally significant for non-big 4 auditors, suggesting that audit partner's expertise is attenuated by important clients.

Third, for non-big 4 auditors, the coefficient on *NAFEERATIO* is -3.881 and significant at the 0.05 level, indicating that the extent of non-audit services provided to a client decreases the likelihood of issuing a going concern opinion. However, there is some evidence that the extent of non-audit services strengthens the relation between audit partner's expertise and going concern opinion (significant at the 0.10 level). Finally, *APTENURE* appears to have no impact on the going concern decision for both the Big 4 and non-big 4 auditors.

[Insert Table 8 about Here]

Additional Analyses

Exclude mining industry

Mining companies are financially vulnerable and may have more going concern opinions than other industries. We exclude mining companies and reestimate model (2). The results (not tabulated) show that *PARTEXP* is positively associated with going concern opinion (at the 0.05 level), *CLIENTIMP* is positive (significant at the 0.10 level), *APTENURE* is negative (significant

at the 0.05 level), and $NAFEERATIO \times PARTEXP$ is positive and significant at the 0.05 level. These results are generally consistent with the results in Table 6.

Exclude financial services industry

We also exclude financial services industry since it is subject to more regulation and re-estimate model (2). Untabulated results show that the results are consistent with the results in Table 6. This provides some assurance that our results are not sensitive to the inclusion of firms in the financial services industry.

Alternative measures of client Importance and Non-audit Fee Ratio

We also measure $CLIENTIMP$ and $NAFEERATIO$ at the audit partner level instead at the office level. It is possible that a client may be important to the audit office but not to the audit partner, especially if the audit partner does not serve the client. On the other hand, a particular client may be important to the audit partner but not to the audit office. Thus, we believe that both approaches are appropriate to measure the effect of client importance and non-audit services provided to a client on the audit quality. Untabulated results indicate that the coefficient on $PARTEXP$ is positive and significant at the 0.05 level when both $CLIENTIMP$ and $NAFEERATIO$ are measured at the audit partner level.

VI. SUMMARY AND CONCLUSION

We examine the relation between audit quality and three key partner attributes: city-specific expertise, tenure, and independence. We use the first-time going concern opinion issued to financially distressed Australian firms to proxy for audit quality. We find that an audit partner's expertise is positively associated with going concern opinion. Further, our findings suggest that audit partner's expertise matters more for non-big 4 auditors compared to Big 4

auditors. With regard to audit partner tenure, we find the likelihood of issuing a going concern opinion is *decreasing* in audit partner's tenure but this finding does not hold for the period after the mandatory rotation of the lead engagement partner required under CLERP 9 Act. With regard to auditor independence, we find that the likelihood of issuing a going concern opinion is higher, not lower for important clients.

While there is an extensive body of archival research on audit quality (see Knechel et al. 2013), there is a paucity of empirical evidence on what attributes of audit partners are associated with audit quality. We contribute to the literature in several ways. First, we provide empirical evidence that city-specific expertise of an audit partner is positively related to audit quality. Second, while prior research has examined the relation between audit partner tenure and audit quality, particularly in Australia, we are not aware of a study that examines the consequences of the regulation that calls for mandatory rotation of the lead engagement partner on audit quality. We provide evidence that while audit partner tenure had a negative impact before the mandatory rotation was introduced, partner tenure is not associated with audit quality after the regulation became effective. Third, regulators and investors are concerned about the potential threat to auditor independence posed by large and influential clients. We provide strong evidence that audit quality is increasing in client importance.

Our findings have important implications for practice. Our findings support the notion that audit partner's city-level expertise has a positive impact on audit quality. Thus, the findings would be important to the audit firm and its clients in matching audit partners with clients. The finding that audit partner tenure does not impact the likelihood of going concern decision provides some assurance that mandatory audit partner rotation introduced under CLERP 9 Act had some effect in mitigating the negative effect of audit partner tenure on audit quality. The

finding that audit partner expertise matters more in non-Big 4 firms underscores the importance of developing partner skills and competence in those firms. The lack of a significant relation between audit partner expertise and audit quality for Big 4 firms is also interesting in that it suggests that Big 4 audit partners are homogeneous in terms of expertise. Finally, the findings might be relevant to countries where currently audit partner identity is not publicly disclosed. If attributes of an audit partner are associated with audit quality, then users of financial statements could benefit from disclosure of audit partner identity.

