



## **The Impact of Management, Family, and Institution on The Auditor's Going Concern Opinion Issuance Decision**

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### **ABSTRACT**

Incidents where external auditors do not issue a going concern audit opinion (GC opinion) to companies having severe financial problems have been reported globally. This issue motivated this study – (i) to investigate the effect of selected auditor characteristics in terms of specialization, tenure, and fee on GC opinion issuance and (ii) to examine the moderating effect of management's, family's, and institution's influence on the relationship between auditor characteristics and GC opinion issuance. The study involves 644 Malaysian financially distressed listed companies in the period 2006 to 2012. The results of a panel logistic regression analysis show that auditor characteristics have no relationship with GC opinion issuance. Influential management - measured as the level of their ownership - can dampen the positive relationship between auditor specialization and auditor tenure with GC opinion issuance. The presence of an influential family, on the other hand, can strengthen the positive relationship between auditor tenure and GC opinion. No evidence about an influential institution's impact on the GC opinion process could be found. In conclusion, while auditor characteristics do not affect the possibility of a GC opinion issuance, pressure imposed by influential management and family on the auditor during the audit opinion decision process does have an impact.

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## INTRODUCTION

The applicable International Standard on Auditing 570 (ISA 570) states that auditors must (i) assess and conclude about the appropriateness of a client's management application of the going concern principle in the financial statement preparation and (ii) provide a conclusion about the client's going concern status (International Federation of Accountants, 2015). Auditors are supposed to provide a credible external and independent professional certification (Garcia-Blandon and Argiles, 2015). The instance when an auditor issues a GC opinion appropriately can be seen as an indicator of high audit quality (Hossain, 2013; Knechel and Vanstraelen, 2007), but such a good case is always an ideal. The problem of a low GC opinion issuance rate to financially distressed companies has been reported in the US (Read and Yezegel, 2018; Read, 2015), the UK (Citron and Taffler, 2004), Australia (Young and Wang, 2010), and Spain (Garcia-Blandon and Argiles, 2015).

In the context of Malaysia, the practice of not issuing a GC opinion in appropriate situations is a pressing local issue. A survey conducted by Osman et al., (2016) reported that auditors issued GC opinion to only between 11 and 30% of financially distressed Malaysian property and construction industry listed companies. Earlier, Abdul Wahab et al., (2013) analysed data from 379 selected financially distressed companies and found that only 6.3% of them had received a GC opinion. As early as 2009 (and until recently), the Financial Statement Review Committee (FSRC) of Malaysian Institute of Accountants revealed that the most common weakness in financial statements under their selective review was in the assessment of the appropriateness of GC assumption (see Accountants Today, December 2009, May or June 2012, November 2010, November, 2009).

The incident of major corporate collapses at the beginning of this millennium, particularly Enron and WorldCom, and the cost stakeholders had to pay for it, has demonstrated the importance of the issuance of a GC opinion. The case of Enron, for instance, reveals that Arthur Andersen (the company's audit firm since it was set up) did not issue a GC opinion even though they were aware of the major viability problem faced by the company, and this omission by the auditor caused great financial loss to shareholders and creditors. In Malaysia, the importance of a GC opinion transpired in the investigation of the controversial high profile case of 1 Malaysia Development Berhad (1MDB). Malaysia's Public Account Committee (PAC) specifically questioned Deloitte, the external auditor of the company, about why the debt-laden 1MDB had been issued a clean audit opinion instead of a GC opinion (see Asia One Business News, 2015; The Star Online, 2015).

Ironically, it is not an unexpected development for Malaysian auditors as well as auditors in other countries to not issue a GC opinion to their most distressed clients. Auditors seem to hold on to the idea that no auditing standards require them to predict corporate failure, although this is the opposite of financial statement user expectations (Ryu, Uliss, & Roh, 2009). In addition, issuing a GC opinion is a less favourable resort for auditors because it could lead to losing a client. A client that has been given a GC report tends to switch auditors; this could be to punish the auditor and to find a new more 'flexible' auditor or simply because management-auditor conflict following a GC opinion issuance is too severe (Carcello and Neal, 2003; Craswell, 1988). For the non-litigious context<sup>1</sup> like Malaysia, the likely pressure for the auditor to issue a GC opinion, if any, is to maintain a good reputation.

Not unlike the auditors, client companies are reluctant to accept a GC audit opinion given that such a situation would have a negative effect on their listing status. The current Bursa Malaysia's Practice Note 17 (PN17) states that the criteria for public listed companies (PLC) that would fall into a distress status include one that receives a modified opinion with emphasis on the inappropriateness of the GC assumption (Bursa Malaysia Securities Berhad, 2009, para. 2.1e). When a company falls into PN17 status, it sends a negative signal to shareholders and creditors, consequently jeopardizing the possibility of acquiring future cheap capital, and even resulting in forced liquidation (the case of Kenmark Industrial Co. (M) Bhd., for instance). Insights from the US show that companies that have been issued a GC opinion would face a negative market reaction (Blay and Geiger, 2001; Citron et al., 2008; Kausar et al., 2015; Loudder et al., 1992), a higher cost of equity capital (Amin et al., 2014), and an inability to continue operating (Callaghan et al., 2009).

Even though the issuance of a GC opinion is not favored by Malaysian auditors and is unfavorable to their clients, the appropriate issuance of such an opinion primarily stands on the firm ground of the preservation

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<sup>1</sup> A condition where the pressure for auditors to issue a GC opinion is less compared to in a litigious environment (Geiger & Raghunandan, 2002b)

of stakeholders' interest. Arguably, stakeholders, including customers, suppliers, and creditors, are the main beneficiaries of the issuance of such an audit opinion. A GC opinion could function as an early signal to the stakeholders regarding the ability of a company to stay afloat and could save billions of dollars of stakeholders' capital if issued appropriately. At least one study has found that investors in the US and the UK react negatively in the capital market after GC opinion issuance, showing that the opinion in fact has market relevance (Kausar et al., 2015).

The topic of GC opinion issuance to financially distressed companies has been examined in both developed and developing markets. Most studies have examined the effect of auditor characteristics on the issuance of such an audit opinion (Boone et al., 2010; Chiang et al., 2015; Firth et al., 2012; Garcia-Blandon and Argiles, 2015; Lim and Tan, 2008; Read, 2015; Shafie et al., 2009). In addition, the literature also shows that the ability of the auditor to perform audit activities independently is affected by certain forms of internal pressures, particularly from the management, family, and institutions who own a company, hence affecting the propensity to issue a GC opinion (Abdul Wahab et al., 2011; Ballesta and Garcia-Meca, 2005; Callaghan et al., 2009). However, no empirical tests on this relationship have been done. This motivated this study to seek answers to the following questions: Is there any significant association between Malaysian auditor characteristics viz. specialization, tenure, and fee, and the issuance of a GC opinion? Do the levels of management, family, and institutional influence moderate the association between auditor characteristics and the issuance of a GC opinion?

This study makes a contribution to the current literature on GC opinion, as it seems to be the first to adopt a holistic approach in assessing the predictors of GC opinion by assessing variables that both directly and moderately affect GC opinion issuance. Specifically, this study not only tests the direct relationship between auditor characteristics and GC opinion issuance, but also assesses the moderating effect of management's, family's, and institution's influence on the mentioned relationship. At the time of writing this study, there was no known study on the moderating impact of stakeholders' influence on GC opinion issuance. Furthermore, this study has policy implications because the findings could provide an input to the process of developing future promulgations as well as refining existing ones. For instance, if this study finds management influence can dampen the propensity of specialized auditors to issue a GC opinion, then this finding can be used as one of the justifications for policy makers to introduce measures that can curb the practice of management or executives to keep significant ownership of a company.

The rest of the paper is organized as follows. First, we review prior literature and develop hypotheses. In sections 3 and 4, we present the research method and findings respectively. Finally, we conclude this paper with summary and conclusion.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Going-Concern Opinion and the Issuance Process

The applicable ISA 570 (2010) states that GC assumption refers to the notion that an entity is viewed as continuing in business for the foreseeable future and management has to prepare a financial statement on a GC basis unless the party intends to discontinue business operations or has no other option but to do so. The standards also explain that the auditor is responsible (1) for gathering adequate audit evidence about the appropriateness of management using a GC assumption in the preparation of the financial statement, and (2) for drawing conclusions on the viability of a client company continuing operations. An auditor has to issue a GC opinion when there is doubt about a client's ability to continue operations in the next accounting year. Appropriate issuance of a GC opinion by an auditor is seen as an indicator of high audit quality (e.g., Hossain, 2013; Junaidi et al., 2012; Knechel and Vanstraelen, 2007; Tepalagat and Lin, 2015).

The process of GC opinion issuance comprises two main stages: (1) recognition, and (2) decision. In the first stage, the auditor is involved in audit activities to ascertain whether the GC assumption can be applied to a particular client. The second stage is when the auditor decides on the appropriateness of the GC assumption (Mutchler, 1985, 1986). The recognition step depends on auditor competence, i.e., the more competent the auditor, the more likely it is that they will be able to detect a client that has characteristics that defy the GC assumption. The decision step, which is the second step, relates to auditor independence, i.e., whether the auditor is impartial enough to issue a GC opinion if the situation requires them to do so. The idea that the GC opinion

process comprises two main stages has empirical support particularly by the findings reported in Kida (1980). Specifically, Kida (1980) found that the GC opinion issuance process has two distinct elements, namely, (i) the identification of the GC problem and (ii) the issuance of a GC opinion.

The decision stage (stage two) is less straightforward compared to the recognition stage (stage one), as it involves negotiations. Before deciding about an audit opinion, an auditor would have to negotiate with parties whose interests are affected by the issuance of a GC opinion. The eventual party with whom the auditors would have to negotiate extensively is the management, i.e., the party who hired them (Asare, 1990; Behn et al., 2001). The negotiation with management may become difficult because the client is a distressed company, and the possibility of issuing a GC opinion is brought to the table (Basioudis et al., 2008; Geiger et al., 1998). Any idea of departure from the standard or clean audit report would disfavor the management for its potential negative consequences to them. In the non-litigious context of Malaysia, the negotiation is more likely to involve owners who have a significant interest, i.e., family and institutions.

The idea of two stages of a GC opinion issuance discussed above frames the hypotheses development process below.

