

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

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ABSTRACT: Regulators have taken action to harmonise accounting and auditing standards. Financial statement users expect that uniform standards will result in uniform application of these standards across national boundaries and firms. We investigate whether there is consistency in the application of auditing reporting standards across countries, between audit firms and over time. Our study uses a sample of 19,157 financially distressed firms from the United States, the United Kingdom and Australia for the years 2001 to 2006. By evaluating 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 network structures. The study also shows that differences between countries 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

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 19,157 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. We define consistency as the uniformity of the auditor's decision to modify an audit report for reasons of going concern. The study shows that there are significant differences in auditor reporting behaviour between countries, but that these are less so 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. 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

We seek to investigate consistency of audit reporting behaviour across the United States, United Kingdom and Australia. These countries have been selected because they are highly consistent in language, culture and legal systems. 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 plays a similar economic role. 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 marginally with respect to litigation risk⁴. In particular, the United States has been shown to have a higher litigation risk than both the United Kingdom and Australia which are also assessed as having high litigation risk. Consequently, we hypothesise in the null that:

H1: There is no difference in the propensity to modify the audit opinion for going concern considerations between the United States, United Kingdom and Australia.

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

⁴ Wingate (1997) reports an insurer assessed litigation index for the United States of 15, and for both the United Kingdom and Australia of 10. These are the countries with the three highest scores. Scores range from 1 to 15 with 15 meaning maximum assessed litigation risk.

(Carson 2009). Further, in order to reduce moral hazard, the affiliates of international audit firm networks⁵ 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: Any differences in firms' propensity to modify the audit opinion for going concern considerations is 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.

⁵ 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).

Enron and WorldCom in the US, as well as OneTel and HIH Insurance in Australia), 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, differences in auditor reporting behaviour are likely to have diminished over time, and this is tested by the following hypothesis:

H3: Any differences in firms' propensity to modify the audit opinion for going concern considerations has diminished over the period 2001-2006.

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 loss⁶. Thus, the United States is used as the benchmark and is included in the intercept. Six years of data were obtained for the time period 2001 to 2006. A total of 19,909 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 model specified below. Of these, 752 were financial firm-year observations and were excluded.⁷ The final sample consists of 19,157 observations⁸ and of these 1,482 (7.7%) contain going concern modifications to the audit report for the first time and 3,338 (17.4%) are recurring going concern modifications. There are 3,297 (17.2%) observations from Australia, 2,181 (11.4%) observations from the United Kingdom and the United States is represented with 13,679 (71.4%) observations.⁹

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:

⁶ 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.

⁷ 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.

⁸ The 19,157 observations represent 6,873 unique firms: 4,851 from the United States, 823 from the United Kingdom and 1,199 from Australia.

⁹ 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 annual reports through MergentOnline and various company websites; the United States financial data was collected from Compustat NA and audit data from Audit Analytics.

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

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.

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) score¹⁰, 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 ΔLEV 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). ΔLEV 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 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

¹⁰ 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: $b = -4.803 - 3.599(\text{current ratio}) + 5.406(\text{leverage}) - 0.100(\text{return on assets})$.

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 25.2% of the observations in the sample received a going concern modification, and that 21.4% 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\$211.2 million and US\$26.3 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 .742 and .506, respectively, and the median for Δ LEV is 0.111. The three liquidity measures – CURRENT, WC and QUICK – display mean values of 3.068, 0.048 and 2.089, and median values of 1.640, 0.157, and 0.527 respectively. Given these are all loss making firms, net income to total assets (ROA) exhibits a mean of -0.618 and a median of -0.219. Further, Table 1 shows that 78.7% of the firms had a loss in the preceding year (LLOSS) and that 18.9% of the firms have negative equity (NEGEQ).

Table 1 also shows that 12.1% of the firms in the sample belong to the materials sectors (MATERIALS), and that 27.4% 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 (71.4%) of the firms in the sample are US firms, and that Australian and UK firms represent 17.2% and 11.4% of the sample, respectively. Table 2, Panel B, shows that 42% of the firms were audited by NONTW audit firms and 58% 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 (54.4% and 60.3%, respectively). Table 2, Panel C, shows that of the observations in the sample, 0.5% were audited by Arthur Andersen, 8.8% by Deloitte, 14.8% by Ernst & Young, 10.9% by KPMG, and 11.8% by PWC. Besides the individual Big N firms, 5.6% were audited by BDO and 5.7% were audited by Grant Thornton and 42% were audited by a large 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 earlier years. The difference in frequency of observations over time may be explained by limiting the sample to observations that show a current year loss and that in 2001 and 2002 there was a general higher number of loss making firms. The requirement for company matching current and prior year audit data and current and prior year financial data also manifests in fluctuations in the number of observations over time. UK financial data was also supplemented with some additional hand collections of various financial data in years with low number of observations and where such collection was feasible.