This study is subject to the following limitations. As common in other empirical research, we document associations rather than causality, between audit partner attributes and audit quality. We calculate audit partners' city-level expertise based on the sample of listed firms. Audit partners may also have clients or expertise in non-listed firms. Thus, our measure of an audit partner's expertise could be incomplete. While going concern opinion is a commonly used measure of audit quality in prior research, by design, we study only financially distressed firms. Future research could examine how audit partner expertise and independence affect audit quality in healthier firms. Future research could also replicate our in other settings where information about audit partners is available. Also, future research could examine whether partner fixed-effects matter in audit pricing decisions or investor valuation of earnings quality.

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APPENDIX

Dependent variable

GC = 1 if an auditor issues a first-time going concern opinion for a financially distressed company, 0 otherwise;

Experimental variables

PARTEXP = 1 if an audit partner is a city leader based on audit fees, 0 otherwise;

CLIENTIMP = total audit fees paid by a client is divided by total fees earned by a particular audit office and coded as 1 at above the median value, 0 otherwise;

APTENURE = number of years an audit partner has been engaged with the current client;

NAFEERATIO = total non-audit fees paid by a client is divided by total audit and non-audit fees earned by a particular audit office;

Control variables

LTA = natural log of total assets;

PBANK = probability of bankruptcy as measured by adjusted Zmijewski score;¹¹

LAGE = natural log of number of years the company has been listed in the Australian Securities Exchange (ASX);

LEVERAGE = total liabilities divided by total assets;

CLEVERAGE = change in leverage during the year;

ROA = earnings before interest and taxes divided by total assets;

LOSS = 1 if the client reported a loss in the previous year, 0 otherwise;

INVESTMENTS = short- and long-term investment securities (measured as current assets minus debtors and inventory) divided by total assets;

CFO = operating cash flow deflated by total assets;

BIG4 = 1 if the audit firm is a Big 4, 0 otherwise;

LOCAL = 1 if both the auditor and client are in the same city, 0 otherwise;

MINING = 1 if the company belongs to the mining industry, 0 otherwise;

RETURN = The firm's stock return over the fiscal year;

BETA = The firm's beta estimated using a market model over the fiscal year;

VOLATILITY = The variance of the residual from the market model over the fiscal year.

¹¹ Consistent with Carcello et al. (1995), we calculated Zmijewski (1984) score as $b = -4.803 - 3.6(\text{net profit after tax divided by total assets}) + 5.4(\text{total liabilities divided by total assets}) - 0.1(\text{current assets divided by current liabilities})$.

TABLE 1
Descriptive Statistics (n = 5,835)

Variables	Mean	Std. Deviation	Minimum	Maximum
<i>GC</i>	0.093	0.291	0.000	1.000
<i>PARTEXP</i>	0.082	0.274	0.000	1.000
<i>CLIENTIMP</i>	0.421	0.494	0.000	1.000
<i>APTENURE</i>	2.729	1.964	1.000	20.000
<i>NAFEERATIO</i>	0.020	0.051	0.000	0.932
<i>PARTEXP</i> × <i>CLIENTIMP</i>	0.042	0.201	0.000	1.000
<i>APTENURE</i> × <i>PARTEXP</i>	0.005	0.030	0.000	0.857
<i>NAFEERATIO</i> × <i>PARTEXP</i>	0.227	0.927	0.000	14.000
<i>LTA</i>	16.817	2.031	6.911	27.231
<i>PBANK</i>	-2.399	5.792	-16.594	35.228
<i>LAGE</i>	2.158	0.790	0.693	4.682
<i>LEVERAGE</i>	1.437	5.782	0.000	98.732
<i>CLEVERAGE</i>	2.636	34.280	-194.089	1765.935
<i>ROA</i>	-0.398	1.001	-35.721	14.506
<i>LOSS</i>	0.802	0.399	0.000	1.000
<i>INVESTMENTS</i>	0.357	0.297	0.000	1.000
<i>CFO</i>	-0.236	0.579	-16.286	4.034
<i>BIG4</i>	0.481	0.500	0.000	1.000
<i>LOCAL</i>	0.851	0.356	0.000	1.000
<i>MINING</i>	0.415	0.493	0.000	1.000
<i>RETURN</i>	6.150	64.659	-66.670	128.180
<i>BETA</i>	1.586	1.278	-0.390	3.480
<i>VOLATILITY</i>	69.935	28.936	19.930	114.400

See Appendix for definitions of variables.

