

International Consistency in Audit Reporting Behaviour: Evidence from Going Concern Modifications

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ABSTRACT: In the wake of increased globalisation, regulators have taken actions to harmonise accounting and auditing standards. These actions have been based on the premise that uniform standards will result in uniform application of these standards across national boundaries and firms, and, unless there is any evidence to the contrary, this would be the expectation of both regulators and financial statement users. This study is one of the first to provide such evidence by empirically investigating whether there is consistency in the application of auditing standards across countries, between audit firms and over time. The study uses a sample of 11,798 financially distressed firms from the United States, the United Kingdom and Australia for the years 2001 to 2006. By evaluating the auditors' reporting behaviour with respect to going concern modifications, the results indicate that there is a lack of consistency in audit reporting behaviour across countries. This lack of consistency is found to be moderated by international audit firm networks, demonstrating an advantage of these networks beyond the individual firm. The study also shows that the country differences in audit reporting behaviour have reduced over time. The implications of these findings for financial statement users, audit firms and regulators are considered.

Keywords: International harmonisation; audit reporting behaviour; going concern opinions

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1. Introduction

A sound financial reporting system contributes to economic development and is supported by strong governance, high quality standards, and strong regulatory frameworks. High quality auditing and ethics underpin the trust that investors place in financial and non-financial information and play an integral role in contributing to economic growth and financial stability at both domestic and international levels (Wong 2004). The forces of globalisation have prompted more countries to open their doors to foreign investments and as the businesses themselves expand across borders¹, maintaining a narrow national view of financial reporting and auditing is considered no longer sustainable (Ball 2005; Nobes and Parker 2006; Camfferman and Zeff 2007). Academics, practitioners, regulatory bodies, politicians, investors as well as public and private sector, domestic and international firms are increasingly advocating the benefits² of having a widely accepted and commonly understood financial reporting framework supported by strong globally accepted auditing standards. In this context, the International Federation of Accountants (IFAC) and the International Auditing and Assurance Standards Board (IAASB) have played an important role in the promotion of a high quality global audit profession through the development of International Standards on Auditing (ISAs). Over a hundred countries now either claim to be using ISAs, or are in the process of implementing them into their national auditing standards (IFAC 2008a). Yet, there are still potential impediments to the adoption and implementation of globally consistent auditing standards (Hegarty et al. 2004).³

While auditing standards are harmonised in over 100 countries (that is, *de jure* harmonisation), there are the issues to be considered regarding harmonisation of audit practices of corporations and audit firms within a given auditing framework (namely,

¹ As evidenced by an increase in number of foreign listings on the world's largest stock exchanges as well as an increasing number of companies observed to provide their annual report in more than one language (Megginson and Sutter 2005; Nobes and Parker 2006).

² The argued benefits of a global financial reporting framework are numerous and include: greater comparability of financial information for investors; greater willingness on the part of investors to invest across borders; more efficient allocation of resources; lower cost of capital; easier to fulfil foreign listing requirement; easier consolidation and auditing of multinational companies; and, higher economic growth (Wong 2004; Nobes and Parker 2006).

³ The World Bank's "Reports on the Observance of Standards and Codes" (ROSC) program highlights issues which include inconsistencies between international standards and the domestic legal framework, the lack of appropriate linkages between general purpose financial reporting and regulatory reporting, inappropriate scope of the use of international standards, and the non-observability of preparer or auditor compliance with standards (Hegarty et al. 2004).

de facto harmonisation). But despite numerous studies on audit reporting behaviour, audit quality and on harmonisation of accounting practices (see Francis 2004; Baker and Barbu 2007), no identified empirical research has been conducted which examines whether international auditing standards are inconsistently applied or interpreted.

From the point of comparative financial reporting, international accounting standards are meaningless without consistent international auditing standards. In turn, international auditing standards are futile if there is not uniform and consistent application of those international audit standards between countries, audit firms and auditors. Without some empirical indication or measurement of the degree to which audit behaviour has become uniform given the same requirements in auditing standards, it becomes inherently difficult for policy makers to objectively evaluate the success, or otherwise, of their desire to achieve consistency, and to identify where their efforts should be concentrated in the future (Pierce and Weetman 2000). From the perspective of a user of financial statements, harmonisation of auditing practice will be achieved when clients with similar circumstances are issued with the same audit report for similar underlying factors regardless of the period, or the auditor's firm or country of domicile. The expectation from international policies of harmonisation is that users of audited financial statements can expect consistent reporting behaviour under ISAs. However, it is currently not known whether consistent auditing standards (*de jure* harmonisation) will also result in consistent audit reporting behaviour (*de facto* harmonisation). If it does not, this will induce an expectation gap in that the financial statement users believe audit reporting behaviour to be consistent, when in reality it is not. Clearly, this will have the potential to undermine the benefits of international harmonisation of auditing.

It is possible that systematic differences in audit reporting behaviour may differ due to various reporting incentives occurring at the firm or country level. In particular, factors related to audit quality have been shown to vary between countries with different level of litigation risk, and absent reputational concerns, litigation risk provides incentives for both audit effort and truthful reporting (Melumad and Thoman 1990; Dye 1993; Schwartz 1997). In this sense, differences in litigation risk between countries may be a severe impediment to *de facto* harmonisation of auditing. On the

other hand, the effects of litigation risk on audit reporting behaviour may be moderated by international audit firm networks. The major international accounting firms have played a role in promoting the concept of consistent audit reporting behaviour around the world (Thomadakis 2008). Further, potential benefits arise from consistent audit reporting to international audit firm networks. First, it reduces moral hazard (Lenz and James 2007) by subjecting affiliates of the international audit firm networks to quality assurance that promotes consistent reporting behavior and protecting the reputation of the network. Second, economies of scale can be gained by the efficiencies that consistency of audit reporting brings when engaged in transnational audit appointments and transfers of staff between network members occur.

Using a sample of 11,798 observations over the period 2001 to 2006 from the United States, the United Kingdom and Australia, this study investigates the consistency of audit reporting behaviour across countries, between audit firms and over time. These countries have been chosen because they are consistent in culture and legal systems, and therefore represent a worst-case scenario for examining consistency in application of ISAs, and allow us to focus on litigation risk as a possible cause of inconsistency. The study shows that there are significant differences in auditor reporting behaviour between countries, but that these are not so prominent for auditors that are members of international networks, and that country differences have diminished over the time period examined. The findings are of importance to regulators, financial statement users and audit firms alike. The systematic lack of consistency in audit reporting behaviour across national boundaries is vital information for regulators, financial users, and the audit firms to act upon. Financial statement users, particularly in a global economy, have a fundamental interest in the extent of national differences of audit reporting behaviour. The results document recent advances in the harmonisation of audit reporting behaviour, but that future challenges lie with ensuring international consistency in audit reporting behaviour for audit firms that are not members of international audit networks.

The remainder of the paper is organised as follows. In Section 2, testable hypotheses are derived; in Section 3, the design and methodology used are described; in Section

4, the results of the study are detailed; and in Section 5, our conclusions from the research are presented.

2. Hypothesis development

Hwang and Carson (2008) report country differences in going concern modification rates. Within countries, changes in audit reporting behaviour have been shown to be related to changes in litigation risk over time (LaSalle and Anandarajan 1996; Geiger and Raghunandan 2001; 2002; 2005; Barns 2004; Blay 2005; Geiger et al. 2006; Myers et al. 2008). Prior studies document a positive relationship between a country's level of litigation risk and the associated ability to sue auditors with factors related to audit quality (Taylor and Simon 1999; Seetharama et al. 2002; Khurana and Raman 2004; Francis and Wang 2008; Choi et al. 2008). But there has been no research undertaken on the relationship between country litigation risk and audit reporting behaviour. In particular, we expect that the level of litigation risk in a country will be positively associated with the propensity to issue a going concern modification as prior research have shown that in the absence of litigation risk, the auditor would have little incentive to put in the necessary effort or to report truthfully absent reputational concerns (Dye 1993; Melumad and Thoman 1990). Consequently, we hypothesise that:

H1: The propensity to modify the audit opinion for going concern considerations is higher in countries with higher litigation risk.