Table 3, Panel A, shows that within the sample there are a total of 4,820 (25.2%) observations that received a going concern opinion of which 1,482 (7.7%) were first time going concern opinions and 3,338 (17.4%) were recurring going concern opinions. The sample has 13,566 (70.8%) observations with clean audit opinions, 770 (4%) 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 (27.8%), followed

by Australia (22.9%) and then the United Kingdom (12%). Table 3, Panel B, shows audit opinion by audit firm type. The non-networked (NONTW) audit firms in the sample issue a higher proportion of going concern opinions (43%) than the audit firm networks (NTW) (12.3%). Table 3, Panels C and D, shows type of audit opinion issued in the time periods 2001-2003 and 2004-2006, respectively. There is a higher frequency of recurring going concern opinions in the later time period (19.6%) than in the earlier one (15.7%), but a smaller percentage of first time going concern opinion during 2004-2006 (6.7%) compared to 2001-2003 (8.6%).

[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 \$69.229 million; median \$4.282 million) are significantly smaller than the observations in the sample that received clean audit opinions (mean \$258.912 million; median \$47.950 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 (.874), WC (-.901) and CURRENT (-.964) and NEGEQ (.619). In addition WC shows high correlation with LEV (-.684) and CURRENT (.934). CURRENT also shows high correlation with QUICK (.848). 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 CURRENT 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.¹¹ 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 NTW audit firms and SIZE (.565). None of the pairwise correlation coefficients between the variables of interest that are not 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

¹¹ 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 to the auditor reporting behaviour on going concern opinions. Variance Inflation Factors are examined for the variables of interest.

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 subsamples using the Wald test, but also inferred from comparisons of significance levels and the magnitude of the effect¹² (Ai and Norton 2003; Liao 2004).¹³

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]

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 PBANK, SIZE, LEV, WC, QUICK, ROA, LLOSS, NEQUITY and LOPINION are all significant ($p < .05$) and in the predicted direction. INFOTECH is significant ($p < .05$) and is negatively associated with going concern opinions. The variables Δ LEV and

¹² 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).

¹³ The intuition from linear models does not extend to nonlinear models, and a significant product term in a nonlinear model does not necessarily infer interaction effects. In fact, Ai and Norton (2003) show that the interaction effect in nonlinear models does not equal the marginal effect of a product term, can be of opposite sign, and its significance is not calculated by standard statistical software. This is further complicated by the fact that the magnitude of the interaction effect is conditional on the independent variables, unlike a product term in the linear model. As such, separate models will be estimated for sub-samples and coefficients will be compared across the sub-samples to infer interaction effects (The formal test for equality of single pairs of coefficients across two logit models is discussed by Liao 2004). Significant differences in coefficients across the sub-samples will indicate significant interactions and the magnitude will be inferred from comparisons of the effect. Thus, the results are presented without sacrificing conciseness while still doing justice to the complexities of the nonlinear logit model. Further, by estimating the models for each sub-sample separately, allowance for any structural differences in regression functions across the sub-samples is made. Homogeneity of residual variation is assumed.

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.

MATERIALS are not significant variables in the baseline model.¹⁵ The variable CURRENT is significant, but not in the expected direction. 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 negative and significant for the UK ($p < .05$, two-tailed) and marginally significant for Australia ($p < .10$, two-tailed) and the effect suggest that in comparison to auditors in the United States, auditors in the United Kingdom and Australia are 1.9 and 6 percentage points less likely to issue a going concern modification.¹⁶ Consequently, Model 2 fails to support the null hypothesis. The results from Model 2 are not fully confirmed in Model 3 after controlling for time period and type of audit firm ($p < .05$, two-tailed, for UK, but AUS is insignificant). However, this does suggest that there are country differences in propensity to issue going concern modifications and that these are influenced by time and type of audit firm. In sum, the results from Table 5 reject the null hypothesis of no difference in propensity to issue going concern modified opinions and suggest that the propensity to issue a going concern modification does vary between these three countries and is higher in the United States.