### **Auditor Characteristics**

#### **Auditor Specialization**

Research on the association between auditor specialization and the issuance of a GC opinion to financially distressed companies is limited; in fact, only studies by Chiang et al. (2015), Lim and Tan (2008), and Geiger and Raghunandan (2002b) can be traced. Even though empirical support on the association between auditor specialization and GC opinion is scarce, there are at least two arguments that support a positive association between these two variables. The dominant view is the tendency of this kind of auditor to preserve a firm's reputation. Specialized auditors are known to invest in the development of reputation in the market and hence would avoid making an error in GC opinion issuance (Abbott and Parker, 2000; Chiang et al., 2015; Lim and Tan, 2008). This dominant view is supported by empirical works that discovered that specialized auditors are positively associated with compliance with auditing standards (O'Keefe et al., 1994), are associated with more effective fraud deterrence (Carcello and Nagy, 2004), and are related to a lower possibility of earning management practice (Balsam et al., 2003; Krishnan, 2003).

Secondly, a specialized auditor is more likely to issue GC opinions appropriately to financially distressed companies because they are knowledgeable and hence could provide a higher quality audit compared to non-specialists (see Abbott and Parker, 2000; Minutti-Meza, 2013). This argument is supported by empirical evidence that audit specialists are superior in terms of knowledge and performance compared to auditors that do not possess such characteristics (see Owosho et al., 2002; Solomon et al., 1999). Furthermore, a specialized auditor can be related to better identification of GC-related issues for at least two reasons, as suggested by Williams (1988). Firstly, audit specialists who are typically associated with auditing many clients in a particular industry may have an advantage over other auditors in terms of economies of scale in conducting audits. Secondly, a specialized auditor would be more likely to provide effective services because their position as a dominant player in the audit market of a particular industry reflects that they have a deep understanding about the industry. Hence, H1 is stated as follows:

*Hypothesis 1: Auditor specialization is positively related to issuance of a GC opinion to financially distressed companies*

#### **Auditor Tenure**

Tepalagul and Lin (2015) and Knechel and Vanstraelen (2007) suggested that audit tenure could positively affect both auditor competence and independence. A long tenure could enhance auditor familiarity with the client (i.e., become more competent and associated with a greater possibility of issuing a GC opinion to a distressed client). In addition, long audit tenure is also associated with more auditor independence because an auditor that has provided long service has recovered the initial investment they spent in the early years of service (Geiger and Raghunandan, 2002a; Shafie et al., 2009). Conversely, auditors are said to be less independent in the early years of providing services because at that time, they spend a lot on the initial investment and may not

be willing to act against management's will (and have their contract terminated for doing so) before the cost can be recovered.

Short audit tenure, on the other hand, would not be associated with the appropriate issuance of a GC opinion by an auditor. Knechel and Vanstraelen (2007) argue that audit tenure is negatively associated with both auditor's competence and independence and hence leads to a low possibility of the auditor issuing a GC opinion to distressed clients. In addition, short tenure maybe associated with reduced auditor competence because of less familiarity with the client's organization. The authors also suggest that short tenure could hamper auditor independence because the auditor may wish to stay longer with the client in order to get back their initial investment (which is typically a high level of investment) and hence may sacrifice independence for that reason. Furthermore, as stated above, Geiger and Raghunandan (2002a) suggest that an auditor who is in the early years of service may act less independently in order to avoid termination of their contract. The market is more likely to assume termination in the early years of service is the fault of the auditor, and hence the auditor would avoid such damage to their reputation. This leads us to the following hypothesis:

*Hypothesis 2: Auditor tenure is positively related to issuance of a GC opinion to financially distressed Companies*

### **Auditor Fees**

There are the operational and financial arguments for the association between audit fee and GC opinion issuance. Operationally, it is contended that a high audit fee is associated positively with GC opinion issuance to financially distressed clients because when an auditor has to issue a non-unqualified opinion report, they have to conduct additional substantive tests, documentation, and discussion and negotiation with the client (Basioudis et al., 2008). These additional audit activities are expensive, and a higher audit fee is the result. Empirical support for this argument can be seen in early studies on audit fees (see Francis, 1984; Francis and Simon, 1987; Simunic, 1980). In contrast, economically, one can expect that the auditor would be less likely to issue a GC opinion to a financially distressed client who had paid a substantial audit fee because if the client retaliates by terminating the auditor's contract, the loss of revenue to the auditor would be significant (Vanstraelen, 1999). In other words, audit firms may be afraid that they would lose clients if they issued unfavorable opinions. Previous literature suggests that there is a relationship between audit fee and GC opinion, but such findings are not conclusive on whether such a relationship is positive or negative in nature. We therefore test an non-directional hypothesis:

*Hypothesis 3: Audit fee is related to issuance of GC opinion to financially distressed companies*

### **Ownership Structure**

Even though an auditor had detected that a client fulfills all the criteria that may cast doubt on their ability to continue operations, they would not issue a GC opinion if they were not an independent auditor. In addition, it has been stated in the literature that parties like management, family, and institutions are very influential in the GC opinion decision process. If a party functions as a catalyst or presses for an independent audit, then the auditor would be more likely to issue a GC opinion to a financially distressed client and vice versa (Ballesta and Garcia-Meca, 2005; Callaghan et al., 2009). Given the above insights from the literature, this study argues that the propensity for an auditor to issue a GC opinion to a financially distressed client is conditional upon the extent of other parties' influence. Thus, this study will test the moderating effect of management, family, and institutional influence on the relationship between auditor characteristics and the issuance of a GC opinion.

To date, to the best of our knowledge, there are no known studies on the moderating effect of management, family, and institution on the relationship between auditor characteristics and GC opinion. However, there are previous studies in the relevant auditing and accounting fields.

### **Management Ownership**

Management, or specifically, the CEO of a company, is an important party in the GC opinion issuance process because they are "central to the plans firms implement to escape from financial distress" (Ji and Lee, 2015, p.

2124). The propensity of an auditor to issue a GC opinion to a financially distressed client is conditional upon pressure placed by management, as stated in Callaghan et al. (2009) as the more a GC opinion would negatively affect management's remuneration and the company's finances, the more management would press the auditor not to issue a GC opinion. Callaghan's contention that management would protect their remuneration is supported by a study by Kothari et al., (2009), who discovered that managers would delay the disclosure of bad news to protect their remuneration and career from the negative impact of such news. Therefore, we suggest that the level of management ownership would probably dampen any positive relationship between auditor characteristics and the possibility of a GC opinion issuance to financially distressed companies:

*Hypothesis 4: Management ownership weakens the positive relationship between auditor specialization and GC opinion issuance.*

*Hypothesis 5: Management ownership weakens the positive relationship between auditor tenure and GC opinion issuance.*

*Hypothesis 6: Management ownership affects the relationship between audit fee and GC opinion issuance.*

### **Family Ownership**

There is a strong argument that family ownership would positively moderate the relationship between auditor characteristics and the issuance of a GC opinion to financially distressed companies. The argument is that a high concentration of family ownership may make clients seem 'riskier' from the perspective of the auditor. The empirical support for this argument is provided by Ballesta and Garcia-Meca (2005), who found that family owners, if they are on the board of directors, would increase the propensity of the auditor to issue a qualified audit opinion. The situation arises because a family business is typically associated with a less independent board and with less emphasis on corporate transparency. Ballesta and Garcia-Meca (2005) conducted their study in Spain, a country that is similar to Malaysia in terms of high family ownership and a low litigious environment. Therefore, we suggest that there is a positive moderation of family ownership on the association between auditor characteristics and GC opinion issuance to financially distressed companies.

*Hypothesis 7: Family ownership strengthens the positive relationship between auditor specialization and GC opinion issuance.*

*Hypothesis 8: Family ownership strengthens the positive relationship between auditor tenure and GC opinion issuance.*

*Hypothesis 9: Family ownership affects the relationship between audit fee with GC opinion issuance.*

### **Institutional Ownership**

Institutional owners, which typically have a high proportion of ownership, have greater influence compared to individual investors (Wan Abdullah et al., 2008). The common understanding about institutional shareholders is that they can assert a demand for a high quality audit from the auditor, hence strengthening the effect of certain auditor characteristics on the proper GC opinion issuance. The contention that institutional owners would demand high audit quality has empirical support, as Kane and Velury (2002) found that the higher proportion of institutional ownership, the more likely a company is to be associated with the appointment of a big audit firm, the kind of firm which is known to provide high quality audit services. Accordingly, we expect that institutional owners would enhance the relationship between auditor characteristics and GC opinion issuance:

*Hypothesis 10: Institutional ownership strengthens the positive relationship between auditor specialization and GC opinion issuance.*

*Hypothesis 11: Institutional ownership strengthens the positive relationship between auditor tenure and GC opinion issuance.*

*Hypothesis 12: Institutional ownership affects the relationship of audit fee and GC opinion issuance.*

## RESEARCH METHODOLOGY

### Data Collection

The population of this study is Malaysian public listed companies (PLCs), as these are the kind of companies that contribute significantly to the economy and social development of the country. The sample tested in this study is financially distressed companies from the PLCs. Distressed companies are taken as the sample because ISA 570 mentioned that GC opinion is appropriate to companies that are facing financial problems, and this is consistent with prior Malaysian studies in this area (Shafie et al., 2004; Shafie et al., 2009) as well as studies in other contexts (Chiang et al., 2015; Geiger and Rama, 2003; Lai, 2009; Mutchler et al., 1997).

Financially distressed companies included in the sample have two out of the following criteria: (1) net liability or a net current liability balance sheet, (2) negative operating cash flows, or (3) substantial operating losses. Data were collected from 2006 to 2012; in this study; (an unbalanced) panel data approach is employed so that the data acquires many advantages of a panel data regression analysis (see Baltagi, 2001; Gujarati, 2003). Distressed companies with the following criteria were excluded from the sample: regulated, utility, and financial service companies. Data were collected via secondary sources, namely, Compustat, and Capital IQ databases and companies' annual reports.