TABLE 2
Pearson's Correlations (n = 5,835)

	GC	2	3	4	5	6	7	8	9	10	11
1 GC	1.000										
2 PARTEXP	0.034*	1.000									
	0.010										
3 CLIENTIMP	0.018	0.058**	1.000								
	0.171	0.000									
4 APTENURE	-0.049**	0.106**	0.044**	1.000							
	0.000	0.000	0.001								
5 NAFEERATIO	-0.003	0.026*	0.033*	-0.001	1.000						
	0.840	0.049	0.011	0.938							
6 PARTEXPxCLIENTIMP	0.012	0.704**	0.246**	0.092**	0.044**	1.000					
	0.361	0.000	0.000	0.000	0.001						
7 APTENURExPARTEXP	0.007	0.807**	0.059**	0.293**	0.021	0.598**	1.000				
	0.572	0.000	0.000	0.000	0.112	0.000					
8 NAFEERATIOxPARTEXP	0.006	0.044**	0.031*	-0.002	0.733**	.067**	.035**	1.000			
	0.651	0.001	0.019	0.906	0.000	0.000	0.007				
9 LTA	-0.061**	-0.032*	0.271**	-0.040**	0.034**	.048**	-.041**	.026*	1.000		
	0.000	0.014	0.000	0.002	0.009	0.000	0.002	0.048			
10 PBANK	0.108**	0.021	0.080**	0.005	0.009	0.024	.036**	0.005	-.149**	1.000	
	0.000	0.109	0.000	0.696	0.495	0.067	0.006	0.704	0.000		
11 LAGE	-0.051**	-0.035**	0.108**	0.086**	0.009	-0.003	0.005	0.005	.119**	.050**	1.000
	0.000	0.008	0.000	0.000	0.504	0.841	0.727	0.675	0.000	0.000	

See Appendix for definitions of variables. *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

TABLE 2
Pearson's Correlations (Contd.)

	GC	12	13	14	15	16	17	18	19	20	21	22	23
12 LEVERAGE	-0.031*	1.000											
	0.017												
13 CLEVERAGE	-0.006	-0.007	1.000										
	0.647	0.596											
14 ROA	-0.071**	-0.188**	0.016	1.000									
	0.000	0.000	0.227										
15 LOSS	0.025	.036**	0.006	-0.125**	1.000								
	0.056	0.006	0.621	0.000									
16 INVESTMENTS	-0.074**	.043**	0.024	-0.180**	.131**	1.000							
	0.000	0.001	0.068	0.000	0.000								
17 CFO	-0.060**	-0.190**	0.015	.717**	-0.118**	-0.227**	1.000						
	0.000	0.000	0.263	0.000	0.000	0.000							
18 BIG4	-0.014	-0.001	-0.007	.094**	-0.191**	-0.095**	.085**	1.000					
	0.284	0.953	0.576	0.000	0.000	0.000	0.000						
19 LOCAL	-0.009	-0.037**	-0.022	.037**	-0.016	.033*	.041**	0.020	1.000				
	0.511	0.005	0.086	0.005	0.230	0.012	0.002	0.133					
20 MINING	-0.019	0.019	-0.009	-0.001	.180**	.034**	0.013	-0.135**	.044**	1.000			
	0.144	0.141	0.496	0.940	0.000	0.009	0.331	0.000	0.001				
21 RETURN	-0.018	0.011	0.002	-0.021	0.016	0.004	-0.014	-0.025	0.012	0.017	1.000		
	0.168	0.391	0.854	0.117	0.217	0.747	0.287	0.059	0.364	0.201			
22 BETA	0.004	0.001	-0.006	-0.021	0.022	0.023	-0.017	-0.025	0.009	0.020	.821**	1.000	
	0.762	0.926	0.665	0.103	0.100	0.076	0.201	0.055	0.499	0.123	0.000		
23 VOLATILITY	0.006	0.015	-0.001	-0.034**	0.017	-0.001	-0.030*	-0.024	0.007	-0.006	.971**	.867**	1.000
	0.639	0.257	0.914	0.010	0.190	0.950	0.020	0.063	0.601	0.647	0.000	0.000	

See Appendix for definitions of variables. *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

TABLE 3
Relation Between Going Concern Opinion and Audit Partner's Expertise and Tenure