Table 6 presents the result of investigating if 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 sub-samples 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]

In Model 1, the variables AUS and UK are negative and significant ($p < .05$, one-tailed). In contrast, only the variable AUS is significant ($p < .05$, one-tailed) in Model 2, but loads positive in comparison to USA that is included in the constant. The coefficients on UK and AUS from estimating Models 1 and 2 suggest that country differences in the

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 the median values per Table 1, the discrete change in predicted probability for UK is -4.2 pp and -1.4 pp for AUS.

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 Australia. Further, in Model 1, the effects suggest that auditors from the United Kingdom and Australia are 5.9 and 10.1 percentage points less likely to issue going concern opinions than their counterparts in the United States¹⁷. The differences in probability have decreased to 3.9 percentage points more likely for Australia and only 2.4 percentage points less for United Kingdom in Model 2.¹⁸ Consequently, the inequality in estimated probability to issue a going concern opinion among the three countries for firms that are not members of international networks is 10.1 percentage points, whereas the inequality in estimated probability among the three countries for firms that are members of international networks is 6.1 percentage points. As a formal test of difference, the Wald statistic confirms this, and shows that the coefficients on AUS and UK are significantly ($p < .05$) different across the two Models and thus indicate a positive interaction effect between country variables and firms that are members of international networks. 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

¹⁷ Holding all variables at the median values per Table 1, the discrete change in predicted probability for UK is -7.8 pp and -4.7 pp for AUS.

¹⁸ Holding all variables at the median values per Table 1, the discrete change in predicted probability for UK is -1.4 pp and 2.3 pp for AUS.

¹⁹ Interestingly, there is a discrepancy in pseudo r^2 between the two models. The variables included in the models accounts for 49.5% for the variations in going concern modifications in Model 1, but only 37.2% in Model 2, according to MacFadden's r^2 . In contrast, a larger number of the individual variables are significant in Model 2 and the probability to observe a going concern modifications when all variables are held at mean values as per Table 1 is comparable (.1982 for Model 1 and .1693 for Model 2). It is, however, difficult to pin-point the exact reason for this discrepancy in the overall fit of the Models. One possible explanation is that the observations, with respect to this model, for network firms are simply noisier. Another possible explanation is that there may be some omitted variables: for example, clients of audit firm networks may be comparable more complex – and subsequently make the auditor's evaluation of the going concern modifications more complex – and that the models fail to adequately control for this difference in complexity. On the other hand, using Akaike information criterion (AIC) as a measure of the goodness of fit – where lower AIC value signifies better fit – suggest that the Model variables fit the audit firm network observations better (Model 2's AIC=.470) than the non-network observations (Model 1 AIC =.694). This partially highlight that overall fit measures in non-linear models are somewhat problematic and only provides a *rough* index of whether a

Table 7 presents the results of examining H3 – namely, that any 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 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, the both country variables are insignificant. The estimated magnitude of the country differences 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 7.9 and 2.9 percentage points less likely to issue going concern opinions than their counterparts in the United States.²⁰ The differences in probability in Model 2 have decreased to 1.0 percentage points less for the variable UK and 2.1 percentage points more for the variable AUS.²¹ That is, the inequality in estimated probability to issue a going concern opinion among the three countries in the earlier time period is 7.9 percentage points, whereas the inequality in estimated probability among the three countries in the latter period is 3.1 percentage points. The Wald statistic shows that the coefficient on UK and AUS are significantly ($p < .05$) different across the two Models and indicate a positive interaction effect between country variables and the 2004-2006 period. Together the results provide 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

model is adequate (Long 1997). A pseudo r^2 of 37.0% is still comparable to the overall fit of most of the models used in prior literature, and the estimates of country differences are nevertheless consistent *within* each of the sub-samples. The Wald test of equality of coefficients across the sub-samples takes into account the variance of the coefficients.

²⁰ Holding all variables at the median values per Table 1, the discrete change in predicted probability for UK is -6.8 pp and -2.6 pp for AUS.

²¹ Holding all variables at the median values per Table 1, the discrete change in predicted probability for UK is -0.7 pp and 1.6 pp for AUS.

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, the UK variable is negative and significant ($p < .05$, two-tailed) in both models. The Wald statistic, however, is not significant. In 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, however, insignificant. Overall, this suggests that differences in propensity to issue going concern modifications exist between countries.

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 the analysis of first-time going concern modifications (15,048 observations), the variable AUS is insignificant in Table 5, Model 2, but positive and significant in Model 3. The sign and significance of the variable UK remains the same in Table 5. The results for Tables 6 and 7 show that international audit networks and the latter time-period have a significant positive moderating effect on both the variables UK and AUS.