The audit profession itself – through the Global Public Policy Symposium – has defined the leading international audit networks to consist of the current six largest audit firms (DiPiazza et al. 2006); that is, the Big 4 firms as well as BDO and Grant Thornton. LaSalle (2006) suggests that the highly concentrated market for auditing services could result in consistent auditor reporting behaviour across countries caused by similarities within the international audit firm networks, despite differences in litigation risk. Empirical evidence shows that audit firms that are affiliates of international networks have global similarities with regard to audit specialisation (Carson 2009). Further, in order to reduce moral hazard, the affiliates of international

audit firm networks⁴ are subject to quality assurance and internal quality reviews, share common methodology and practice rules because if network members do not adhere to the agreed quality standards, the reputation of the whole network is at stake (Lenz and James 2007; Thomadakis 2008). Their membership of the Forum of Firms also requires the consistent quality control over audit practices within the network irrespective of national borders (IFAC 2008b). In addition, significant economies of scale are to be gained by international audit firm networks by the efficiencies resulting from common audit processes on transnational audit appointments and staff transfers between network affiliates (Lenz and James 2007; Advisory Committee on the Auditing Profession 2008; Thomadakis 2008). Further, conditions that facilitate consistency *between* international audit firm networks have emerged as the members of the Forum of Firms are also committed to the use of International Standards on Auditing (ISAs), the IFAC Code of Ethics for Professional Accountants for transnational audits and the IAASB's International Standard on Quality Control. By way of contrast, smaller domestically located audit firms do not enjoy the inputs from an international audit firm network, nor do they engage in audits of large multinational corporations and are not under the stringent conditions imposed by Forum of Firms. Consequently and stated in the alternative:

H2: Country differences in the propensity to modify the audit opinion for going concern considerations are moderated by membership of international audit firm networks.

Several studies report that auditors in the United States have changed their audit reporting behaviour and become more likely to issue going concern opinions after 2001 (Geiger et al. 2006; Myers et al. 2008). Similarly, Fargher and Jiang (2009) show that auditors in Australia are more likely to issue going concern modifications in 2003 than in 1999. It is currently not known if this applies to other countries, but recent global events – such as a wave of corporate scandals across the world (e.g. Enron and WorldCom in the US, as well as OneTel and HIH Insurance in Australia),

⁴ The initial creation of these networks of affiliates in the early twentieth century was a response to a number of factors: the emergence of multi-national companies, different accounting and auditing standards and cultural environment, but among them, also differing legal regulations, (Klaassen and Buisman 2000; Lenz and James 2007). In today's environment, these audit firm networks of affiliates are arguably more prevalent and integrated than ever, even if for legal reasons the network agreements typically affirm the legal independence of each member firm (Lenz and James 2007; Advisory Committee on the Auditing Profession 2008).

the subsequent demise of Arthur Andersen; regulatory changes (e.g. SOX in the United States, CLERP 9 in Australia and the Companies Act 2004 in the United Kingdom); and, in late 2007 the subprime crisis – have transformed the global legal environment that auditors operate in and show that the matter of litigation is not unique to the United States. Further, recent commitments to harmonisation have ensured that currently more than 100 countries use or are in the process of adopting ISAs as issued by the IAASB. In addition, many of the world's major capital markets have come to accept the use of ISAs for foreign issuers, the international audit firm networks have become more prevalent and integrated (Lenz and James 2007; Advisory Committee on the Auditing Profession 2008), and the Forum of Firms (created 2002) has become more established with its members committed to the promotion of ISAs (IFAC 2008a). Consequently, country differences in auditor reporting behaviour are likely to have diminished over time, and this is tested by the following hypothesis:

H3: Country differences in propensity to modify the audit opinion for going concern considerations will diminish over the period 2001-2006.

Overall, our expectations are that the propensity to modify the audit report is directly associated with country litigation risk. However, we expect that cross country variations are moderated by type of audit firm and to have reduced over time.

3. Methodology

The auditor's report plays a critical role in warning market participants of a firm's ability to continue as a going concern and may take on added importance for international investors who potentially have limited access to information about foreign entities and thus rely heavily on published statements (Wood 1996; DeFond et al. 2002). Inherent to the issuance of a going concern modification is the subjective judgement on the auditor's part in evaluating and deciding the threshold at which the evidence becomes so negative as to warrant the inclusion of a going concern modification in the audit report (Levitan and Knoblett 1985). At the same time, such types of opinion should also not be a matter for negotiation between the auditor and the company (as distinct to mere disagreements with management, which can be

negotiated). In this respect, the issuance of going concern modifications is an appropriate frame to investigate consistency in audit reporting behaviour.

Hopwood et al. (1994) suggest that investigations of auditor reporting behaviour with respect to going concern opinion decisions should be conducted on samples that have been partitioned into stressed and non-stressed categories because auditors' decision processes are different for stressed and non-stressed companies. Consistent with this, and in line with prior research (e.g. Behn et al. 2001; DeFond et al. 2002; Geiger and Rama 2003; Carey and Simnett 2006), the sample is restricted to financially distressed firms. Financially distressed firms are defined as firms with a current year loss⁵. The sample is limited to three countries: Australia, the United Kingdom and the United States. These countries, for all practical purposes, have identical audit requirements with respect to the auditor's going concern evaluation and subsequent reporting decision (See Appendix), and the annual financial statements are prepared on the premise that organisations will continue operations as a going concern. However, these countries differ with respect to levels of litigation risk. In particular, the United States has been shown to have a higher litigation risk than the United Kingdom and Australia⁶ making it possible to investigate the effect of litigation risk on audit reporting behaviour (Wingate 1997; Baginski et al. 2002; Seetharaman et al. 2002; Khurana and Raman 2004). Thus, the United States is used as the benchmark as to whether litigation risk impacts audit reporting behaviour. The similarities in the institutional environments of these three countries strengthen the internal validity of the analysis.⁷ Six years of data were obtained for the time period 2001 to 2006. A total of 12,267 firm-year observations fit the criteria of reporting a current year loss and having sufficient financial statement and audit reporting data available to run the

⁵ How distressed firms are operationalised within the literature varies. For example, some papers (e.g. DeFond et al. 2002; Carey and Simnett 2006) use one or two characteristics – e.g. loss and/or negative cash flow – other papers (e.g. Krishnan and Krishnan 1996; Fargher and Jiang 2009) use a distress or bankruptcy prediction model in order to identify the sample of distressed firms. To the extent that both methods identify distressed firms, the sample selection criteria should be invariant to the inferences drawn from the paper as the sample stratification is exogenous.

⁶ Wingate (1997) reports an insurer assessed litigation index for the United States of 15, and for both the United Kingdom and Australia of 10.