The Datastream and Capital IQ database identify 770 observations that fit the criteria of the sample (Table 1). Thirty-three observations with no available annual reports and 93 observations with incomplete data were excluded. Incomplete data were mostly due to an untraceable CEO name, and/or the ownership level could not be traced, or Altman's z-score could not be calculated due to untraceable items (especially market capitalization). This left the study with a usable sample of 644 observations:

Table 1 Sample Selection Process

Criteria	Number of observation
Population (according to Bursa Malaysia website)	5238
Observations that fit the criteria of the sample	770
Excluded because financial reports are not available	(33)
Excluded companies due to incomplete data	(93)
Usable sample	644

### Data Analysis

Panel logistic regression was used to test the hypotheses of this study. This statistic is used given that the dependent variable is nominal (0 = non-GC opinion, 1 = GC opinion). This statistic has been used in prior studies on this topic conducted in Malaysia (e.g., Shafie et al., 2004; Shafie et al., 2009) as well as in other contexts (e.g., Chiang et al., 2015; Geiger and Raghunandan, 2002a; Geiger et al., 1998; Ji and Lee, 2015). Logistic regression is robust; as it does not require a linear relationship between the covariates and the outcome variable, there is no requirement for normally distributed independent variables, and it does not assume homoscedasticity (Sarkar et al., 2011). When a study involves a panel data logit model with a moderating effect (like this study does), it has to run the logistic regression to test all hypotheses using the random effect model (REM) approach. The fixed effect model (FEM) approach is not an option because the FEM for logit model approach does not produce a group constant term, and this makes the prediction of any interaction effect among independent variables impossible (Karaca-Mandic et al., 2012).

### Model specification

The logistic regression model:

$$\begin{aligned}
 GCOP = & b_0 + b_1SPECLS + b_2TENURE + b_3AUDFEE - b_4MANINF + b_5FAMINF + b_6INSTINF - \\
 & b_7SPECLS*MANINF - b_8TENURE*MANINF - b_9AUDFEE*MANINF + b_{10}SPECLS*FAMINF \\
 & + b_{11}TENURE*FAMINF + b_{12}AUDFEE*FAMINF + b_{13}SPECLS*INSTINF + \\
 & b_{14}TENURE*INSTINF + b_{15}AUDFEE*INSTINF + b_{16}PROBFL + b_{17}NON1STGC + b_{18}DEFAULT \\
 & + b_{19}AUDSIZE - b_{20}CLTSIZE + b_{21}AUSTDD + b_{22}CGSTDD + b_{23}INDS + e
 \end{aligned}$$

This study has GC opinion issuance (GCOP) as the dependent variable. GCOP is a nominal variable indicating whether an auditor has issued a GC opinion to a distressed company or not (GC opinion = 1, else = 0). The 'GC opinion' refers to every type of GC opinion allowable per ISA 570 - unqualified GC opinion with emphasis on matter, qualified GC opinion, adverse GC opinion, or disclaimer (Basioudis et al., 2008; Chiang et al., 2015; Ji and Lee, 2015). Three auditor characteristics, namely, auditor specialization (SPECLS), auditor tenure (TENURE), and audit fee (AUDFEE) are the independent variables. Craswell et al., (1995) proposed that the auditing firm is a specialist if it has dominated the audit market share in a particular industry. In this study, accordingly, an audit firm that audited 20% or more companies in an industry or sector is coded as a specialist, i.e., equal to 1, else is coded as 0 (Chen and Elder, 2001; Mayhew and Wilkins, 2003; Md. Ali et al., 2008).

Auditor tenure (TENURE) is measured as the number of years an audit firm has audited a particular client (Garcia-Blandon and Argiles, 2015; Shafie et al., 2009; Vanstraelen, 2000). The measure reflects exactly how long an auditor has provided audit services to a client. The audit fee in Ringgit Malaysia (RM) is used to measure the variable AUDFEE (Callaghan et al., 2009; DeFond et al., 2002; Geiger and Rama, 2003).

The model also includes management influence (MANINF), family influence (FAMINF), and institutional influence (INSTINF) as variables that moderate the relationship between the auditor characteristics and the issuance of a GC opinion. In this study, management influence is measured as the percentage of shares owned by the CEO (both direct and indirect ownership) (Lafond and Roychowdhury, 2008). The CEO is the highest-level manager in a company; thus, his percentage of ownership could reflect the influence of management in the company as well as in the GC opinion decision process. Family influence is measured as a percentage of common shares held by the family that dominates a company (Chau and Leung, 2006). Both direct and indirect share ownership are considered. The degree of institutional influence is measured as a percentage of ordinary shares owned by institutional investors in a company, and this is possible because this data is available in the Capital IQ database.

Eight variables are controlled, namely, client probability of failure (PROBFL), non-first timer GC opinion recipient (NON1STGC), debt default (DEFAULT), auditor size (AUDSIZE), client size (CLTSIZE), newly issued auditing standard (AUSTDD), newly issued corporate governance code (CGSTDD), and industry (INDS). PROBFL is measured using Altman's z-score (Garcia-Blandon and Argiles, 2015; Sharma and Sidhu, 2001; Simunic, 1984; Young and Wang, 2010). An auditor might find it is easier to give a GC opinion to a non-first timer GC opinion recipient (Li, 2009), and an auditor tends to give a GC opinion again (and again) after the first time until a company has a certain hope of a turnaround (Mutchler, 1985). This study, therefore, controls the effect of NON1STGC in the analysis (non-first timer GC opinion recipient = 1, else = 0). Big firms are more likely to issue a GC opinion to financially distressed clients (Berglund et al., 2018). AUDSIZE is measured as Big 4 and its local counterparts = 1, and else = 0 (Chiang et al., 2015; Johl et al., 2007; Masyitoh and Adhariani, 2010; Read, 2015). CLTSIZE is measured through the value of total revenue.

There would be an increase in the rate of GC opinion issuance after a new auditing standard is released; this happens in the US (Ryu et al., 2009), and in the UK (Citron and Taffler, 2004) and China (DeFond et al., 1999). Based on the above evidence, this study controls the effect of the release of a new ISA 570, which was effective in Malaysia in January 2010. This control variable is named AUSTDD, and the value of 1 is given to data after the new ISA 570 was effective, 0 is given to earlier data. The revised Malaysian Code of Corporate Governance (MCCG) released in 2007 is more stringent compared to the earlier version, particularly in terms of characteristics and function of the audit committee and the internal auditor (see MCCG 2007); thus, there is a possibility that it will affect the demand for audit quality (Abdul Wahab et al., 2011). For this reason, this study controls the effect of the new MCCG. The control variable was named CGSTDD; the value of 1 is given to data after October 1st 2007, and 0 is given to earlier data. Krishnan and Krishnan (1996) found that auditors treat companies from different industries differently in the audit-opinion decision process. Industry variable has been controlled in previous studies (Geiger et al., 2005). Consequently, the industries or sectors the sample companies come from are coded as the control variable named INDS. The independent variables, moderating variables, control variables, and measures are as summarized in Table 2.



Table 2 Tested variables in the logistic regression model

Expected Sign	Variables	Measures
+	SPECLS	20% audit market share or more = 1, else = 0
+	TENURE	Number of years an auditor provided audit services to a particular client
+/-	AUDFEE	Audit fee
-	MANINF	The percentage of shares owned by CEO
+	FAMINF	The percentage of shares owned by dominating family
+	INSTINF	The percentage of shares owned by institutions
-	MANINF_SPECLS	The percentage of shares owned by CEO multiplied by SPECLS.
-	MANINF_TENURE	The percentage of shares owned by CEO multiplied by TENURE.
-	MANINF_AUDFEE	The percentage of shares owned by CEO multiplied by AUDFEE.
+	FAMINF_SPECLS	The percentage of shares owned by dominating family multiplied by SPECLS.
+	FAMINF_AUDSTEN	The percentage of shares owned by dominating family multiplied by TENURE.
+	FAMINF_AUDFEE	The percentage of shares owned by dominating family multiplied by AUDFEE.
nil	INSTINF_SPECLS	The percentage of shares owned by institutions multiplied by SPECLS.
nil	INSTINF_AUDSTEN	The percentage of shares owned by institutions multiplied by TENURE.
nil	INSTINF_AUDFEE	The percentage of shares owned by institutions multiplied by AUDFEE.
nil	PROBFL	Altman's Z-score of current year
+	NON1STGC	Non-first timer GC opinion recipient = 1, else = 0
+	DEFAULT	Debt ratio = total liabilities/total assets
+	AUDSIZE	Audited by Big 4 audit firm or the firm's local counterparts = 1, else = 0
-	CLTSIZE	Total revenue
+	AUSTDD	Data on or after January 2010 = 1, else = 0
+	CGSTDD	Data on or after October 2007 = 1, else = 0
+/-	INDS	Industry (construction = 1, consumer product = 2, industrial product = 3, plantation = 4, properties = 5, technology = 6, trading and services = 7)

## FINDINGS

### Descriptive Analysis

Table 3 presents the descriptive statistics of the sample. The table shows data of both before and after winsorization at the 1% level (continuous data only - 4 highest and 4 lowest points of data). The data prior to winsorization might offer an unrealistic view about the sample because they contain extreme values and/or outliers:

Table 3: All Variables

Variable	Mean	Std. Dev.	Min	Max
GCOP	.20	.3980	0	1
SPECLS	.250	.4330	0	1
TENURE	4.110	1.8270	1	6
AUDFEE	154728.060	204695.890	10000	1673000
MANINF	.180	.2019	.00	.83
FAMINF	.231	.2755	.00	.93
INSTINF	.082	.1279	.00	.72
PROBFL	.480	2.9789	-11.99	16.15
NON1STGC	.110	.3190	0	1
DEFAULT	62.360	42.4143	2.020	329.200
AUDSIZE	.430	.4950	0	1
CLTSIZE	389.030	1287.2055	.00	11266.49
AUSTDD	.450	.4980	0	1
CGSTDD	.740	.4370	0	1
INDS	5.710	3.8960	1	7

Note: GCOP = GC opinion (1,0). PROBFL = Probability of failure (z-score). SPECLS = Auditor specialization (1,0). TENURE = Auditor tenure. AUDFEE = Audit fee. MANINF = Management ownership. FAMINF = Family ownership. INSTINF = Institutional ownership. NON1STGC = Non first-timer GC opinion recipient (1,0). DEFAULT = Debt default. AUDSIZE = Auditor size (1,0). CLTSIZE = Client size. AUSTDD = Auditing standard (1,0). CGSTDD = Corporate governance standard (1,0). INDS = Industries.

As shown in Table 3, the mean of the independent variable GCOP is 0.20, which means that Malaysian auditors issue a GC opinion to around only 20% of seriously financially distressed Malaysian PLCs. Due to a stricter sample selection procedure (i.e. this study selected companies that were experiencing severe financial problems in contrast to prior studies in this area), this rate of GC opinion issuance is higher in comparison to the GC opinion issuance rate as reported in a recent Malaysian study by Abdul Wahab et al. (2013), which is only at 6.3%. It is also higher compared to studies in other countries like Lim and Tan (2008), DeFond et al. (2002), and Reynolds and Francis (2001), who reported report values of 7%, 9% and 8%, respectively.