Variable (Expected Sign)	Coefficient (z statistic)
<i>PARTEXP</i> (?)	0.817 ^{***} (2.865)
<i>APTENURE</i> (?)	-0.060 [*] (-1.768)
<i>APTENURE</i> × <i>PARTEXP</i> (?)	-0.117 (-1.307)
<i>LTA</i> (-)	-0.225 ^{***} (-7.085)
<i>PBANK</i> (+)	0.025 ^{***} (2.701)
<i>LAGE</i> (-)	-0.248 ^{***} (-4.364)
<i>LEVERAGE</i> (+)	-0.056 ^{***} (-2.742)
<i>CLEVERAGE</i> (+)	0.001 (0.674)
<i>ROA</i> (-)	-0.020 (-0.424)
<i>LOSS</i> (+)	0.012 (0.0877)
<i>INVESTMENTS</i> (-)	-1.831 ^{***} (-8.799)
<i>CFO</i> (-)	-0.124 (-1.182)
<i>BIG4</i> (+)	0.275 ^{***} (2.934)
<i>LOCAL</i> (-)	-0.049 (-0.411)
<i>MINING</i> (?)	-0.063 (-0.705)
<i>RETURN</i> (-)	-0.004 ^{***} (-4.191)
<i>BETA</i> (+)	-0.008 (-1.204)
<i>VOLATILITY</i> (+)	0.001 ^{***} (3.686)
Year effects	Included
Firm fixed-effects	Included
Constant	2.328 ^{***} (3.671)
No. observations	5,835
Pseudo R ²	0.0988
Wald chi2	330.920
Prob > chi2	0.0000

See Appendix for definitions of variables. z statistics in parentheses. *, **, and *** indicate significant at 10%, 5% and 1% respectively.

TABLE 4
Relation Between Going Concern Opinion and Audit Partner's Expertise and Tenure

Variable (Expected Sign)	Coefficient (z statistic)			
	Pre-mandatory period (2003-2006)		Post-mandatory period (2007-2011)	
<i>PARTEXP</i> (?)	-	0.592* (1.761)		0.504*** (2.937)
<i>APTENURE</i> (?)	-0.174** (-2.360)	-0.179** (-2.421)	0.004 (0.095)	-0.011 (-0.264)
<i>LTA</i> (-)	-0.236*** (-2.992)	-0.241*** (-3.059)	-0.238*** (-6.626)	-0.243*** (-6.778)
<i>PBANK</i> (+)	0.023 (1.579)	0.022 (1.464)	0.059*** (4.821)	0.059*** (4.905)
<i>LAGE</i> (-)	-0.129 (-0.946)	-0.124 (-0.910)	-0.275*** (-4.341)	-0.265*** (-4.166)
<i>LEVERAGE</i> (+)	-0.030 (-1.631)	-0.028 (-1.564)	-0.292*** (-2.898)	-0.297*** (-3.026)
<i>CLEVERAGE</i> (+)	-0.001 (-0.455)	-0.001 (-0.465)	0.001 (1.245)	0.001 (1.017)
<i>ROA</i> (-)	-0.015 (-0.132)	-0.019 (-0.159)	0.020 (0.385)	0.018 (0.340)
<i>LOSS</i> (+)	0.957*** (2.517)	0.959** (2.500)	-0.195 (-1.288)	-0.205 (-1.355)
<i>INVESTMENTS</i> (-)	-1.366*** (-3.211)	-1.439*** (-3.359)	-1.943*** (-8.588)	-1.953*** (-8.636)
<i>CFO</i> (-)	0.013 (0.114)	0.011 (0.0962)	0.084 (1.639)	0.091* (1.761)
<i>BIG4</i> (+)	0.254 (1.166)	0.341 (1.493)	0.227** (2.125)	0.260** (2.434)
<i>LOCAL</i> (-)	0.460 (1.574)	0.445 (1.538)	-0.198 (-1.529)	-0.204 (-1.575)
<i>MINING</i> (?)	-0.307 (-1.357)	-0.325 (-1.417)	-0.007 (-0.0706)	0.001 (0.00512)
<i>RETURN</i> (-)	-0.005** (-2.345)	-0.005** (-2.340)	-0.003*** (-3.581)	-0.003*** (-3.613)
<i>BETA</i> (+)	-0.013 (-0.980)	-0.013 (-0.945)	0.038* (1.739)	0.037* (1.715)
<i>VOLATILITY</i> (+)	0.001 (1.050)	0.001 (1.043)	0.002*** (2.743)	0.002*** (2.736)
Year effects	Included	Included	Included	Included
Firm fixed-effects	Included	Included	Included	Included
Constant	1.336 (0.923)	1.356 (0.938)	2.849*** (4.057)	2.910*** (4.155)
No. observations	1,720	1,720	4,115	4,115
<i>Pseudo R</i> ²	0.1100	0.1132	0.0965	0.0991

See Appendix for definitions of variables. z statistics in parentheses. *, **, and *** indicate significant at 10%, 5% and 1% respectively.