⁷ These three countries are all English speaking and issue their respective auditing standards in English, all have a common law legal system, and all three have developed economies with well established capital markets and an entrenched auditing profession that play a similar economic role. Consequently, any findings related to country differences across these three countries is not *because* of different languages, legal systems, varying importance of the audit profession and capital markets, but *despite* these factors. In other words, it reduces the impact of any omitted variable bias that results from structural differences between these three countries on the statistical inference and consequently strengthens the internal validity of the study.

model specified below. Of these, 469 were financial firm-year observations and were excluded.⁸ The final sample consists of 11,798 observations⁹ and of these 863 (7.3%) contain going concern modifications to the audit report for the first time and 1,992 (16.9%) are recurring going concern modifications. There are 2,981 (25.3%) observations from Australia, 2,204 (18.5%) observations from the United Kingdom and the United States is represented with 6,633 (56.2%) observations.¹⁰

Following prior literature – (see e.g. Menon and Schwartz 1987; Mutchler and Williams 1990; Bell and Tabor 1991; Chen and Church 1992; Hopwood et al. 1994; Carcello et al. 1995; Mutchler et al. 1997; Carcello et al. 2000; Carcello and Neal 2000; Behn et al 2001; Geiger and Raghunandan 2002; DeFond et al. 2002; Carey and Simnett 2006) – this study will use the following logit model to test the hypotheses set forth:

$$\text{OPINION} = \beta_0 + \beta_1 \text{PBANK} + \beta_2 \text{SIZE} + \beta_3 \text{LEV} + \beta_4 \Delta \text{LEV} + \beta_5 \text{CURRENT} + \beta_6 \text{WC} + \beta_7 \text{QUICK} + \beta_8 \text{ROA} + \beta_9 \text{MATERIALS} + \beta_{10} \text{INFOTECH} + \beta_{11} \text{LLOSS} + \beta_{12} \text{NEGEQUITY} + \beta_{13} \text{LOPINION} + \beta_{14} \text{COUNTRY} + \beta_{15} \text{AUDITFIRM} + \beta_{16} \text{TIME} + \varepsilon$$

Where:

OPINION = 1 if a firm receives a GC modified opinion, 0 otherwise

PBANK = the Zmijewski (1984) score measuring the probability of bankruptcy

SIZE = the natural logarithm of year end total assets in USD millions (where necessary using end of year exchange rates)

LEV = end of year total liabilities divided by end of year total assets

Δ LEV = end of year leverage divided by beginning of year leverage minus 1

CURRENT = end of year current assets divided by end of year current liabilities

WC = end of year working capital to end of year total assets

QUICK = end of year cash and short term investments divided by end of year current liabilities

ROA = end of year loss divided by end of year total assets

MATERIALS = 1 if the firm belongs in the GICS materials sector, 0 otherwise

INFOTECH = 1 if the firm belongs in the GICS information technology sector, 0 otherwise

LLOSS = prior year loss; 1 if the firm reported a loss in the prior financial year, 0 otherwise

NEGEQ = 1 if the firm's end of year total liabilities is greater than its end of year total assets, 0 otherwise.

⁸ Financial firms have a relatively small portion of their assets in tangible assets and also have short term obligations often in excess of shareholders' funds. These firms are also subject to various forms of regulation and supervision to specifically guard against unsound practices. For these reasons, financial firms (GICS Sector Code 40) were excluded.

⁹ The 11,798 observations represent 5,206 unique firms: 3,303 from the United States, 800 from the United Kingdom and 1,103 from Australia.

¹⁰ Australian financial data is drawn from Aspect Financial and audit data from the UNSW Audit Fee Database, the United Kingdom financial data from Compustat Global and audit data obtained from MergentOnline and various company websites; the United States financial data was collected from Compustat NA and audit data from Audit Analytics.

LOPINION = prior year audit opinion; 1 if the firm received a going concern modified opinion in the prior financial year, 0 otherwise

Variables of Interest

COUNTRY

UK= 1 if the firm is incorporated in the United Kingdom, 0 otherwise

AUS=1 if the firm is incorporated in Australia, 0 otherwise

US=1 if the firm is incorporated in the United States, 0 otherwise

AUDITFIRM

NTW=1 if the firm is audited by an auditor that is a member of an international network, 0 otherwise

NONTW= 1 if the firm is not audited by an audit firm that is a member of an international network, 0 otherwise

TIME

P2001-2003=1 if the firm's financial year end was either 2001, 2002 or 2003, 0 otherwise

P2004-2006= if the firm's financial year end was either 2004, 2005 or 2006, 0 otherwise

The choice of control variables is based on consideration of the prior literature and a deliberation of which factors may be correlated with the variables of interest and the auditor's decision to issue a going concern modification or not. The explanatory variables have also been used in prior research (see Dopuch et al. 1987; Mutchler et al. 1997; Reynolds and Francis 2000; DeFond et al. 2002; Carey and Simnett 2006).

The degree of financial distress is an important factor mentioned in the relevant auditing standards. The magnitude of financial distress is related to the probability of bankruptcy (Hopwood et al. 1994). PBANK explicitly measures the probability of bankruptcy using the Zmijewski (1984) score¹¹, where high values indicate a higher probability for bankruptcy and vice versa. The Zmijewski (1984) score incorporates ratios measuring profitability, solvency and liquidity. LEV and Δ LEV are included in the model because debt covenant violations are positively associated with the probability of issuing a going concern opinion (Mutchler et al. 1997; DeFond et al. 2002). Specifically, LEV is included to capture the proximity to covenant violation as firms with high leverage is likely to be close to violations (Beneish and Press 1993). Δ LEV is included because an increase in leverage is likely to move firms closer to violation of debt covenants (Reynolds and Francis 2000; DeFond et al. 2002). LLOSS

¹¹ The coefficients are based on the model in Panel B, Table 3 (with a 40:800 ratio of bankrupt and non-bankrupt companies) of Zmijewski (1984). The Zmijewski score measurement of the probability of bankruptcy is calculated as: $b = -4.803 - 3.599(\text{current ratio}) + 5.406(\text{leverage}) - 0.100(\text{return on assets})$.

is included because firms that show prior year losses might prompt auditor's concern about a firm's future viability, and thus, such firms are more likely to receive a going concern opinion (Menon and Schwartz 1987; Reynolds and Francis 2000; DeFond et al. 2002). Current year loss as an indicator variable is not included in the model because the sample-selection criterion is based on the firm incurring a loss in the current year. However, ROA is included because the more severe the current year loss, the more likely the firm is to receive a going concern modification. NEGEQ is included because firms with negative shareholders' equity are more likely to be in financial distress and therefore also more likely to receive a going concern opinion (Ohlson 1980). The models also include several factors that are likely to mitigate the probability of receiving a going concern opinion. SIZE (log of total assets in US millions) is included because larger firms have more negotiating power when they are in financial difficulty and are therefore more likely to avoid bankruptcy and consequently less likely to receive a going concern opinion (Campbell 1996; Reynolds and Francis 2000; DeFond et al 2002). CURRENT, WC and QUICK are included in the model as liquidity measures that capture the availability of funds and the ability to quickly raise funds in relation to the firm's short term obligations (DeFond et al. 2002). High liquidity suggests that firms are more likely to avoid bankruptcy and therefore less likely to receive a going concern opinion. The models also include the indicator variables MATERIALS and INFOTECH to control for where the firm's operation is within the respective GICS sectors of materials and information technology. It has been suggested that high-technology firms may be more likely to receive a going concern opinion because the auditor perceives that there is a higher risk associated with audits of such companies (Cook et al. 1992; Chenok 1994; Raghunandan and Rama 1999). Materials firms are controlled for in the model because of the large number of such companies listed in Australia and their riskier financial profile (Butterworth and Houghton 1995; Carey and Simnett 2006). The model also includes the indicator variable LOPINION to control for the firm receiving a going concern opinion in the prior year (Reynolds and Francis 2000); using a lagged dependent variable in a cross-sectional equation also account for historical factors that cause current differences in the dependent variable that are difficult to account for in other ways (Wooldridge 2006). Prior models based on similar variables prove to have acceptable explanatory power (See Menon and Schwartz 1987; DeFond et al. 2002; Carey and Simnett 2006).