For this sample of 644 financially distressed companies (observations), only 25% of them had been audited by a specialized auditor (SPECLS). The average auditor tenure (TENURE) is 4.11 years (min = 1 and max = 6). On average, these financially distressed companies paid RM154,728.08 in audit fees (AUDFEE) to their auditor ranging from RM10,000 to RM1,673,000 (SD = 204695.89). The mean for management ownership (MANINF) and family ownership (FAMINF) are 18% and 23% respectively. MANINF ranges from 0 to 83%, and FAMINF ranges from 0 to 93%. The Capital IQ database provides data about INSTINF (institutional ownership), and on average, it is at 8.2% for the sample companies (min = 0, max = 72%, SD = .128).

Descriptive statistics for control variables are also presented in Table 3. The average score of possibility of failure for the sample companies (z-score) is 0.48, with scores ranging from -11.99 to 16.15 (SD = 2.979). The average for every company is well below 1.8, which is the benchmark point of Altman's z-score and which means there is a high likelihood that a company would collapse (Thai, Goh, Teh, Wong, & Ong, 2014). For variable non-first timer GC opinion recipients (NON1STGC), 11% of sample companies/observations are non-first timer GC opinion recipients, i.e., have received the same audit opinion in the immediate prior year. The third control variable debt default (DEFAULT), measured as leverage (total liabilities/total assets), has an average of 62.36% (min = 2.02%, max = 329.20%). For audit size (ADSIZE), around 43% of sample companies are audited by big firms. The size of sample observations (CLTSIZE) ranged from RM0 to RM11.266 billion in sales revenue (average RM389.03 million). Forty five percent of sample companies are in the period of a later ISA570 (AUSTDD), and 74% of the sample companies are in the period when newer MCCG is effective. INDS is a nominal data for industry classification, and therefore, its mean, standard deviation, and minimum and maximum data as revealed in Table 3 are meaningless.

### Diagnostic Tests

The three most common protocols for multivariate regression diagnostics are checking for outliers, normality, and multicollinearity. Research shows that the presence of outliers has only a benign effect on the result of logistic regression; however, it is commonly accepted that "deleting cases with the largest residuals or more extreme values almost always improves the fit of the model" (Sarkar et al., 2011, p. 34). To obtain a better fit of model as mentioned above, this study winsorizes the data at the 1% level. Logistic regression does not require normally distributed independent variables (Bewick, Cheek, & Ball, 2005; Peng, Lee, & Ingersoll, 2002). Multivariate logistic regression is also sensitive to multicollinearity between independent variables in a tested model (Hosmer Jr, Lemeshow, & Sturdivant, 2013). Table 4 below shows that the highest correlation among variables in this study is between SPECLS and AUDSIZE; this is at .635\*\*, which is below 0.70 and thus indicates no possible multicollinearity problem is present (Anderson et al., 1996).

Table 4 Pearson Correlation (N = 644)

	GCOP	SPECLS	TENURE	AUDFEE	MANINF	FAMINF	INSTINF	PROBFL	NON1STGC	DEFULT	AUDSIZE	CLTSIZE	USTDD	CGSTDD	INDS
<b>GCOP</b>	1														
<b>SPECLS</b>	-.034	1													
<b>TENURE</b>	.016	.241**	1												
<b>AUDFEE</b>	.030	.105**	.150**	1											
<b>MANINF</b>	-.065	.083*	.061	-.056	1										
<b>FAMINF</b>	-.046	.097*	.091*	-.019	.558**	1									
<b>INSTINF</b>	-.048	.030	.028	.246**	-.119**	-.167**	1								
<b>PROBFL</b>	-.378**	.059	.096*	-.021	.003	.062	.026	1							
<b>NON1STGC</b>	.617**	-.028	-.039	.028	-.030	-.030	-.066	-.311**	1						
<b>DEFULT</b>	.380**	-.054	-.080*	.057	-.032	-.053	-.010	-.534**	.321**	1					
<b>AUDSIZE</b>	-.040	.635**	.385**	.205**	-.048	.025	.095*	.089*	-.024	-.098*	1				
<b>CLTSIZE</b>	-.071	.091*	.142**	.481**	-.027	-.005	.185**	.106**	-.070	.038	.179**	1			
<b>AUSTDD</b>	.061	-.155**	.080*	.120**	-.077*	-.030	.050	.078*	.085*	-.059	-.116**	.045	1		
<b>CGSTDD</b>	.130**	-.162**	.154**	.094*	-.038	-.008	.075	.027	.100*	-.028	-.135**	.026	.531**	1	
<b>INDS</b>	.089*	.047	-.041	.194**	-.087*	-.161**	.045	.008	.063	-.026	.029	.037	.072	.080*	1

Note: \*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).PROBFL = Client probability of failure (z-score). SPECLS = Auditor specialization (1,0). TENURE = Auditor tenure. AUDFEE = Audit fee. MANINF = Management ownership. FAMINF = Family ownership. INSTINF = Institutional ownership. NON1STGC = Non first-timer GC opinion recipient (1,0). DEFULT = Debt default. AUDSIZE = Auditor size (1,0). CLTSIZE = Client size. AUSTDD = Auditing standard (1,0). CGSTDD = Corporate governance standard (1,0). INDS = Industries.

**Univariate Analysis**

This study used a t-test for continuous variables and a chi-square test for categorical variables to test between-group differences (independent groups of GC opinion recipients and non-GC opinion recipients). In this study, eight continuous variables were tested against the dependent variable GC opinion – TENURE, AUDFEE, MANINF, FAMINF, INSTINF, PROBFL, DEFULT and CLTSIZE. The result of the t-test is summarized below in Table 5:

Table 5 Univariate Tests for Continues Variables

Variable	Total sample (N = 644)		GC companies (N = 127)		Non-GC companies (N = 517)		GC companies VS Non-GC companies t-test	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	t-stat	p-value
TENURE	4.110	1.827	4.170	1.890	4.100	1.812	.401	.688
AUDFEE	154728.060	204695.890	167194.780	129795.652	151665.640	219206.923	.766	.444
MANINF	.180	.202	.156	.195	.188	.203	-1.642	.101
FAMINF	.231	.276	.203	.267	.235	.278	-1.169	.243
INSTINF	.082	.128	.063	.117	.079	.130	-1.230	.219
PROBFL	.480	2.979	-1.788	3.270	1.041	2.621	-9.061	.000
DEFULT	62.360	42.414	94.813	57.183	54.388	33.472	7.651	.000
CLTSIZE	389.030	1287.206	204.644	436.722	434.321	1416.935	-3.130	.002

Note: TENURE = Auditor tenure. AUDFEE = Audit fee. MANINF = Management ownership. FAMINF = Family ownership. INSTINF = Institutional ownership. PROBFL = Probability of client failure (z-score). DEFULT = Debt default. CLTSIZE = Client size.

As seen in the table above, no significant difference between GC opinion recipient and non-recipient groups has been detected for variable auditor tenure (TENURE), audit fee (AUDFEE), management ownership (MANINF), family ownership (FAMINF), and institutional ownership (INSTINF). The t-test result, however, shows that there are significant differences between groups of GC opinion compared to non-GC opinion recipients for three continuous control variables, namely, the probability of client failure (PROBFL), debt default (DEFULT), and client size (CLTSIZE). Specifically, for the variable client probability of failure (PROBFL), there is a significant difference in the Altman’s z-scores for GC opinion recipients (M=-1.788, SD=3.270) and non-GC opinion recipients (Mean =1.041, SD=2.621);  $t(167.873) = -9.061, p = 0.000$ . This shows that the group of GC recipients has a high probability of client failure compared to the group of non-GC opinion recipients. For DEFULT, there is a significant difference in the tendency of facing debt default for GC opinion clients (M = 94.8130, SD = 57.1829) and non-GC opinion clients (M = 54.3884, SD = 33.4724);  $t(147.848) = 7.651, p = 0.000$ . For CLTSIZE, GC opinion clients (M = 204.644, SD = 436.722) and non-GC

opinion clients ( $M = 434.321$ ,  $SD = 1416.935$ );  $t(615.376) = -3.130$ ,  $p = 0.002$ , and this shows that the GC recipients' group contains smaller companies compared to the non-GC recipients' group.

Six categorical variables were tested against the dependent variable GC opinion, and the result of the chi square test is summarized below:

Table 6 Univariate Tests for Dichotomous Variables

Variable				GC companies VS Non-GC companies	
	Total sample (N = 644)	GC companies (N = 127)	Non-GC companies (N = 517)	Chi square test	
	n (%)	n (%)	n (%)	Pearson chi square (df)	P
SPECLS	161 (25.0%)	28 (22.0%)	133 (25.7%)	.736 (1)	.391
NON1STGC	74 (11.5%)	65 (51.2%)	9 (1.7%)	245.039 (1)	.000
AUDSIZE	274 (42.5%)	49 (38.6%)	225 (43.5%)	1.017 (1)	.313
AUSTDD	290 (45.0%)	65 (51.2%)	225 (43.5%)	2.417 (1)	.120
CGSTDD	479 (74.4%)	109 (85.8%)	370 (71.5%)	10.879 (1)	.001
INDS	N/A	N/A	N/A	32.496 (6)	.000

Note: SPECLS = Auditor specialization (1,0). NON1STGC = Non first-timer GC opinion recipient (1,0). AUDSIZE = Auditor size (1,0). AUSTDD = Auditing standard (1,0). CGSTDD = Corporate governance standard (1,0). INDS = Industries.

As seen in Table 6, this study observed no association between the SPECLS and the GC opinion issuance,  $\chi^2(1) = 0.736$ ,  $p = 0.391$ . It shows that specialized auditors and non-specialized auditors did not differ in terms of tendency to issue a GC opinion to financially distressed companies. For the control variable non-first time GC opinion receiver (NON1STGC), the table shows that from the total sample of 644 companies, 74 companies or 11.5% were given a GC opinion by auditors in the year before the observed year. For GC companies, 65 out of 127 (51.2%) had received a GC opinion a year before and for the group of non GC opinion companies, 9 out of 517 companies (1.7%) had been given a GC opinion in the previous year. This study observed a strong association between the NON1STGC and the GC opinion issuance,  $\chi^2(1) = 245.039$ ,  $p = .000$ .