Limiting the sample to observations that have both a current year loss and negative cash flow from operations (12,746 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 (2,479 observations), the variable UK is no longer significant in the overall sample (Table 5). In Table 6, international audit networks have only a significant and positive moderating effect on the variable UK, and Table 7 shows no significant moderating effects. Thus, the results exhibited in Tables 5 to 7 are somewhat sensitive with respect to the imposed sample restriction. 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 of continuous variables as these are less sensitive to outliers and eliminate common transitory distress characteristics of broad economic and industry forces (Kane et al. 1998). The results are qualitatively the same, except for the variable AUS in Model 2, Table 5 which is no longer significant. Thus, the results are relatively robust

with regard to robust standard errors and rank transformations of the continuous variables. The results are also replicated by excluding all materials and information technology firms because of their different characteristics. When all firms are dropped (11,588 observations), there is no significant country difference between Australia and the United States in the overall sample. Table 6 and Table 7 still show a significant and positive moderating effect on the country difference between Australia and the United States. 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 and technology firms. The analysis is also replicated after excluding all Arthur Anderson observations (leaving 19,063 observations), the results are unaffected. When a Big N variable representing Big N audit firms are used instead of the NTW variable that includes Big N firms as well as BDO and Grant Thornton, the results in Tables 5 to 7 remains unchanged, although the results with respect to hypothesis two show that Big N audit firms have an even stronger moderating effect on country differences in propensity to issue going concern modifications. When Model 2, Table 5, is replicated for each of the international audit firm networks (not tabulated), the only significant AUS variable is for EY and BDO which show a positive coefficient. The variable UK fails to show that there is any significant country difference between United Kingdom and the United States for any of the individual international network firms. With respect to hypothesis three, when the sub-samples are estimated using different “cut-off points” for the two periods – the early period consist of 7,571 observations from 2001 to 2002 only and the latter periods consist of 11,586 observations from 2003 to 2006, as well as when the early period consist of 13,610 observations from 2001 to 2004, and the latter periods consist of 5,547 observations from 2005 to 2006 only – the latter period country variables still exhibit smaller coefficients than in the earlier period. However, the differences in coefficients across the two periods are most prominent when 2001 to 2002 observations represent the early period and the 2003 to 2006 observations represent the latter period. Lastly, hypotheses two and three are tested by using conventional product terms in both a linear probability model with heteroskedasticity robust standard errors and in a logit model.²² The results in Tables 6 and 7 are

²² It is acknowledged that inferences on these alone should be viewed with both caution and scepticism (Ai and Norton 2003). Nevertheless, when the corrected interaction effect of these product terms in the logit model was estimated one at a time by the method proposed by Ai and Norton (2003), the inferences with respect to hypotheses two and three still remain unchanged.

confirmed, as all interactions terms show positive coefficients and all are significant ($p < .01$, one-tailed).

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 19,157 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 and 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=19,157)

Dependent Variable	Mean	Median	Min	Max	Std. Dev.	Skewness
OPINION	0.252	0	0	1	-----	-----
Independent variables	Mean	Median	Min	Max	Std. Dev.	Skewness
PBANK	-11.741	-7.651	-54.899	13.306	15.504	-1.240
ASSETS (US\$ Mil.)	211.187	26.263	0.490	1821.635	447.903	2.765
LEV	0.742	0.506	0.045	3.457	0.823	2.160
ΔLEV	0.389	0.111	-0.649	3.241	0.912	1.887
CURRENT	3.068	1.640	0.110	14.188	3.624	1.914
WC	0.048	0.157	-2.148	0.799	0.667	-1.992
QUICK	2.089	0.527	0.004	12.451	3.332	2.042
ROA	-0.618	-0.219	-3.925	-0.010	0.982	2.383
MATERIALS	0.121	0	0	1	-----	-----
INFOTECH	0.274	0	0	1	-----	-----
LLOSS	0.787	1	0	1	-----	-----
NEGEQ	0.189	0	0	1	-----	-----
LOPINION	0.214	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	3,297	17.21
UK	2,181	11.38
US	13,679	71.40
Total	19,157	

PANEL B: BY AUDIT FIRM TYPE AND COUNTRY

Audit Firm	All Firms		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
NONTW	8,046	42.00	6,234	45.57	504	23.11	1,308	39.67
NTW	11,111	58.00	7,445	54.43	1,677	76.89	1,989	60.33
Total	19,157		13,679		2,181		3,297	