4. Results

4.1 Descriptive Statistics

Table 1 presents descriptive statistics on the full sample for the variables used in our going concern base model. All continuous variables have been winsorised at the 95th percentile and at the 5th percentile because financial ratios tend to be skewed (Horrigan 1965; Deakin 1976; Frecka and Hopwood 1983) and that this inherent characteristic of financial ratios becomes even more prominent when applied to “abnormal” firms – such as financially distressed firms. Table 1 shows that 24.2% of the observations in the sample received a going concern modification, and that 20.8% of the observations in the sample received a going concern modification in the preceding year. The mean and median firm size, measured in total assets, is US\$206.8 million and US\$20.4 million, indicating a skewed distribution and therefore justifying the use of log assets in the multivariate analysis. The mean and median values for LEV are .677 and .490, respectively, and the median for Δ LEV is 0.100. The three liquidity measures – CURRENT, WC and QUICK – display mean values of 3.202, 0.091 and 2.179, and median values of 1.640, 0.150, and 0.510 respectively. Given these are all loss making firms, net income to total assets (ROA) exhibits a mean of -0.508 and a median of -0.190. Further, Table 1 shows that 76.4% of the firms had a loss in the preceding year (LLOSS) and that 16.4% of the firms have negative equity (NEGEQ). Table 1 also shows that 15.6% of the firms in the sample belong to the materials sectors (MATERIALS), and that 23.8% of the firms are in the information technology sector (INFOTECH).

[Insert Table 1]

Table 2 describes the variables of interest and Table 3 gives a more thorough description of the dependent variable. Table 2, Panel A, shows that the majority (56.2%) of the firms in the sample are US firms, and that Australian and UK firms represent 25.3% and 18.5% of the sample, respectively. Table 2, Panel B, shows that 36.9% of the firms were audited by NONTW audit firms and 63.1% by NTW audit firms. The United Kingdom subsample has a higher frequency of NTW audits (76.9%) than the United States and the Australian subsample (59.6% and 60.68%, respectively). Table 2, Panel C, shows that of the observations in the sample, 1.3%

were audited by Arthur Andersen, 9.8% by Deloitte, 15.2% by Ernst & Young, 12.2% by KPMG, and 13.2% by PWC. Besides the individual Big N firms, 5.8% were audited by BDO and 5.6% were audited by Grant Thornton and 36.9% were audited by a number of smaller auditors. The low number of Arthur Andersen audits is due to the collapse of the firm in 2002. Table 2, Panel D, shows that the sample has a higher frequency of observations in the later years, and particularly so for observations from the United States. The difference in frequency of observations between countries and over time is primarily due to availability of audit data.

Table 3, Panel A, shows that within the sample there are a total of 2,855 (24.2%) observations that received a going concern opinion of which 863 (7.3%) were first time going concern opinions and 1,992 (16.9%) were recurring going concern opinions. The sample has 8,943 (75.6%) observations with clean audit opinions, 460 (3.9%) of these had a going concern opinion in the preceding year. The United States has the largest frequency of going concern opinions in the sample (28.8%), followed by Australia (22.8%) and then the United Kingdom (12.5%). Table 3, Panels B and C, shows audit opinion by audit firm type and by time period respectively. The non-networked (NONTW) audit firms in the sample issue a higher proportion of going concern opinions (41.1%) than the audit firm networks (NTW) (14.3%), and there is a higher frequency of going concern opinions in the later time period (27.1%) than in the earlier one (20.0%).

[Insert Table 2]

[Insert Table 3]

Following DeFond et al. (2002), Table 4 classifies the variables in Table 1 by opinion type (going concern opinion and clean audit opinion), along with the p-values from t-tests and median tests of differences across the two groups. It is not surprising that PBANK has significantly higher mean and median values in the sample that received going concern opinions compared to the sample that received clean audit opinions. Further, the values of ASSETS show that the observations in the going concern opinion sample (mean \$73.91 million; median \$4.795 million) are significantly smaller than the observations in the sample that received clean audit opinions (mean \$249.270 million; median \$33.690 million). LEV and Δ LEV display significant higher mean and

median values for the going concern opinion sample than the sample that received clean audit opinions. CURRENT, WC, QUICK and ROA exhibit significantly lower mean and median values for the going concern sample than the clean audit opinion sample. In addition, LLOSS and NEGEQ indicate that the observations in the going concern sample have significantly higher frequency of prior year losses and negative equity in comparison to the clean audit opinion sample. The median and mean values of MATERIALS and INFOTECH reveal that the relative frequency of observations in the materials sector and information technology sector are not significantly different across the two samples. Overall, the mean and median values and their differences between the going concern opinion sample and the clean audit sample are in accordance with expectations.

[Insert Table 4]

The pairwise correlation coefficients show a high degree of correlation among some of the variables included in the model (not tabulated). The variable PBANK shows high correlation with LEV (.905), WC (-.771) and ROA (-.831) and NEGEQ (.747). In addition WC shows high correlation with LEV (-.812) and CURRENT (.556). CURRENT also shows high correlation with QUICK (.957). The high correlation between these variables is expected because some of the control variables measure the same underlying construct – for example WC, CURRENT, and QUICK are all measures of liquidity. High correlation between PBANK and the other variables such as LEV and ROA is also expected because the PBANK includes these components as part of its calculation. In this sense, a lack of correlation would be of greater concern. However, none of the control variables are perfectly correlated, and as such, convey some unique information.¹² Fortunately, the consequence of high multicollinearity only applies to variables that are highly collinear, and none of the control variables exhibit correlation coefficients greater than .60 with the variables of interest; the only correlation coefficient above .50 is between BIGN audit firms and SIZE (.525). None of the pairwise correlation coefficients between the variables of interest that are not

¹² The high correlation between the control variables makes it problematic to obtain good estimates of their distinct effects on the dependent variable, because this may make their standard errors inflated, although it does not bias the coefficients (Wooldridge 2006). Thus control variables that appear to have weak effects individually, may actually have quite strong effects as a group with respect the auditor reporting behaviour on going concern opinions. Variance Inflation Factors are examined for the variables of interest.

mutually exclusive are higher than .50. Thus, the statistical inferences of the variables of interest should not be affected by extreme levels of multicollinearity.

The descriptive statistics presented above are consistent with the distressed nature of the total sample and with the going concern sample being even more distressed. The relative differences in the frequency of going concern opinions across country and audit firms provides descriptive support for the notion that there is a lack of consistency in audit reporting behaviour. This does not, however, control for the numerous client- and industry-specific factors affecting the auditor's decision to issue going concern opinions. Indeed, Table 4 shows that these factors are different for firms that receive a going concern opinion and those firms that do not. Consequently, multivariate tests are used to formally test the hypotheses outlined above.

4.2 Multivariate Results

The hypotheses outlined are tested by adding the variables of interest to the model in various combinations in the full sample and across various subsamples. Consequently, the tables presented directly test H1, but due to the non-linearity of the model conclusions regarding H2 and H3 are formally based on testing the equality of the logit coefficients across nested subsamples using the Wald test, but also inferred from comparisons of significance levels and the magnitude of the effect¹³ (Ai and Norton 2003; Liao 2004).

Table 5 presents the results of estimating the logit model where Model 1 presents a baseline case of the going concern model without including any of the variables of interest. Model 2 introduces the variables UK and AUS to test H1. Model 3 is a replication of Model 2 but also controls for differences due to time periods and between types of audit firms.

[Insert Table 5]

¹³ The term "effect" in this paper refers to a change in the probability of observing a going concern opinion, as an independent variable goes from its minimum value to its maximum value, holding all other variables at constant at their mean values as per Table 1 (note that the independent variables are winsorised at the 95th and the 5th percentile.) This is a *discrete* change as the change in the independent variables are finite, and thus differs from the *marginal* change, which is the instantaneous rate of change. The nonlinearity of the model makes the *marginal* effect inaccurate as an indication of economic significance especially with regard to binary independent variables, and the *discrete change* is therefore more preferable (Long 1997).