TABLE 5
Relation Between Going Concern Opinion and Audit Partner's Expertise and Client Importance

Variable (Expected Sign)	Coefficient (z statistic)
<i>PARTEXP</i> (?)	0.649 ^{***} (3.194)
<i>CLIENTIMP</i> (?)	0.313 ^{***} (2.846)
<i>CLIENTIMP</i> × <i>PARTEXP</i> (?)	-0.437 (-1.450)
<i>LTA</i> (-)	-0.260 ^{***} (-7.478)
<i>PBANK</i> (+)	0.021 ^{**} (2.250)
<i>LAGE</i> (-)	-0.271 ^{***} (-4.739)
<i>LEVERAGE</i> (+)	-0.055 ^{***} (-2.677)
<i>CLEVERAGE</i> (+)	0.001 (0.706)
<i>ROA</i> (-)	-0.022 (-0.470)
<i>LOSS</i> (+)	0.034 (0.245)
<i>INVESTMENTS</i> (-)	-1.824 ^{***} (-8.770)
<i>CFO</i> (-)	-0.121 (-1.198)
<i>BIG4</i> (+)	0.381 ^{**} (3.820)
<i>LOCAL</i> (-)	-0.050 (-0.420)
<i>MINING</i> (?)	-0.061 (-0.689)
<i>RETURN</i> (-)	-0.004 ^{***} (-4.207)
<i>BETA</i> (+)	-0.008 (-1.310)
<i>VOLATILITY</i> (+)	0.001 ^{***} (3.828)
Year effects	Included
Firm fixed-effects	Included
Constant	2.604 ^{***} (3.963)
No. observations	5,835
Pseudo R ²	0.0990
Wald chi2	332.180
Prob > chi2	0.000

z statistics in parentheses. *, **, and *** indicate significant at 10%, 5% and 1% respectively. See Appendix for definitions of variables.

TABLE 6
Relation Between Going Concern Opinion and Audit Partner's Expertise and Fee ratio

Variable (Expected Sign)	Coefficient (z statistic)
<i>PARTEXP</i> (?)	0.406*** (2.661)
<i>NAFEERATIO</i> (?)	-2.611* (-1.777)
<i>NAFEERATIO</i> × <i>PARTEXP</i> (?)	3.473* (1.875)
<i>LTA</i> (-)	-0.220*** (-6.736)
<i>PBANK</i> (+)	0.026*** (2.826)
<i>LAGE</i> (-)	-0.253*** (-4.423)
<i>LEVERAGE</i> (+)	-0.057*** (-2.735)
<i>CLEVERAGE</i> (+)	0.001 (0.716)
<i>ROA</i> (-)	-0.016 (-0.348)
<i>LOSS</i> (+)	0.020 (0.144)
<i>INVESTMENTS</i> (-)	-1.839*** (-8.855)
<i>CFO</i> (-)	-0.130 (-1.266)
<i>BIG4</i> (+)	0.257*** (2.669)
<i>LOCAL</i> (-)	-0.034 (-0.286)
<i>MINING</i> (?)	-0.084 (-0.940)
<i>RETURN</i> (-)	-0.004*** (-4.200)
<i>BETA</i> (+)	-0.008 (-1.207)
<i>VOLATILITY</i> (+)	0.001*** (3.666)
Year effects	Included
Firm fixed-effects	Included
Constant	2.123*** (3.300)
No. observations	7,256
Pseudo R ²	0.0978
Wald chi2	322.540
Prob > chi2	0.0000

See Appendix for definitions of variables. z statistics in parentheses. *, **, and *** indicate significant at 10%, 5% and 1% respectively.