PANEL C: BY AUDIT FIRM AND COUNTRY

Audit Firm	All Firms		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
AA	94	0.49	10	0.07	57	2.61	27	0.82
DT	1,688	8.81	1,150	8.41	287	13.16	251	7.61
EY	2,830	14.77	2,060	15.06	229	10.50	541	16.41
KPMG	2,086	10.89	1,315	9.61	360	16.51	411	12.47
PWC	2,252	11.76	1,452	10.61	414	18.98	386	11.71
BDO	1,073	5.60	712	5.21	142	6.51	219	6.64
GT	1,088	5.68	746	5.45	188	8.62	154	4.67
OTHER ¹	8,046	42.00	6,234	45.57	504	23.11	1,308	39.67
Total	19,157		13,679		2,181		3,297	

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	3,833	20.01	2,890	21.13	446	20.45	497	15.07
2002	3,738	19.51	2,726	19.93	437	20.04	575	17.44
2003	3,145	16.42	2,271	16.60	398	18.25	476	14.44
2004	2,894	15.11	2,008	14.68	347	15.91	539	16.35
2005	2,882	15.04	1,958	14.31	311	14.26	613	18.59
2006	2,665	13.91	1,826	13.35	242	11.10	597	18.11
Total	19,157		13,679		2,181		3,297	

TABLE 3: DESCRIPTIVE STATISTICS FOR DEPENDENT VARIABLE

PANEL A: TYPE OF AUDIT OPINION BY COUNTRY

Audit Opinion	All Countries		AUS		UK		US	
	#obs	%	#obs	%	#obs	%	#obs	%
FIRST TIME GC OPINION	1,482	7.74	340	10.31	110	5.04	1,032	7.54
RECURRING GC OPINION	3,338	17.42	414	12.56	153	7.02	2,771	20.26
FIRST TIME CLEAN OPINION	771	4.02	198	6.01	48	2.20	525	3.84
RECURRING CLEAN OPINION	13,566	70.81	2,345	71.13	1,870	85.74	9,351	68.36
Total	19,157		3,297		2,181		13,679	

PANEL B: AUDIT OPINION BY AUDIT FIRMS

Audit Opinion	NONTW		NTW	
	#obs	%	#obs	%
FIRST TIME GC OPINION	794	9.87	688	6.19
RECURRING GC OPINION	2,664	33.11	674	6.07
FIRST TIME CLEAN OPINION	427	5.31	344	3.10
RECURRING CLEAN OPINION	4,161	51.72	9,405	84.65
Total	8,046		11,111	

PANEL C: AUDIT OPINION BY COUNTRY AND TIME PERIOD 2001-2003

Audit Opinion	All Countries		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
FIRST TIME GC OPINION	918	8.57	686	8.70	58	4.52	174	11.24
RECURRING GC OPINION	1,682	15.69	1,451	18.40	62	4.84	169	10.92
FIRST TIME CLEAN OPINION	378	3.53	277	3.51	16	1.25	85	5.49
RECURRING CLEAN OPINION	7,739	72.21	5,473	69.39	1,146	89.39	1,120	72.35
Total	10,717		7,887		1,282		1,548	

PANEL D: AUDIT OPINION BY COUNTRY AND TIME PERIOD 2004-2006

Audit Opinion	All Countries		US		UK		AUS	
	#obs	%	#obs	%	#obs	%	#obs	%
FIRST TIME GC OPINION	564	6.68	346	5.97	52	5.78	166	9.49
RECURRING GC OPINION	1,656	19.62	1,320	22.79	91	10.12	245	14.01
FIRST TIME CLEAN OPINION	393	4.66	248	4.28	32	3.56	113	6.46
RECURRING CLEAN OPINION	5,827	69.04	3,878	66.95	724	80.53	1,225	70.04
Total	8,440		5,792		899		1,749	

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

	Mean		t-test	Median		χ^2
	GC Firms	Clean Firms	<i>p-value</i>	GC Firms	Clean Firms	Median test <i>p-value</i>
PBANK	-1.432	-15.207	.000	-1.670	-9.659	.000
ASSETS (US\$ Millions)	69.229	258.912	.000	4.282	47.950	.000
LEV	1.443	0.507	.000	0.983	0.417	.000
Δ LEV	0.712	0.280	.000	0.303	0.079	.000
CURRENT	1.276	3.670	.000	0.567	2.070	.000
WC	-0.574	0.257	.000	-0.229	0.236	.000
QUICK	0.733	2.545	.000	0.101	0.844	.000
ROA	-1.485	-0.326	.000	-0.889	-0.147	.000
MATERIALS	0.118	0.122	.460	0	0	.460
INFOTECH	0.266	0.276	.171	0	0	.171
LLOSS	0.911	0.745	.000	1	1	.000
NEGEQ	0.490	0.087	.000	0	0	.000
LOPINION	0.693	0.054	.000	1	0	.000
SAMPLE SIZE	4,820	14,337		4,820	14,337	