The results indicate that Model 1 does a good job of explaining the auditor's going concern decision. The adjusted pseudo r^2 is 49% and the overall model is significant.¹⁴ The variables SIZE, WC, QUICK, ROA, LLOSS, NEQUITY and LOPINION are all significant ($p < .05$) and in the predicted direction. INFOTECH and FINANCIAL are significant ($p < .05$) and are negatively associated with going concern opinions. The variables PBANK, LEV, Δ LEV, CURRENT and MATERIALS are not significant variables in the baseline model¹⁵. Model 2 introduces the following variables of interest: UK and AUS, with US included in the constant in order to test H1 and if any country differences exist in the propensity to issue going concern modifications. The country variables UK and AUS have negative coefficients. Both are significant ($p < .05$, one-tailed) and the effect suggest that in comparison to auditors in the United States, auditors in the United Kingdom and Australia are 2.6 and 6.5 percentage points less likely to issue a going concern modification¹⁶. Consequently, Model 2 provides support for H1. The results from Model 2 are confirmed in Model 3 when controlling for time period and type of audit firm ($p < .05$, one-tailed, for UK and AUS). The effects are not changed. In sum, the results from Table 5 strongly support H1 and suggest that the propensity to issue a going concern modification is higher in countries with higher litigation risk.

Table 6 presents the result of investigating if any country differences in propensity to modify the audit opinion for going concern considerations are moderated by audit firms that are members of international networks (Hypothesis 2). Models 1 and 2 present the results for the subsamples of firms that are not audited by an audit firm that is a member of an international audit firm network, and by the firms that are audited by an audit firm that is a member of an international audit firm network, respectively.

[Insert Table 6]

¹⁴ The measure of fit labelled pseudo r^2 and adjusted pseudo r^2 refers to the MacFadden r^2 and MacFadden's adjusted r^2 respectively.

¹⁵ One must, however, bear in mind that there are significant levels of collinearity between some of these variables, which may inflate their standard errors.

¹⁶ Holding all variables at values at the median values per Table 1, the discrete change in predicted probability for UK is -4.5 pp and -1.9 pp for AUS. Holding variables that have a positive (negative) coefficient in the base model at their 25th (75th) percentile value the effect are -1.3 pp for UK and -0.6 pp for AUS. Conversely, when all the variables that have a positive (negative) coefficient are held at their 75th (25th) percentile value the effects are -8.5 pp for UK and -3.45 pp for AUS.

In Model 1, the variables AUS and UK are negative and significant ($p < .05$, one-tailed). In contrast, only the UK is negative and significant ($p < .05$, one-tailed) in Model 2. The coefficients on UK and AUS from estimating Models 1 and 2 suggest that country differences in the propensity to issue going concern varies depend on whether the audit firm is a member of international audit firm network. In particular, for audit firms that are not part of international audit firm networks, there are significant differences in the propensity to issue going concern opinion between the United States and Australia, and between the United States and the United Kingdom. In contrast, for audit firms that are members of international audit firm networks, there are significant differences in the propensity to issue going concern opinions only between the United States and the United Kingdom. Further, in Model 1, the effects suggest that auditors from the United Kingdom and Australia are 5.6 and 8.5 percentage points less likely to issue going concern opinions than their counterparts in the United States¹⁷. The differences in probability have decreased to 0.1 and 4.9 percentage points less in Model 2.¹⁸ As a formal test of difference, the Wald statistic confirms this, and shows that the coefficients on AUS and UK are respectively significantly ($p < .05$, one tailed) and marginally significantly ($p < .10$, one tailed) smaller in Model 2, than in Model 1. The evidence presented in Table 6 supports H2 and the claim that country differences in propensity to issue going concern modifications are less for audit firms that are part of an international network than for those audit firms that are not.¹⁹

Table 7 presents the results of examining H3 – namely, that country differences in propensity to modify the audit opinion for going concern considerations will diminish over the period 2001-2006. Models 1 and 2 present the results for the sub-samples of

¹⁷ Holding all variables at values at the median values per Table 1, the discrete change in predicted probability for UK is -5.6 pp and -3.8 pp for AUS. Holding variables that have a positive (negative) coefficient in the base model at their 25th (75th) percentile value the effect are -1.5 pp for UK and -1.5 pp for AUS. Conversely, when all the variables that have a positive (negative) coefficient are held at their 75th(25th) percentile value the effects are -11.1 pp for UK and -7.3 pp for AUS.

¹⁸ Holding all variables at values at the median values per Table 1, the discrete change in predicted probability for UK is -3.0 pp and 0.1 pp for AUS. Holding variables that have a positive (negative) coefficient in the base model at their 25th (75th) percentile value the effect are -1.1 pp for UK and -0.0 pp for AUS. Conversely, when all the variables that have a positive (negative) coefficient are held at their 75th(25th) percentile value the effects are -6.6 pp for UK and 0.2 pp for AUS.

¹⁹ When Model 2 is replicated for each of the international audit firm networks (not tabulated), the UK and AUS variable fails to show that there is any significant country difference for any of the individual Big N firms. There are, however, some significant country differences for BDO and for the Grant Thornton. BDO in the United Kingdom are significantly less likely to issue a going concern opinion than BDO in Australia ($p < .05$, two-tailed) and Grant Thornton in the United Kingdom is less likely to issue a going concern opinion in comparison to Grant Thornton in the United States ($p < .05$, one-tailed).

firms that are audited by an audit firm in the period 2001 to 2003 and the period 2004 to 2006 respectively.

[Insert Table 7]

In Model 1, the country variables for UK and AUS are negative and significant ($p < .05$, one-tailed). Model 2, in comparison, shows that the only significant difference is between the United Kingdom and the United States ($p < .05$, one-tailed), as the variable AUS is insignificant. The magnitude of the country difference in the probability to issue a going concern opinion has become lower in the 2004-2006 period relative to 2001-2003. In terms of the effects, in Model 1, auditors from the United Kingdom and Australia are 3.6 and 9.2 percentage points less likely to issue going concern opinions than their counterparts in the United States.²⁰ The differences in probability have decreased to 1.6 and 3.2 percentage points less in Model 2.²¹ The Wald statistic confirms this, and shows that the coefficient on UK is significantly ($p < .05$, one tailed) smaller in Model 2 than in Model 1. However, the difference in the coefficients on AUS is insignificant across Models 1 and 2. Together, however, the results provide partial support for H3 and the claim that the country differences and the magnitude of those differences are moderated over time.

The analyses in Tables 5 to 7 are re-estimated with AUS in the constant to examine any country differences in audit reporting behaviour between United Kingdom and Australia (not tabulated). Table 5, Models 2 and 3 shows that the variable UK is negative and significant ($p < .05$, two-tailed), suggesting that there is a difference in audit reporting behaviour between Australia and the United Kingdom. In Table 6, Model 1, the UK variable is insignificant, but in Model 2 the UK variable is negative and significant ($p < .05$, two-tailed). The Wald statistic, however, is not significant. In

²⁰ Holding all variables at values at the median values per Table 1, the discrete change in predicted probability for UK is -6.0 pp and -2.5 pp for AUS. Holding variables that have a positive (negative) coefficient in the base model at their 25th (75th) percentile value the effect are -1.7 pp for UK and -0.9 pp for AUS. Conversely, when all the variables that have a positive (negative) coefficient are held at their 75th (25th) percentile value the effects are -12.9pp for UK and -5.1 pp for AUS.

²¹ Holding all variables at values at the median values per Table 1, the discrete change in predicted probability for UK is -2.1 pp and -1.1 pp for AUS. Holding variables that have a positive (negative) coefficient in the base model at their 25th (75th) percentile value the effect are -0.6 pp for UK and -0.4pp for AUS. Conversely, when all the variables that have a positive (negative) coefficient are held at their 75th (25th) percentile value the effects are -4.2pp for UK and -2.1pp for AUS.

Table 7, Model 1, the variable UK is negative and significant ($p < .05$, two-tailed), but in Model 2, it is insignificant. The Wald statistic is significant ($p < .05$, one-tailed). Overall, this suggests that the difference in audit reporting behaviour between the United Kingdom and Australia is becoming smaller over time, but also that country differences in propensity to issue going concern modifications exist between countries with more benign litigation risk.