Two other control variables, namely, auditor size (AUDSIZE) and auditing standard (AUSTDD) were found to have no significant association with GC opinion issuance, at  $\chi^2(1) = 1.017$ ,  $p = .313$  and  $\chi^2(1) = 2.417$ ,  $p = .120$  respectively. For variable corporate governance standard (CGSTDD), however, there is a strong association between the variable with GC opinion issuance,  $\chi^2(1) = 10.879$ ,  $p = 0.001$ , suggesting that the rate of GC opinion issuance is significantly higher after the release of MCCG (2007) compared to the period before that. The variable industry (INDS) also shows a significant result,  $\chi^2(6) = 32.496$ ,  $p = 0.000$ . This indicates that auditors issue GC opinions to different industries at different rates.

### Results of the logistic regression

Table 7 below presents the results of the panel logistic regressions (random effect). The model presented in the table has a likelihood ratio of 290.068 ( $p > 0.01$ ) indicating that the model fits the data very well. The model is an acceptable one where the H-L test yielded an  $X^2(8)$  of 13.155 and is insignificant ( $p > 0.10$ ). The McFadden  $R^2$  for the model reported below it is 45.3 percent. The  $R^2$  is higher compared to a study on the moderation effect of auditor specialization on the direct relationship between auditor fee and GC opinion performed by Lim and Tan (2008), who obtained  $R^2 = 38.7\%$ .

Table 7 Panel Logistic Regression (Random Effect Model) Dependent Variable = GCOP, N = 644

Hypothesis and Variables	Predicted signs	Coefficient (z-statistic)	Prob.
Intercept	?	-5.024 (-6.537)	***
<b>Independent variables</b>			
H1 SPECLS	+	1.065 (1.566)	
H2 TENURE	+	0.245 (1.675)	*
H3 AUDFEE	+/-	1.90E-06 (1.308)	
MANINF	-	5.561 (2.605)	***
FAMINF	+	-2.765 (-1.934)	*
INSTINF	+	5.003 (1.189)	

Table 7 Cont.

<b>Moderating effect</b>			
H4 SPECLS*MANINF	-	-5.458 (-2.372)	**
H5 TENURE*MANINF	-	-1.299 (-2.554)	**
H6 AUDFEE*MANINF	-	1.04E-06 (0.212)	
H7 SPECLS*FAMINF	+	0.934 (0.667)	
H8 TENURE*FAMINF	+	0.754 (2.171)	**
H9 AUDFEE*FAMINF	+	-1.68E-06 (-0.443)	
H10 SPECLS*INSTINF	+	-2.470 (-0.811)	
H11 TENURE*INSTINF	+	-0.570 (-0.590)	
H12 AUDFEE*INSTINF	+	-1.01E-05 (-1.145)	
<b>Control variables</b>			
PROBFL	Nil	-0.491 (-4.213)	***
NON1STGC	+	3.591 (8.286)	***
DEFAULT	+	0.008 (2.051)	**
AUDSIZE	+	-0.185 (-0.435)	
CLTSIZE	-	-0.000 (-0.806)	
AUSTDD	+	-0.097 (-0.301)	
CGSTDD	+	1.000 (2.349)	**
INDS	+/-	0.045 (1.146)	
Likelihood Ratio Statistic ( <i>p</i> )		290.068 (0.000)	
McFadden R-squared		0.453	
H & L [ $X^2(8)$ ] ( <i>p</i> )		13.155 (0.107)	

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$  and \*  $p < 0.10$ . SPECLS = Auditor specialization (1,0). TENURE = Auditor tenure. AUDFEE = Audit fee. MANINF = Management ownership. FAMINF = Family ownership. INSTINF = Institutional ownership. AUDFEEX = Client probability of failure (z-score). NON1STGC = Non first-timer GC opinion recipient (1,0). DEFAULT = Debt default. AUDSIZE = Auditor size (1,0). CLTSIZE = Client size. AUSTDD = Auditing standard (1,0). CGSTDD = Corporate governance standard (1,0). INDS = Industries.

#### Objective 1 – Auditor Characteristics Association with GC Opinion Issuance (Hypothesis 2, 3 and 4)

The first objective of this study is to ascertain the impact of auditor characteristics in terms of specialization (SPECLS), tenure (TENURE), and fee (AUDFEE) on the issuance of a GC opinion. Table 7 shows that only TENURE has a significant positive relationship with GC opinion issuance at the 0.10 level, but with a z-statistic of 1.675 only, i.e., less than 2.000. The z-statistic is less than 2, i.e., the coefficient of the variable is seen as meaningless (LogisticRegressionAnalysis.com, 2013), thus showing that there is no support for Hypothesis 2. Unexpectedly, this study finds that SPECLS is not significant in predicting GC opinion issuance, and thus, Hypothesis 1 is not supported. This strengthens the previous literature's contention that regardless of the level of specialization, while all auditors might know that a company has a GC problem, other factors would alter their propensity to issue GC opinion. This finding is consistent with the discovery reported in Chiang et al. (2015) and Geiger and Raghunandan (2002b).

Table 7 also shows that AUDFEE is not significant in predicting GC opinion issuance; thus, there is no support for Hypothesis 3. This result is consistent with a number of previous studies (Callaghan et al., 2009; DeFond et al., 2002; Read, 2015). However, the finding that AUDFEE has no significant relationship with GC opinion issuance is inconsistent with Geiger and Rama (2003), who found a positive association between audit fee and GC opinion.

#### Objective 2 – Assess the Moderating Effect of Management, Family, and Institution on the Association between Auditor Characteristics and GC Opinion Issuance (Hypothesis 4 to Hypothesis 12)

The second objective of this study is to assess the moderating effect of the influence of management (MANINF), family (FAMINF), and institution (INSTINF) on the relationship between auditor characteristics and the auditor's decision to issue a GC opinion (GCOP). Hypotheses 4 to 6 are related to the moderating effect of management influence (MANINF) on the direct relationship between auditor characteristics (SPECLS, TENURE and AUDFEE) and GC opinion (GCOP). The coefficient for SPECLS\*MANINF is negative and significantly related to GCOP ( $z = -2.372$ ,  $p < 0.05$ ). The evidence is consistent with the prediction in Hypothesis 4.

The coefficient for TENURE\*MANINF is also negative and has a significant relationship with GCOP ( $z = 2.554$ ,  $p < 0.05$ ), showing support for Hypothesis 5. The result suggests that the possibility of a specialist auditor and a long tenure auditor issuing a GC opinion can be dampened by the level of management ownership. Management would not like an auditor to issue a GC opinion because such an opinion would negatively affect

the company's financial condition and consequently affect management's remuneration (see Callaghan et al., 2009). This evidence is in tandem with findings reported in Koh and Lee (2018). These researchers discovered that CEO conduct can affect the propensity of an auditor to issue a GC opinion. However, no support is seen for Hypothesis 6, as no significant relationship is found between AUDFEE\*MANINF and GC opinion.

Hypotheses 7 to 9 are related to the moderating effect of family influence (FAMINF) on the direct relationship between auditor characteristics (SPECLS, TENURE and AUDFEE) and GC opinion (GCOP). Table 7 shows that only the coefficient of interaction between auditor tenure and family ownership (TENURE\*FAMINF) is positive, and it is significantly related to GC opinion issuance ( $z = 2.171, p < 0.05$ ), indicating that Hypothesis 8 is supported. The result shows that the positive relationship between TENURE and GC opinion can be strengthened by the level of family ownership. The result suggests that the presence of a high level of family ownership is associated with the high possibility of an auditor with longer tenure issuing a GC opinion. The coefficients of interaction between auditor specialization and family ownership (SPECLS\*FAMINF) and audit fee and family ownership (AUDFEE\*FAMINF) are not significant in predicting GC opinion issuance. Thus, there is no support for Hypothesis 7 and Hypothesis 9 respectively. This means that a dominant family has no influence over the probability that (i) an auditor that is specialized or not and (ii) an auditor that charges a high or a low fee would issue a GC opinion.

Hypotheses 10 to 12 are related to the moderating effect of institutional influence (INSTINF) on the direct relationship between auditor characteristics (SPECLS, TENURE and AUDFEE) and GC opinion (GCOP). The coefficients of SPECLS\*INSTINF, TENURE\*INSTINF and AUDFEE\*INSTINF have no significant relationship with GCOP, and these show no support for Hypothesis 10, Hypothesis 11, or Hypothesis 12 respectively. Malaysian institutional investors, which are mostly government-linked organizations (particularly Khazanah Holdings, Lembaga Tabung Haji and Employee Providence Fund), are not active control mechanisms and thus would not influence the GC opinion issuance. Several Malaysian empirical works on institutional ownership have found that institutional owners in this country have these characteristics. Wan Hussin et al., (2009) and Haniffa and Cooke (2002), for instance, found that the level of institutional ownership has no effect on the degree of compliance to compulsory accounting disclosure. In addition, Bamahros and Wan Hussin (2015) found recent evidence that for Malaysian companies, the percentage of institutional ownership has no positive association with discretionary accruals, indicating that institutional owners are not effective monitors of the accounting and auditing process.

### Other Independent Variables

To detect the moderating effect of MANINF, FAMINF, and INSTINF on the relationship between auditor characteristics and the issuance of GC opinion, one has to include these three ownership level variables in the regression model as independent variables (Kenny, 2015). Results presented in Table 7 show that MANINF has a positive relationship with GC opinion issuance ( $z = 2.605, p < 0.01$ ), but not FAMINF and INSTINF. This indicates that management is an influential party in an audit opinion issuance process. This is in contrast to the findings reported by Mohd Iskandar et al. (2011), who found that management ownership is negatively related to the issuance of GC opinion; however, this difference in findings might be due to Mohd Iskandar et al.'s study being a one-year cross sectional study with a smaller sample size.

### Control Variables

Table 7 also highlights the result of analysis on the relationship between GCOP (dependent variable) and eight control variables, namely, client probability of failure (PROBFL), non-first timer GC opinion recipient (NON1STGC), debt default (DEFAULT), auditor size (AUDSIZE), client size (CLTSIZE), newly issued auditing standard (AUSTDD), newly issued corporate governance code (CGSTDD), and industry (INDS). The results show that only the control variables PROBFL, NON1STGC, DEFAULT, and CGSTDD are significant and have positive signs. PROBFL is negative and significant at the 0.01 level ( $z = -4.213$ ). NON1STGC is positive and significant at the 0.01 level ( $z = 8.286$ ). The positive association between NON1STGC and GC opinion shows that a company would more likely be given a GC opinion by an auditor if it has been given such an opinion during the past financial year. DEFAULT and CGSTDD are also positively significant in predicting GC opinion albeit at the 5% level only ( $z = 2.051$  and  $z = 2.349$  respectively).