TABLE 7
Relation Between Going Concern Opinion and Audit Partner's Expertise and Client Importance

Variable (Expected Sign)	Coefficient (z statistic)
<i>PARTEXP</i> (?)	0.985 ^{***} (3.102)
<i>CLIENTIMP</i> (?)	0.365 ^{***} (3.308)
<i>APTENURE</i> (?)	-0.063 [*] (-1.856)
<i>NAFEERATIO</i> (?)	-3.650 ^{**} (-2.232)
<i>CLIENTIMP</i> × <i>PARTEXP</i> (?)	-0.456 (-1.494)
<i>APTENURE</i> × <i>PARTEXP</i> (?)	-0.117 (-1.293)
<i>NAFEERATIO</i> × <i>PARTEXP</i> (?)	4.553 ^{**} (2.294)
<i>LTA</i> (-)	-0.255 ^{***} (-7.252)
<i>PBANK</i> (+)	0.023 ^{**} (2.344)
<i>LAGE</i> (-)	-0.255 ^{***} (-4.469)
<i>LEVERAGE</i> (+)	-0.055 ^{***} (-2.721)
<i>CLEVERAGE</i> (+)	0.001 (0.624)
<i>ROA</i> (-)	-0.023 (-0.494)
<i>LOSS</i> (+)	0.029 (0.210)
<i>INVESTMENTS</i> (-)	-1.814 ^{***} (-8.710)
<i>CFO</i> (-)	-0.119 (-1.134)
<i>BIG4</i> (+)	0.327 ^{***} (3.209)
<i>LOCAL</i> (-)	-0.052 (-0.437)
<i>MINING</i> (?)	-0.058 (-0.654)
<i>RETURN</i> (-)	-0.004 ^{***} (-4.165)
<i>BETA</i> (+)	-0.009 (-1.364)
<i>VOLATILITY</i> (+)	0.001 ^{***} (3.779)
Year effects	Included
Firm fixed-effects	Included
Constant	2.697 ^{***} (4.065)
No. observations	5,835
<i>Pseudo R</i> ²	0.1027

*, **, and *** indicate significant at 10%, 5% and 1% respectively.

TABLE 8
Relation Between Going Concern Opinion and Audit Partner's Expertise and Tenure and Client Importance by Auditor Type

Variable (Expected Sign)	Coefficient (z statistic)	
	Big 4 Auditors	Non-big 4 Auditors
<i>PARTEXP</i> (?)	0.428 (0.702)	1.328*** (3.267)
<i>CLIENTIMP</i> (?)	0.405** (2.385)	0.357** (2.402)
<i>APTENURE</i> (?)	-0.056 (-0.982)	-0.061 (-1.451)
<i>NAFEERATIO</i> (?)	-2.716 (-0.919)	-3.881** (-1.998)
<i>CLIENTIMP</i> × <i>PARTEXP</i> (?)	0.063 (0.0944)	-0.599* (-1.654)
<i>APTENURE</i> × <i>PARTEXP</i> (?)	-0.116 (-0.535)	-0.157 (-1.436)
<i>NAFEERATIO</i> × <i>PARTEXP</i> (?)	3.959 (1.162)	4.092* (1.709)
<i>LTA</i> (-)	-0.187*** (-4.053)	-0.350*** (-5.584)
<i>PBANK</i> (+)	0.014 (0.701)	0.021 (1.416)
<i>LAGE</i> (-)	-0.194** (-2.272)	-0.317*** (-3.834)
<i>LEVERAGE</i> (+)	-0.050* (-1.723)	-0.055* (-1.938)
<i>CLEVERAGE</i> (+)	-0.000 (-0.303)	0.001 (1.008)
<i>ROA</i> (-)	-0.127 (-0.968)	-0.018 (-0.270)
<i>LOSS</i> (+)	0.206 (1.130)	-0.273 (-1.352)
<i>INVESTMENTS</i> (-)	-1.452*** (-4.468)	-2.283*** (-7.954)
<i>CFO</i> (-)	-0.304 (-1.596)	-0.006 (-0.0399)
<i>LOCAL</i> (-)	-0.265 (-1.583)	0.175 (1.008)
<i>MINING</i> (?)	-0.184 (-1.306)	0.074 (0.597)
<i>RETURN</i> (-)	-0.004*** (-2.840)	-0.003*** (-3.023)
<i>BETA</i> (+)	0.031 (1.410)	-0.012** (-2.017)
<i>VOLATILITY</i> (+)	0.002 (0.929)	0.001*** (4.011)
Year effects	Included	Included
Firm fixed-effects	Included	Included
Constant	1.551 (1.555)	4.461*** (3.989)
No. observations	2,808	3,027
Pseudo R ²	0.0947	0.1293
Wald chi2	174.130	226.260
Prob > chi2	0.0000	0.0000

*, **, and *** indicate significant at 10%, 5% and 1% respectively.