4.3 Robustness and Limitations

To test the robustness of the results with regard to the imposed sample restrictions, Tables 5 to 7 are replicated using various selection criteria. The results are not reported. When the sample is restricted to first-time going concern opinions (9,346 observations), the significance and the direction of the effects in Tables 5 to 7, remains unaffected, however, the magnitude of the country difference in propensity to issue a going concern modification between Australia and the United States are consistently smaller across the regression specifications. Limiting the sample to observations that have both a current year loss and negative cash flow from operations (7829 observations) does not change the results. When the results are replicated for a reduced sample with only the observations that yield a positive PBANK score (3,719 observations), the only significant country difference between Australia and the United States is in Table 6, Model 1. There is, however, no significant difference between Australia and the United States in the overall sample or within either of the time periods. The results with respect to country difference between United Kingdom and the United States remain unchanged. Thus, the results exhibited in Tables 5 to 7 are somewhat sensitive with respect to the imposed sample restriction, in particular the country differences between Australia and the United States. Further, all of the regressions in Tables 5 to 7 are replicated with robust standard errors that are correct in the presence of violations of the assumptions of the model. The results are unchanged. In addition, all models are re-estimated by using rank transformations as these are less sensitive to outliers and eliminate common transitory distress characteristics of broad economic and industry forces (Kane et al. 1998) and the results for Tables 5 to 7 are unaltered. Thus, the results are robust with regard to robust standard errors and rank transformations of the continuous variables. The results are also replicated by excluding all materials firms because of their dominance in the Australia. When all materials firms are dropped, the only significant country

difference between Australia and the United States is in Table 6, Model 1. There is, however, no significant difference between Australia and the United States in the overall sample or within either of the time periods. The results with respect to country difference between United Kingdom and the United States remain unchanged. Consequently, the results are sensitive to the exclusion of materials firms. When information technology companies are excluded from the analysis (8,992 observations), the results remain unchanged. When a BigN variable representing BigN audit firms are used instead of the NTW variable that includes BigN firms as well as BDO and Grant Thornton, the results in Tables 5 to 7 remains unchanged, although the results with respect to Hypothesis 2 shows that BigN audit firms have an even stronger moderating effect on country differences in propensity to issue going concern modifications. Lastly, Hypotheses 2 and 3 are tested by using conventionally product terms in a linear probability model with heteroskedasticity robust standard errors. The results in Tables 6 and 7 are confirmed.

Since only observations with complete data are used to estimate the logit model and incomplete data observations may occur non-randomly, a potential limitation of this study is sample selection bias. In particular, the use of multiple data sources and restricting the sample to financially distressed firms may elevate this concern. This does not necessarily influence any statistical inferences (Zmijewski 1984), but the possibility that the results may be influenced by selection bias cannot be ruled out.

5. Summary and Conclusion

Regulators have taken action to harmonise accounting and auditing standards. These actions have been based on the premise that uniform standards will be consistently applied and that consistent auditor reporting behaviour will result. This study empirically investigates consistency of audit reporting behaviour in terms of going concern modifications using a sample of 11,798 observations from three countries: the United States, the United Kingdom and Australia. In particular we investigate whether there is consistency between countries in audit reporting behaviour based on country level litigation risk and consistency between types of audit firms: those that are members of international audit networks and those that are not. The study also examines if country differences in audit reporting behaviour are moderated by international audit firm networks because of benefits of economics of scale and the

deterrents of moral hazard; and if country differences in auditor reporting behaviour have diminished over time due to the current push for international harmonisation. The results indicate that there is a lack of consistency in audit reporting behaviour across countries. Further, we document that the lack of consistency across countries is more prominent for audit firms that are not members of international audit firm networks and that the country differences have diminished over time. A number of implications can be drawn from these findings. First, it appears that litigation exposure drives audit reporting behaviour, irrespective of auditing standards. Second, country differences in audit reporting behaviour have diminished over time suggesting progress in light of the current harmonisation efforts of the audit profession. Third, and despite widespread concerns about market concentration of the large international audit firms, it appears that they have been the driving forces behind the harmonisation of audit reporting behaviour. Lastly, the country differences between the firms that are not members of international networks presents future challenges for national and international regulators in order to prevent an unintended expectation gap arising from the implementation of International Standards on Auditing (ISAs). The findings are, however, somewhat sensitive to imposed sample selection criteria and the exclusion of certain industries. The findings presented and the limitations of scope of this study provide avenues for future research. Although the many similarities between the institutional environments of this study strengthen the internal validity of the analysis, it is nevertheless limited in its scope. In particular, differences in legal systems and the relative importance of capital markets are not investigated and it is conceivable that audit reporting behaviour in terms of going concern modification may be responsive to such factors, although in which manner is not known. Further, the findings indicate that both theoretical as well as empirical research on the consistency of audit reporting behaviour as a desirable characteristic of audit quality is warranted.

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APPENDIX: AUDITING STANDARDS RELATED TO THE GOING CONCERN ASSUMPTION

AUDITORS EVALUATION OF THE GOING CONCERN ASSUMPTION

Country	Standard	In Effect	Evaluation Required	Evaluation Period
US	SAS 59	1988-current	Specifically form an opinion on the going concern assumption from the results of usual audit procedures.	Reasonable period of time, not to exceed one year beyond the date of the financial statements being audited.
UK	SAS 130	1995-2004	Plan and perform procedures specifically designed to identify going concern uncertainties (s.21)	Not specifically defined or elaborated (s9), but likely to be the period that management has considered in assessing going concern (s21(ii))
UK	ISA 570	2004-current	Auditor should consider the appropriateness of the going concern assumption when planning and performing audit procedures and in evaluating their results (s2, s11, s12, s17)	At least one year from balance date (s18. s19)
Australia	AUS 708	1996-2006	Auditor must obtain evidence that the going concern assumption is appropriate (s10). Must specifically assess going concern problems as part of the audit planning process (s17).	Approximately one year from the date of the current auditors report (s4)
Australia	ASA 570	2006-current	Auditor should consider the appropriateness of the going concern assumption when planning and performing audit procedures and in evaluating their results (s2, s11, s12, s17)	Approximately one year from the date of the current auditors report (s53)
ISA (IFAC)	ISA 570	1994-current	Auditor should consider the appropriateness of the going concern assumption when planning and performing audit procedures and in evaluating their results (s2, s11, s12, s17)	At least one year from balance date (s18. s19)

AUDITOR'S REPORT IN RELATION TO A GOING CONCERN MODIFICATION

Country	Standard	In Effect	"Emphasis of Matter"
US	SAS58	1988-current	Certain circumstances, while not affecting the auditor's unqualified opinion, may require that the auditor add an explanatory paragraph (or other explanatory language) to the standard report. These circumstances includes.... a substantial doubt about the entity's ability to continue as a going concern...
UK	SAS 600	1993-2004	Inherent uncertainties are regarded as fundamental when they involve a significant level of concern about the validity of the going concern basis... (s.64). Where resolution of an inherent uncertainty could affect the view given by the financial statements to the degree that the auditors conclude that it is to be regarded as fundamental, they include an explanatory paragraph...(s.61)
UK	ISA 700	2004-current	In certain circumstances, an auditor's report may be modified by adding an emphasis of matter paragraph to highlight a matter affecting the financial statements.... The addition of such an emphasis of matter paragraph does not affect the auditor's opinion (s.30). The auditor should modify the auditor's report by adding a paragraph to highlight a material matter regarding a going concern problem (s.31)
AUS	AUS 702	1997-2006	In certain limited circumstances it will be appropriate for the auditor to draw attention to or emphasise a matter that is relevant to the user of the audit report but is not of such a nature that it affects the audit opinion (s.31)... for example, regarding the continued appropriateness of the going concern assumption (s.61)
AUS	ASA 701	2006-current	In certain circumstances, an auditor's report is modified by adding an emphasis of matter paragraphThe addition of such an emphasis of matter paragraph does not affect the auditor's opinion (s.8). The auditor shall modify the auditor's report by adding a paragraph to highlight a significant uncertainty regarding a going concern problem (s.9)
ISA (IFAC)	ISA 700	1994-current	In certain circumstances, an auditor's report may be modified by adding an emphasis of matter paragraph to highlight a matter affecting the financial statements.... The addition of such an emphasis of matter paragraph does not affect the auditor's opinion (s.30). The auditor should modify the auditor's report by adding a paragraph to highlight a material matter regarding a going concern problem (s.31)