### **Robustness and Sensitivity Tests**

To test the credibility of the main findings, we reran the logistic regression test using an alternative proxy for the tested variable client size (CLTSIZE). The main findings reported in Table 7 used 'total revenue' as the proxy for CLTSIZE, but in this robustness test, the proxy used for the variable is 'total assets'. The result of this robustness test is consistent with the main findings as reported in Table 7 and supports Hypotheses 4 and 5 (see Appendix 1). The only disagreement is Hypothesis 8 whereby in the main findings, the hypothesis is supported, but in this robustness test, no such support can be detected. To be specific, the relationship between the variable moderating effect of family ownership on the relationship between auditor tenure and GC opinion issuance (TENURE\*FAMINF) is positive and significant as expected, but the z-statistic is less than 2, which shows that the coefficient of the variable is meaningless. The consistency between the main findings and the robustness test findings shows no indication that the main findings are not credible.

We also conducted a sensitivity analysis to examine whether the main findings are receptive to the effect of an economic downturn. The World Bank's records show that between 2006 to 2012 (the period covered by the sample of this study), Malaysia experienced negative GDP growth when the US sub-prime crisis occurred in 2009, i.e., at -1.514 percent (The World Economic Bank, 2016). We compared the results of analysis for (1) the period of economic downturn and after (i.e., 2009-2012) and (2) the main findings (2006-2012). Note that the CGSTDD control variable was excluded from the analysis of the 2009 to 2012 data because it had no variation in the period (the variable is defined as data on or after October 2007, i.e., the release of MCCG2007 = 1, else = 0). The inclusion of the variable would cause singular covariance, i.e., the coefficient is not unique, and hence, a logistic panel regression could not be run. We found that the result of data analysis during an economic downturn is almost identical to the result of the main analysis reported earlier in Table 7 (see Appendix 2). This indicates that (i) in the context of Malaysia, the predictors of GC opinion issuance are not sensitive to economic fluctuation, and (ii) the main findings reported in Table 7 are still valid and robust.

## **SUMMARY AND CONCLUSION**

In summary, in this study, 12 hypotheses have been tested using logistic regression. The first objective of the study is related to the testing of the relationship between three auditor characteristics (namely, specialization in Hypothesis 1, tenure in Hypothesis 2 and audit fee in Hypothesis 3) and the issuance of a GC opinion. The analysis produces no support for Hypotheses 1, 2, and 3, indicating that auditor characteristics are not the determinants of a GC opinion issuance in Malaysia. Objective 2 of the study is related to the assessment of the moderating effect of management (Hypotheses 4 to 6), family (Hypotheses 7 to 9), and institutional influence (Hypotheses 10 to 12) on the relationship between auditor characteristics and GC opinion issuance. The result of the logistic regression shows that there is evidence that management ownership impairs the relationship between auditor characteristics and GC opinion issuance (Hypotheses 4 and 5 are supported) whereas family ownership strengthens the relationship (Hypothesis 8 is supported), and, unexpectedly, institutional ownership has no effect on such a relationship (Hypotheses 10 to 12 are not supported). Robustness and sensitivity analyses have been conducted, and the results of these analyses show that the main finding of this study is credible and robust.

Overall, it can be concluded that the concern raised by FSRC of MIA and Zarinah Anwar of SEC Malaysia about there being a high number of financially distressed companies in Malaysia but only a few had received GC opinion is true. It is true because this study has found that auditors in this country issued a GC opinion to only around 20 percent of seriously financially distressed companies. It can also be concluded that in the context of Malaysia, auditor characteristics almost do not differentiate the possibility of GC opinion issuance, but pressure imposed by management, family, and institutions on the auditor during the audit opinion decision process - measured as the level of their ownership - does have an impact. These research findings partially support the agency theory explanation about the interaction between auditor and owners in the GC opinion issuance process.

Even though the current study is an advance compared to previous studies on the topic, it is limited by at least two restrictions. Firstly, there are several types of GC opinion, namely, unqualified (with an emphasis on matter), qualified, adverse, and disclaimer, but they are all treated as one in this research analysis (coded as GC opinion = 1, else = 0). The method of giving 1 and 0 value to all types of GC opinion and others respectively

has been criticized as simplistic (see Young and Wang, 2010) because it does not reflect the degree of seriousness of the GC problem. The only reason different types of audit opinions are not coded differently in this study is because certain types of GC opinion (particularly the disclaimer and adverse opinion) are rarely issued in Malaysia. Secondly, this study tests the effect of auditor specialization on the issuance of GC opinion, but not audit-team specialization and regional specialization because data related to these two concepts are not readily available. Audit-team specialization rather than firm specialization (Schroeder et al., 1986) and/or auditor specialization at a regional instead of at a national level could significantly predict GC opinion issuance (Cenker and Nagy, 2008).

The findings of this study have enriched the literature on GC opinion issuance, but the research approach and topics that can be explored further in this area are far from exhaustive. Firstly, this research can be extended by using a qualitative research paradigm and method. This will enable us to understand in greater depth the process behind a GC opinion issuance decision. Secondly, future studies should expand to explore the effect of other predictors of GC opinion issuance (e.g., client age and control environment). Furthermore, some predictor variables in this study can be tested further by refining the research design. For instance, for auditor tenure, a smaller unit of analysis can be used, i.e., future research can test the impact of audit partner tenure instead of audit firm tenure. Thirdly, the accuracy of the GC opinion issuance and its outcomes (e.g., funding difficulties and client operational failure) should also be explored.

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### REFERENCES

- Abbott, L. J. and Parker, S. (2000), "Auditor selection and audit committee characteristics", *Auditing: A Journal of Practice & Theory*, Vol. 19 No.2, pp. 47-66.
- Abdul Wahab, E. A., Mat Zain, M. and Abdul Rahman, R. (2013), "Political connections, fees paid to auditors and auditor independence in Malaysia: evidence from going concern audit opinion", *International Journal of Accounting, Auditing and Performance Evaluation*, Vol. 9 No. 2, pp. 153-183.
- Abdul Wahab, E. A., Mat Zain, M. and James, K. (2011), "Audit fees in Malaysia: Does corporate governance matter?", *Asian Academy of Management Journal of Accounting and Finance*, Vol. 7 No. 1, pp. 1-27.
- Accountants Today (December 2009), Financial reporting: Concern over 'Going concern'?, pp. 18-21.
- Accountants Today (February 2007), Wake-up call, pp. 10-16.
- Accountants Today (May or June 2012), Upholding financial reporting quality, pp. 22-26.
- Accountants Today (November 2010), Financial Statements Review Committee (FSRC) key observations, pp. 26-30.
- Accountants Today (November, 2009), Lessons from deficient disclosure, pp. 14-17.
- Amin, K., Krishnan, J. and Yang, J. S. (2014), "Going concern opinion and cost of equity", *Auditing: A Journal of Practice & Theory*, Vol. 33 No. 4, pp. 1-39.
- Anderson, D., Sweeney, D. and Williams, T. (1996). *Statistics for business and economics* (6th ed.): West Publishing Co.
- Anwar, Z. (2004), *The future of capital markets-evolving challenges for the Malaysian accounting profession*. Speech by Deputy Chief Executive, Securities Commission. 46th MICPA Anniversary Commemorative Lecture, 2 December, 2007. Renaissance Hotel. Available at: <http://www.sc.com.my>.
- Anwar, Z. (2007), Speech by Chairman of Securities Commission at the Malaysian Institute of Accountant Launching of Financial Reporting Standard Implementation Committee, 30 January, 2007, Available at: <http://www.sc.com.my>.
- Asare, S. K. (1990), "The auditor's going-concern decisions: A review and implications for future research", *Journal of Accounting Literature*, Vol. 9, pp. 39-64.



- Asia One Business News (2015), Deloitte yet to audit 1MDB's financial year Retrieved November 18, 2015, from <http://business.asiaone.com/news/deloitte-yet-audit-1mdb%E2%80%99s-financial-year>
- Ballesta, J. P. S. and Garcia-Meca, E. (2005), "Audit qualifications and corporate governance in Spanish listed firms", *Managerial Auditing Journal*, Vol. 20 No. 7, pp. 725-738.
- Balsam, S., Krishnan, J. and Yang, J. (2003) "Auditor industry specialization and earnings quality", *Auditing: A Journal of Practice & Theory*, Vol. 22 No. September, pp. 71-97.
- Baltagi, B. (2001), *Econometric analysis of panel data* (2nd ed.), Chicester: John Wiley and Sons.
- Bamahros, H. M. and Wan Hussin, W. N. (2015), "Types of institutional investors and earnings management in Malaysia", *Advanced Science Letters*, Vol. 21 No. 6, pp. 2003-2006.
- Basioudis, I. G., Papakonstantinou, E. and Geiger, M. A. (2008), "Audit fees, non-audit fees and auditor going-concern reporting decisions in the United Kingdom", *ABACUS*, Vol. 44 No. 3, pp. 284-309.
- Behn, B. K., Kaplan, S. E. and Krumwiede, K. R. (2001), "Further evidence on the auditor's going-concern report: The influence of management plans", *Auditing: A Journal of Practice & Theory*, Vol. 20 No. 1, pp. 13-28.
- Berglund, N. R., Eshleman, J. D. and Guo, P. (2018), "Auditor Size and Going Concern Reporting", *Auditing: A Journal of Practice & Theory*, Vol. 37 No. 2, pp. 1-25.
- Bewick, V., Cheek, L. and Ball, J. (2005), "Statistic review 14: logistic regression". *Critical Care*, Vol. 9 No. 1, pp. 112-118.
- Blay, A. D. and Geiger, M. A. (2001), "Market expectations for first-time going-concern recipients", *Journal of Accounting, Auditing & Finance*, Vol. 17, pp. 209-226.
- Boone, J. P., Khurana, I. K. and Raman, K. (2010), "Do the big 4 and second-tier firms provide audits of similar quality?", *Journal of Accounting and Public Policy*, Vol. 29, pp. 330-352.
- Bursa Malaysia Securities Berhad (2009), Practice Note 17 - Criteria and obligation of PN17 companies, BMSB.
- Callaghan, J., Parkash, M. and Singhal, R. (2009), "Going-concern audit opinions and provision of nonaudit services: Implications for auditor independence of bankrupt firms", *Auditing: A Journal of Practice & Theory*, Vol. 28 No. 1, pp. 153-169.
- Carcello, J. V. and Nagy, A. L. (2004), "Client size, auditor specialization and fraudulent financial reporting", *Managerial Auditing Journal*, Vol. 19, pp. 651-668.
- Carcello, J. V. and Neal, T. L. (2003), "Audit committee characteristics and auditor dismissals following 'new' going-concern reports", *The Accounting Review*, Vol. 78 No. 1, pp. 95-117.
- Center, W. J. and Nagy, A. L. (2008), "Auditor resignations and auditor industry specialization", *Accounting Horizons*, Vol. 22 No. 3, pp. 279-295.
- Chau, G. & Leung, P. (2006). The impact of board composition and family ownership on audit committee formation: Evidence from Hong Kong. *Journal of Accounting, Auditing and Taxation*, 15, 1-15.
- Chen, K Y, & Elder, R J. (2001). Industry specialization and audit fees: The effect of industry type and market definition. Working Paper. National Cheng Kung University and Syracuse University.
- Chiang, H. T., Lin, S. L. and He, L. J. (2015), "Implications of auditor characteristics and directors' and officers' liability insurance for going-concern audit opinions: evidence from Taiwan", *International Business Research*, Vol. 8 No. 5, pp. 130-145.
- Citron, D. B. and Taffler, R. J. (2004), "The comparative impact of an audit report standard and an audit going-concern standard on going-concern disclosure rates", *Auditing: A Journal of Practice & Theory*, Vol. 23 No. 2, pp. 119-130.
- Citron, D. B., Taffler, R. J. and Uang, J. (2008), "Delays in reporting price-sensitive information: The case of going-concern", *Journal of Accounting and Public Policy*, Vol. 27, pp. 19-37.
- Craswell, A. T. (1988), "The association between qualified opinions and auditor switches", *Accounting and Business Research*, Vol. 19 No. Winter, pp. 23-31.