TABLE 1: DESCRIPTIVE STATISTICS FOR BASE MODEL (n=11,798)

Dependent Variable	Mean	Median	Min	Max	Std. Dev.	Skewness
OPINION	0.242	0	0	1	-----	-----
Independent variables	Mean	Median	Min	Max	Std. Dev.	Skewness
PBANK	0.515	-1.373	-5.213	22.038	6.449	2.271
ASSETS (US\$ Mil.)	206.835	20.355	0.600	1939.240	473.657	2.897
LEV	0.677	0.490	0.040	3.040	0.721	2.076
ΔLEV	0.370	0.100	-0.666	3.170	0.901	1.864
CURRENT	3.202	1.640	0.130	15.400	3.915	2.004
WC	0.091	0.150	-1.620	0.800	0.544	-1.626
QUICK	2.179	0.510	0.000	13.500	3.582	2.116
ROA	-0.508	-0.190	-3.060	-0.010	0.775	-2.281
MATERIALS	0.156	0	0	1	-----	-----
INFOTECH	0.238	0	0	1	-----	-----
LLOSS	0.764	1	0	1	-----	-----
NEGEQ	0.164	0	0	1	-----	-----
LOPINION	0.208	0	0	1	-----	-----

Winsorised variables at the 5th and 95th percentile

Variable Definitions:

OPINION = 1 if a firm receives a GC modified opinion, 0 otherwise

PBANK = the Zmijewski (1984) score measuring the probability of bankruptcy

SIZE = the natural logarithm of year end total assets in USD millions (where necessary using end of year exchange rates)

LEV = end of year total liabilities divided by end of year total assets

ΔLEV = end of year leverage divided by beginning of year leverage minus 1

CURRENT = end of year current assets divided by end of year current liabilities

WC= end of year working capital to end of year total assets

QUICK = end of year cash and short term investments divided by end of year current liabilities

ROA = end of year loss divided by end of year total assets

MATERIALS = 1 if the firm belongs in the GICS materials sector, 0 otherwise

INFOTECH = 1 if the firm belongs in the GICS information technology, 0 otherwise

LLOSS= Prior year loss; 1 if the firm reported a loss in prior financial year, 0 otherwise

NEGEQ= 1 if a firm's end of year total liabilities is greater than its end of year total assets, 0 otherwise.

LOPINION = Prior year audit opinion; 1 if firm received a going concern modified opinion in prior financial year, 0 otherwise

TABLE 2: DESCRIPTIVE STATISTICS FOR VARIABLES OF INTEREST

PANEL A: BY COUNTRY

Country	#observation	Percent
AUS	2,981	25.27
UK	2,184	18.51
US	6,633	56.22
Total	11,798	

PANEL B: BY AUDIT FIRM TYPE AND COUNTRY

Audit Firm	All Firms		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
NONTW	4,357	36.93	2,680	40.40	505	23.12	1,172	39.32
NTW	7,441	63.07	3,953	59.60	1,679	76.88	1,809	60.68
Total	11,798		6,633		2,184		2,981	

PANEL C: BY AUDIT FIRM AND COUNTRY

Audit Firm	All Firms		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
AA	150	1.27	66	1.00	57	2.61	27	0.91
DT	1,158	9.82	645	9.72	287	13.14	226	7.58
EY	1,789	15.16	1,072	16.16	229	10.49	488	16.37
KPMG	1,441	12.21	703	10.60	361	16.53	377	12.65
PWC	1,554	13.17	782	11.79	414	18.96	358	12.01
BDO	684	5.80	344	5.19	143	6.55	197	6.61
GT	665	5.64	341	5.14	188	8.61	137	4.60
OTHER ¹	4,357	36.93	2,680	40.40	505	23.12	1,171	39.28
Total	11,798		6,633		2,184		2,981	

1. representing 550 other audit firms, none with more than 200 firm year observations

PANEL D: BY COUNTRY AND YEAR

Year	All Firms		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
2001	1,283	10.87	339	5.11	446	20.42	498	16.71
2002	1,948	16.51	932	14.05	439	20.1	577	19.36
2003	1,629	13.81	752	11.34	399	18.27	478	16.03
2004	1,606	13.61	718	10.82	347	15.89	541	18.15
2005	2,950	25.00	2,024	30.51	311	14.24	615	20.63
2006	2,382	20.19	1,868	28.16	242	11.08	272	9.12
Total	11,798		6,633		2,184		2,981	

TABLE 3: DESCRIPTIVE STATISTICS FOR DEPENDENT VARIABLE

PANEL A: TYPE OF AUDIT OPINION BY COUNTRY

Audit Opinion	All firms		AUS		UK		US	
	#obs	%	#obs	%	#obs	%	#obs	%
FIRST TIME GC OPINION	863	7.31	307	10.3	110	5.04	446	6.72
RECURRING GC OPINION	1,992	16.88	374	12.55	153	7.01	1,465	22.09
FIRST TIME CLEAN OPINION	460	3.9	178	5.97	48	2.2	234	3.53
RECURRING CLEAN OPINION	8,483	71.9	2,122	71.18	1,873	85.76	4,488	67.66
Total	11,798		2,981		2,184		6,633	

PANEL B: AUDIT OPINION BY AUDIT FIRMS

Audit Opinion	NONTW		NTW	
	#obs	%	#obs	%
FIRST TIME GC OPINION	352	8.08	511	6.87
RECURRING GC OPINION	1,439	33.03	553	7.43
FIRST TIME CLEAN OPINION	219	5.03	241	3.24
RECURRING CLEAN OPINION	2,347	53.87	6,136	82.46
Total	4,357		7,441	

PANEL C: AUDIT OPINION BY TIME PERIOD

Audit Opinion	2001-2003		2004-2006	
	#obs	%	#obs	%
FIRST TIME GC OPINION	378	7.78	485	6.99
RECURRING GC OPINION	592	12.18	1,398	20.15
FIRST TIME CLEAN OPINION	144	2.96	316	4.56
RECURRING CLEAN OPINION	3,747	77.08	4,738	68.3
Total	4,861		6,937	

TABLE 4: DESCRIPTIVE STATISTICS FOR GC AND NO-GC FIRMS

	Mean		t-test	Median		χ^2 Median
	GC Firms	Clean Firms	<i>p</i> -value	GC Firms	Clean Firms	test <i>p</i> -value
PBANK	6.770	-1.481	.000	2.98	-1.967	.000
ASSETS (US\$ Millions)	73.910	249.270	.000	4.795	33.69	.000
LEV	1.281	0.484	.000	0.910	0.410	.000
Δ LEV	0.625	0.288	.000	0.250	0.079	.000
CURRENT	1.439	3.765	.000	0.650	1.990	.000
WC	-0.400	0.247	.000	-0.150	0.215	.000
QUICK	0.858	2.601	.000	0.130	0.760	.000
ROA	-1.202	-0.287	.000	-0.754	-0.130	.000
MATERIALS	0.149	0.159	.226	0	0	.226
INFOTECH	0.250	0.234	.069	0	0	.069
LLOSS	0.904	0.720	.000	1	1	.000
NEGEQ	0.453	0.072	.000	0	0	.000
LOPINION	0.698	0.051	.000	1	0	.000
SAMPLE SIZE	2,855	8,943		2,855	8,943	