- DeFond, M. L., Raghunandan, K. and Subramanyam, K. R. (2002), "Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions", *Journal of Accounting Research*, Vol. 40 No. 4, pp. 1247-1274.
- Firth, M., Oliver, M. and Wu, X. (2012), "How do various forms of auditor rotation affect audit quality? Evidence from China", *The International Journal of Accounting*, Vol. 47 No. 1, pp. 109-138.
- Francis, J. (1984), "The effect of audit firm size on audit prices: A study of the Australian market", *Journal of Accounting and Economics*, Vol. August.
- Francis, J. and Simon, D. (1987), "A test of audit pricing in the small-client segment of the US audit market", *Accounting Review*, Vol. January.
- Garcia-Blandon, J. and Argiles, J. M. (2015), "Audit firm tenure and independence: a comprehensive investigation of audit qualifications in Spain", *Journal of International Accounting, Auditing and Taxation*, Vol. 24, pp. 82-93.
- Geiger, M. A. and Raghunandan, K. (2002a), "Auditor tenure and audit reporting failure", *Auditing: A Journal of Practice & Theory*, Vol. 21 No. 1, pp. 67-78.
- Geiger, M. A. and Raghunandan, K. (2002b), "Going-concern opinions in the "new" legal environment", *Accounting Horizons*, Vol. 16 No. 1, pp. 17-26.
- Geiger, M. A. and Rama, D. V. (2003), "Audit fees, nonaudit fees, and auditor reporting on stressed companies", *Auditing: A Journal of Practice & Theory*, Vol. 22 No. 2, pp. 53-69.
- Geiger, M. A., Raghunandan, K. and Rama, D. V. (1998), "Costs associated with going-concern modified audit opinions: An analysis of audit changes, subsequent opinions, and client failures", *Advances in Accounting*, Vol. 16, pp. 117-139.
- Gujarati, D. N. (2003), *Basic econometrics* (4th ed.), New York: McGraw-Hill Higher Education.
- Haniffa, R M, & Cooke, T E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *ABACUS*, 38(3), 317-349.
- Hosmer Jr, D. W., Lemeshow, S. and Sturdivant, R. X. (2013), *Applied logistic regression* (3rd ed.), New Jersey: Wiley.
- International Federation of Accountants (2010), ISA 570, Going Concern. Kuala Lumpur: Malaysian Institute of Accountants.
- International Federation of Accountants (2015), ISA 570, Going Concern (Revised), Kuala Lumpur: Malaysian Institute of Accountants.
- Ji, G. and Lee, J. E. (2015), "Managerial overconfidence and going-concern modified audit opinion", *The Journal of Applied Business Research*, Vol. 31 No. 6, pp. 2123-2138.
- Johl, S, Jubb, C A, & Houghton, K A. (2007). Earnings management and the audit opinion: Evidence from Malaysia. *Managerial Auditing Journal*, 22(7), 688-715.
- Junaidi, J. H., Miharjo, S. and Hartadi, B. (2012), "Does auditor tenure reduce audit quality?", *Gadjah Mada International Journal of Business*, Vol. 14 No. 3, pp. 303-315.
- Kane, G. D. and Velury, U. (2002), "The role of institutional ownership in the markets for auditing services: An empirical investigation", *Journal of Business Research*, pp. 1-8.
- Karaca-Mandic, P., Norton, E. C. and Dowd, B. (2012), "Interaction terms in nonlinear models", *HSR: Health Services Research*, Vol. 47 No. 1, pp. 255-274.
- Kausar, A., Taffler, R. J. and Tan, C. E. L. (2015), "Legal regimes and investor response to the auditor's going concern opinion", *Journal of Accounting, Auditing & Finance*, pp. 1-33.
- Kenny, D. A. (2015), Moderator variables: introduction, Retrieved from <http://davidakenny.net/cm/moderation.htm>
- Kida, T. (1980), "An investigation into auditors' continuity and related qualification judgments", *Journal of Accounting Research*, Vol. 18 No. 2, pp. 506-523.
- Knechel, R. W. and Vanstraelen, A. (2007), "The relationship between auditor tenure and audit quality implied by going concern opinions", *Auditing: A Journal of Practice & Theory*, Vol. 26 No. 1, pp. 113-131.

- Koh, W. and Lee, K. (2017), "Do auditors recognize managerial risk-taking incentives?", *International Journal of Business*, Vol. 22 No. 3, pp. 206-229.
- Kothari, S. P., Shu, S. and Wysocki, P. D. (2009), "Do managers withhold bad news?", *Journal of Accounting Research*, Vol. 47 No. 1, pp. 241-276.
- Krishnan, G. (2003), "Does Big 6 auditor industry expertise constrain earnings management?", *Accounting Horizons*, Vol. 17 No. Supplement, pp. 1-16.
- Lafond, R., & Roychowdhury, S. (2008). Managerial ownership and accounting conservatism. *Journal of Accounting Research*, 46(1), 101-135.
- Lai, K. W. (2009), "Audit opinion and disclosure of audit fees", *Journal of Accounting, Auditing & Finance*, Vol. 24 No. 1, pp. 91-114.
- Li, C. (2009). Does client importance affect auditor independence at the office level? Empirical evidence from going-concern opinion. *Contemporary Accounting Research*, 26(1), 201-230.
- Lim, C. Y. and Tan, H. T. (2008), "Non-audit service fees and audit quality: The impact of auditor specialization, *Journal of Accounting Research*, Vol. 46 No. 1, pp. 199-246.
- LogisticRegressionAnalysis.com (2013), What are Z-Values in Logistic Regression?, Retrieved December 15, 2015, from <http://logisticregressionanalysis.com/1577-what-are-z-values-in-logistic-regression/>
- Loudder, M. L., Khurana, I. K., Sawyers, R. B., Cordery, C., Johnson, C., Lowe, J. et al. (1992), "The information content of audit qualification", *Auditing: A Journal of Practice & Theory*, Vol. 11 No. 1, pp. 69-82.
- Masyitoh, O C, & Adhariani, D. (2010). The analysis of determinants of going concern audit report. *Journal of Modern Accounting and Auditing*, 6(4), 26-37.
- Mayhew, B W, & Wilkins, M S. (2003). Audit firm industry specialization as a differentiation strategy: Evidence from fees charged to firms going public. *Auditing: A Journal of Practice & Theory*, 22(2), 33-52.
- Md. Ali, A, Sahdan, M H, Harun Rasit, M H, & Teck, H L. (2008). Audit specialisation in Malaysia. *International Journal of Business and Management*, 3(3), 91-99.
- Minutti-Meza, M. (2013), "Does auditor industry specialization improve audit quality?", *Journal of Accounting Research*, Vol. 51 No. 4, pp. 779-817.
- Mohd Iskandar, T, Rahmat, M M, Mohd Noor, N, Mohd Saleh, N, & Ali, M J. (2011). Corporate governance and going concern problems: evidence from Malaysia. *International Journal of Corporate Governance*, 2(2), 119-139.
- Mutchler, J. F. (1985), "A multivariate analysis of the auditor's going-concern opinion decision", *Journal of Accounting Research*, Vol. 23 No. 2, pp. 668-682.
- Mutchler, J. F. (1986), "Empirical evidence regarding the auditor's going-concern opinion decision, *Auditing: A Journal of Practice & Theory*, Vol. 6 No. 1, pp. 148-163.
- Mutchler, J. F., Hopwood, W. and McKeown, J. (1997), "The influence of contrary information and mitigating factors on audit opinion decisions on bankrupt companies", *Journal of Accounting Research*, Vol. 35 No. 2, pp. 295-310.
- O'Keefe, T. B., Kin, R. D. and Gaver, K. M. (1994), "Audit fees, industry specialization, and compliance with GAAS reporting standards", *Auditing: A Journal of Practice & Theory*, Vol. 13, pp. 41-55.
- Osman, M. N. H., Turmin, S. Z., Muhamad, H. and Hussain, R. (2016), "Auditor characteristics and the issuance of going concern opinion", *International Business Management*, Vol. 10 No. 17, pp. 3733-5250.
- Owhoso, V. E., Messier, W. F., and Lynch, J. G. (2002), "Error detection by industry-specialized teams during sequential audit review", *Journal of Accounting Research*, Vol. 40, pp. 883-900.
- Peng, C. Y., Lee, K. L. and Ingersoll, G. M. (2002), "An introduction to logistic regression analysis and reporting", *The Journal of Educational Research*, Vol. 96 No. 1, pp. 3-14.
- Raed, W. J., and Yezegel, A. (2018), "Going-concern opinion decisions on bankrupt clients: Evidence of long-lasting auditor conservatism?", *Advances in Accounting*, pp. 20-26.

- Read, W. J. (2015), "Auditor fees and going-concern reporting decisions on bankrupt companies: additional evidence", *Current Issues in Auditing*, Vol. 9 No. 1, pp. A13-A27.
- Reynolds, J. and Francis, J. (2001), "Does size matter? The influence of large clients on office-level auditor reporting decisions", *Journal of Accounting and Economics*, Vol. 30, pp. 375-400.
- Ryu, T. G., Uliss, B. and Roh, C. (2009), "The effect of the Sarbanes-Oxley Act on auditors' audit performance", *Journal of Finance and Accountancy*, Vol. 1 No. August, pp. 1-7.
- Sarkar, S. K., Midi, H. and Rana, S. (2011), "Detection of outliers and influential observations in binary logistic regression: An empirical study", *Journal of Applied Sciences*, Vol. 11 No. 1, pp. 26-35.
- Schroeder, M. S., Solomon, I. and Vickrey, D. (1986), "Audit quality: The perceptions of audit committee chairpersons and audit partners", *Auditing: A Journal of Practice & Theory*, Vol. 5 No. 2, pp. 86-94.
- Shafie, R., Md. Yusof, M. A. and Md Hussain, M. H. (2004), *Laissez-fair or mandatory auditor rotation: The case of audit firm tenure and audit firm switching*, Paper presented at the Fourth Asia Pacific Interdisciplinary Research in Accounting Conference, Singapore.
- Shafie, R., Wan Hussin, W. N., Md. Yusof, M. A. and Md Hussain, M. H. (2009), "Audit firm tenure and auditor reporting quality: Evidence in Malaysia", *International Business Research*, Vol. 2 No. 2, pp. 99-109.
- Sharma, D S, & Sidhu, J. (2001). Professionalism vs commercialism: The association between non-audit services (NAS) and audit independence. *Journal of Business Finance & Accounting*, 28(5), 595-629.
- Simunic, D. (1984). Auditing, consulting, and auditor independence. *Journal of Accounting Research*(Autumn), 679-702.
- Simunic, D. (1980), "The pricing of audit services: Theory and evidence", *Journal of Accounting Research*, Vol. Spring.
- Solomon, I., Shields, M. and Whittington, R. (1999), "What do industry-specialist auditor know?", *Journal of Accounting Research*, Vol. 37, pp. 191-208.
- Tepalagul, N. and Lin, L. (2015), "Auditor independence and audit quality: a literature review", *Journal of Accounting, Auditing & Finance*, Vol. 30 No. 1, pp. 101-121.
- Thai, S. B., Goh, H. H., Teh, B. H., Wong, J. C. and Ong, T. S. (2014), "A revisited of altman z-score model for companies listed in Bursa Malaysia", *International Journal of Business and Social Science*, Vol. 5 No. 12, pp. 197-120.
- The Star Online (2015), 1MDB's RM13.4bil assets had been tested and at fair value, *The Star Online* Retrieved November 18, 2015, from <http://www.thestar.com.my/Business/Business-News/2015/06/10/Deloitte-stands-by-No-going-concern-on-1MDB-for-financial-year-2014/?style=biz>
- The World Economic Bank (2016), GDP growth (annual %) Retrieved October 26, 2016, 2016, from <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2012&locations=MY&start=2006>
- Vanstraelen, A. (1999), "The auditor's going concern opinion decision: A pilot study", *International Journal of Auditing*, Vol. 3, pp. 41-57.
- Vanstraelen, A. (2000). Impact of renewable long-term audit mandates on audit quality. *The European Accounting Review*, 9(3), 419-422.
- Wan Abdullah, W. Z., Ismail, S. and Jamaluddin, N. (2008), "The impact of board composition, ownership and CEO duality on audit quality: The Malaysian evidence", *Malaysian Accounting Review*, Vol. 7 No. 2, pp. 17-28.
- Williams, D. D. (1988), "The potential determinants of auditor change", *Journal of Business Finance & Accounting*, Vol. 15 No. 2, pp. 243-261.
- Young, A. and Wang, Y. (2010), "Multi-risk level examination of going concern modifications", *Managerial Auditing Journal*, Vol. 25 No. 8, pp. 756-791.

**APPENDIX**

APPENDIX 1 Panel Logistic Regression (Random Effect Model) Dependent Variable = GCOP, N = 644 - NY

Hypothesis and Variables	Predicted signs	Coefficient (z-statistic)	Prob.
Intercept	?	-5.017 (-6.399)	***
<b>Independent variables</b>			
H1 SPECLS	+	1.011 (1.631)	
H2 TENURE	+	0.256 (1.852)	*
H3 AUDFEE	+/-	1.64E-06 (1.041)	
MANINF	-	5.642 (2.160)	**
FAMINF	+	-2.636 (-1.361)	
INSTINF	+	5.341 (1.464)	
<b>Moderating effect</b>			
H4 SPECLS*MANINF	-	-5.049 (-2.104)	**
H5 TENURE *MANINF	-	-1.369 (-2.485)	**
H6 AUDFEE*MANINF	-	1.16E-06 (0.204)	
H7 SPECLS*FAMINF	+	0.832 (0.575)	
H8 TENURE*FAMINF	+	0.740 (1.886)	*
H9 AUDFEE*FAMINF	+	-2.29E-06 (-0.502)	
H10 SPECLS*INSTINF	+	-2.954 (-0.808)	
H11 TENURE*INSTINF	+	-0.569 (-0.809)	
H12 AUDFEE*INSTINF	+	-1.25E-05 (-1.322)	
<b>Control variables</b>			
PROBFL	Nil	-0.500 (-5.241)	***
NON1STGC	+	3.613 (8.158)	***
DEFAULT	+	0.007 (2.179)	**
AUDSIZE	+	-0.200 (-0.470)	
CLTSIZE (TA)	-	1.07E-07 (0.660)	
AUSTDD	+	-0.122 (-0.372)	
CGSTDD	+	0.991 (2.271)	**
INDS	+/-	0.046 (1.186)	
Likelihood Ratio Statistic (p)		290.106 (0.000)	
McFadden R-squared		0.454	
H & L [ $\chi^2(8)$ ] (p)		6.268 (0.617)	

Note: \*\*\* p < 0.01, \*\* p < 0.05 and \* p < 0.10. SPECLS = Auditor specialization (1,0). TENURE = Auditor tenure. AUDFEE = Audit fee. MANINF = Management ownership. FAMINF = Family ownership. INSTINF = Institutional ownership. AUDFEEX = Client probability of failure (z-score). NON1STGC = Non first-timer GC opinion recipient (1,0). DEFAULT = Debt default. AUDSIZE = Auditor size (1,0). CLTSIZE = Client size. AUSTDD = Auditing standard (1,0). CGSTDD = Corporate governance standard (1,0). INDS = Industries.

APPENDIX 2 The Period of Economic Downturn vs. the Main Findings

Hypothesis and Variables	Predicted signs	2009 and after		Main analysis (from Table 4.5)	
		Coefficient (z-statistic)	Prob.	Coefficient (z-statistic)	Prob.
Intercept	?	-4.968 (-4.539)	***	-5.024 (-6.537)	***
<b>Independent variables</b>					
H1 SPECLS	+	1.325 (1.496)		1.065 (1.566)	
H2 TENURE	+	0.321 (1.787)	*	0.245 (1.675)	*
H3 AUDFEE	+/-	1.54E-06 (0.756)		1.90E-06 (1.308)	
MANINF	-	6.497 (2.000)	**	5.561 (2.605)	***
FAMINF	+	-3.111 (-1.276)		-2.765 (-1.934)	*
INSTINF	+	1.957 (0.329)		5.003 (1.189)	
<b>Moderating effect</b>					
H4 SPECLS*MANINF	-	-6.199 (-1.715)	*	-5.458 (-2.372)	**
H5 TENURE *MANINF	-	-1.681 (-2.458)	**	-1.299 (-2.554)	**
H6 AUDFEE*MANINF	-	6.17E-06 (0.813)		1.04E-06 (0.212)	
H7 SPECLS*FAMINF	+	-0.655 (-0.317)		0.934 (0.667)	
H8 TENURE*FAMINF	+	1.051 (2.187)	**	0.754 (2.171)	**
H9 AUDFEE*FAMINF	+	-3.97E-06 (-0.695)		-1.68E-06 (-0.443)	
H10 SPECLS*INSTINF	+	-0.468 (-0.077)		-2.470 (-0.811)	
H11 TENURE*INSTINF	+	-0.557 (-0.469)		-0.570 (-0.590)	
H12 AUDFEE*INSTINF	+	-5.84E-06 (-0.455)		-1.01E-05 (-1.145)	
<b>Control variables</b>					
H1 AUDEXF	Nil	-0.599 (-4.106)	***	-0.491 (-4.213)	***
NON1STGC	+	3.503 (6.339)	***	3.591 (8.286)	***
DEFAULT	+	0.014 (2.331)	**	0.008 (2.051)	**
AUDSIZE	+	-0.691 (-1.175)		-0.185 (-0.435)	
CLTSIZE	-	-0.000 (-0.799)		-0.000 (-0.806)	
AUSTDD	+	0.037 (0.087)		-0.097 (-0.301)	
CGSTDD	+	N/A		1.000 (2.349)	**
INDS	+/-	0.086 (1.661)	*	0.045 (1.146)	
Likelihood Ratio Statistic		216.360 (0.000)		290.068 (0.000)	
McFadden R-squared		0.518		0.453588	
H & L [ $\chi^2(8)$ ] (p)		7.942 (0.439)		13.155 (0.107)	
Total observation		388 (GC opinion = 89, else = 299)		644 (GC opinion = 127, else = 517)	

Note: \*\*\* p < 0.01, \*\* p < 0.05 and \* p < 0.10. SPECLS = Auditor specialization (1,0). TENURE = Auditor tenure. AUDFEE = Audit fee. MANINF = Management ownership. FAMINF = Family ownership. INSTINF = Institutional ownership. AUDFEEX = Client probability of failure (z-score). NON1STGC = Non first-timer GC opinion recipient (1,0). DEFAULT = Debt default. AUDSIZE = Auditor size (1,0). CLTSIZE = Client size. AUSTDD = Auditing standard (1,0). CGSTDD = Corporate governance standard (1,0). INDS = Industries.