Notes to Table 4:

1. All *p*-values are two-tailed. See Table 1 for variable descriptions

TABLE 5: MULTIVARIATE RESULT TO TEST H1

VARIABLES	ALL FIRMS MODEL 1			ALL FIRMS MODEL 2			ALL FIRMS MODEL 3		
	coef.	P> z	ΔPr	coef.	P> z	ΔPr	coef.	P> z	ΔPr
CONSTANT	-1.988	.000		-1.747	.000		-1.773	.000	
PBANK	-0.039	.145	-.118	-0.038	.152	-.117	-0.038	.150	-.117
SIZE	-0.185	.000	-.203	-0.192	.000	-.211	-0.196	.000	-.214
LEV	-0.001	.997	.000	-0.057	.763	-.023	-0.058	.759	-.023
ΔLEV	-0.034	.391	-.018	-0.025	.529	-.013	-0.025	.537	-.013
CURRENT	-0.029	.358	-.056	-0.030	.358	-.056	-0.028	.389	-.053
WC	-0.935	.000	-.401	-0.992	.000	-.428	-0.999	.000	-.431
QUICK	-0.114	.001	-.150	-0.116	.001	-.151	-0.118	.001	-.153
ROA	-0.956	.000	-.583	-0.949	.000	-.579	-0.950	.000	-.579
MATERIALS	-0.048	.604	-.007	-0.024	.807	-.003	-0.022	.818	-.003
INFOTECH	-0.272	.001	-.036	-0.270	.001	-.035	-0.271	.001	-.035
LLOSS	0.373	.000	.048	0.351	.000	.045	0.346	.000	.044
NEGEQ	0.679	.000	.108	0.651	.000	.103	0.649	.000	.102
LOPINION	2.898	.000	.563	2.865	.000	.556	2.863	.000	.556
P2004-2006							0.043	.544	.006
AUS				-0.198	.013	-.026	-0.195	.018	-.026
UK				-0.535	.000	-.065	-0.530	.000	-.065
NTW							0.024	.760	.003
N	11798			11798			11798		
Pseudo r ²	.492			.494			.494		
Adj. Pseudo r ²	.490			.492			.492		
Log likelihood	-3318.25			-3301.60			-3301.55		
Prob>chi2	.000			.000			.000		
Pr(y=1 x)	.1635			.1632			.1632		

Notes to Table 5:

1. p-values for UK and AUS p-values are one tailed, all other are two-tailed. See Table 1 for variable descriptions
- 2 None of the variables of interest show Variance Inflation Factors above 2.
3. ΔPr is the change in Pr(y=1 | x) when the variable goes from their minimum value to maximum value holding all other variables at their mean value per Table 1.
- 4 Pr(y=1 | x) is the probability of observing a going concern opinion when all variables are at their mean value as per Table 1

TABLE 6: MULTIVARIATE RESULTS TO TEST H3

VARIABLES	NO NETWORKS MODEL 1			INT'L NETWORKS MODEL 2		
	coef.	P> z	ΔPr	coef.	P> z	ΔPr
CONSTANT	-1.628	.000		-0.392	.001	
PBANK	-0.034	.335	-.106	-0.051	.209	-.146
SIZE	-0.201	.000	-.219	-0.191	.000	-.208
LEV	-0.033	.898	-.013	0.045	.871	.019
ΔLEV	-0.026	.641	-.014	-0.012	.835	-.006
CURRENT	-0.054	.213	-.094	0.012	.808	.026
WC	-0.827	.000	-.346	-1.244	.000	-.545
QUICK	-0.077	.102	-.112	-0.165	.001	-.189
ROA	-0.909	.000	-.553	-1.036	.000	-.628
MATERIALS	0.016	.917	.002	-0.064	.609	-.009
INFOTECH	-0.068	.570	-.009	-0.442	.000	-.056
LLOSS	0.257	.088	.033	0.404	.000	.051
NEGEQ	0.337	.121	.049	0.797	.000	.129
LOPINION	2.905	.000	.563	2.788	.000	.540
P2004-2006	0.070	.542	.009	0.032	.723	.004
AUS	-0.447	.001	-.056	0.009	.472	.001
UK	-0.736	.000	-.085	-0.392	.001	-.049
N	4357			7441		
Pseudo r ²	.539			.370		
Adj. Pseudo r ²	.533			.365		
Log likelihood	-1361.29			-1923.09		
Prob>chi2	.000			.000		
Pr(y=1 x)	.1619			.1625		

Notes to Table 6:

1. p-values for UK and AUS p-values are one tailed, all other are two-tailed. See Table 1 for variable description

2 None of the variables of interest show Variance Inflation Factors above 2.

3. ΔPr is the discrete change in Pr(y=1 | x) when the variable goes from their minimum value to maximum value holding all other variables at their mean value per Table 1.

4 Pr(y=1 | x) is the probability of observing a going concern opinion when all variables are at their mean value as per Table 1

Wald test of equality of coefficients across type of audit firm

Statistic	H0:	H1:	Coef. atio	Wald	df	p-value
βAUS	M1≤M2	M1>M2	-0.020	5.462341	1	.0194
βUK	M1≤M2	M1>M2	0.532	2.759544	1	.0967

TABLE 7: MULTIVARIATE RESULTS TO TEST H3

VARIABLES	PERIOD 2001-2003 MODEL 1			PERIOD 2004-2006 MODEL 2		
	coef.	P> z	ΔPr	coef.	P> z	ΔPr
CONSTANT	-1.985	0.000		-1.482	0.000	
PBANK	-0.058	0.156	-0.154	-0.014	0.717	-0.048
SIZE	-0.134	0.000	-0.142	-0.248	0.000	-0.276
LEV	0.006	0.983	0.003	-0.219	0.405	-0.081
ΔLEV	0.059	0.354	0.031	-0.064	0.223	-0.033
CURRENT	-0.012	0.794	-0.024	-0.028	0.530	-0.054
WC	-1.399	0.000	-0.605	-0.766	0.000	-0.322
QUICK	-0.169	0.002	-0.184	-0.109	0.020	-0.148
ROA	-0.964	0.000	-0.581	-0.919	0.000	-0.565
MATERIALS	-0.002	0.989	0.000	-0.078	0.561	-0.011
INFOTECH	-0.356	0.009	-0.044	-0.203	0.050	-0.027
LLOSS	0.443	0.001	0.054	0.259	0.043	0.035
NEQUITY	0.618	0.006	0.093	0.743	0.000	0.121
LOPINION	2.914	0.000	0.559	2.818	0.000	0.551
AUS	-0.284	0.023	-0.036	-0.118	0.171	-0.016
UK	-0.840	0.000	-0.092	-0.240	0.038	-0.032
NTW	0.067	0.591	0.009	0.016	0.872	0.002
N	4861			6937		
Pseudo r ²	.451			.521		
Adj. Pseudo r ²	.444			.517		
Log likelihood	-1334.73			-1942.67		
Prob>chi2	.000			.000		
Pr(y=1 x)	.1558			.1672		

Notes to Table 7:

1. p-values for UK and AUS p-values are one tailed, all other are two-tailed. See Table 1 for variable description

2 None of the variables of interest show Variance Inflation Factors above 2.

3. ΔPr is the discrete change in Pr(y=1 | x) when the variable goes from their minimum value to maximum value holding all other variables at their mean value per Table 1.

4 Pr(y=1 | x) is the probability of observing a going concern opinion when all variables are at their mean value as per Table 1

Wald test of equality of coefficients across time periods

Statistic	H0:	H1:	Coef. Ratio	Wald	df	p-value
βAUS	M1≤M2	M1>M2	0.415	0.077166	1	.3797
βUK	M1≤M2	M1>M2	0.285	9.008973	1	.0026