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	-0.465	.146		-0.268	.419		-0.304	.345	
PBANK	0.210	.001	.975	0.219	.001	.980	0.214	.000	.978
SIZE	-0.190	.000	-.223	-0.197	.000	-.232	-0.159	.000	-.186
LEV	-1.568	.000	-.379	-1.644	.000	-.392	-1.600	.000	-.383
ΔLEV	0.050	.108	.029	0.058	.066	.033	0.056	.076	.032
CURRENT	0.694	.002	.972	0.725	.001	.975	0.707	.001	.973
WC	-0.941	.000	-.528	-0.964	.000	-.541	-0.929	.000	-.519
QUICK	-0.110	.000	-.145	-0.110	.000	-.145	-0.105	.000	-.139
ROA	-0.547	.000	-.429	-0.532	.000	-.416	-0.542	.000	-.423
MATERIALS	-0.010	.900	-.001	0.023	.783	.003	0.022	.787	.003
INFOTECH	-0.298	.000	-.041	-0.306	.000	-.042	-0.304	.000	-.041
LLOSS	0.352	.000	.047	0.329	.000	.044	0.334	.000	.044
NEGEQ	0.807	.000	.134	0.789	.000	.131	0.795	.000	.131
LOPINION	2.767	.000	.543	2.749	.000	.539	2.736	.000	.536
P2004-2006							-0.027	.604	-.004
AUS				-0.138	.068	-.019	-0.039	.620	-.006
UK				-0.473	.000	-.060	-0.394	.000	-.050
NTW							-0.273	.000	-.039
N	19157			19157			19157		
Pseudo r2	.494			.496			.496		
Adj. Pseudo r2	.493			.494			.495		
Log likelihood	-5466.5554			-5450.9901			-5442.1323		
Prob>chi2	.000			.000			.000		
Pr(y=1 x)	.1718			.1715			.1702		

Notes to Table 5:

1. p-values 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 H2

VARIABLES	NO NETWORKS MODEL 1			INT'L NETWORKS MODEL 2		
	coef.	P> z	ΔPr	coef.	P> z	ΔPr
CONSTANT	0.270	.649		-1.420	.000	
PBANK	0.305	.009	.998	0.112	.068	.768
SIZE	-0.137	.000	-.178	-0.182	.000	-.212
LEV	-2.108	.001	-.517	-0.684	.074	-.216
ΔLEV	0.080	.043	.051	-0.013	.813	-.007
CURRENT	1.012	.016	.988	0.430	.055	.906
WC	-0.799	.000	-.469	-1.579	.000	-.809
QUICK	-0.081	.033	-.130	-0.150	.001	-.177
ROA	-0.476	.000	-.388	-0.749	.000	-.593
MATERIALS	0.033	.791	.005	0.022	.847	.003
INFOTECH	-0.185	.019	-.029	-0.486	.000	-.064
LLOSS	0.295	.005	.045	0.349	.001	.046
NEGEQ	0.544	.000	.095	0.740	.000	.120
LOPINION	2.742	.000	.560	2.644	.000	.516
P2004-2006	-0.007	.920	-.001	-0.011	.887	-.002
AUS	-0.405	.000	-.059	0.251	.017	.037
UK	-0.770	.000	-.101	-0.182	.057	-.024
N	8046			11111		
Pseudo r2	.495			.372		
Adj. Pseudo r2	.492			.368		
Log likelihood	-2776.6268			-2595.7527		
Prob>chi2	.000			.000		
Pr(y=1 x)	.1982			.1693		

Notes to Table 6:

1. p-values for UK and AUS 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. Ratio	Wald	df	p-value
βAUS	M1=M2	M1≠M2	-0.619	16.653	1	.000
βUK	M1=M2	M1≠M2	0.236	9.075	1	.003

TABLE 7: MULTIVARIATE RESULTS TO TEST H3

VARIABLES	PERIOD 2001-2003			PERIOD 2004-2006		
	MODEL 1			MODEL 2		
	coef.	P> z	ΔPr	coef.	P> z	ΔPr
CONSTANT	0.557	.357		-0.805	.024	
PBANK	0.376	.002	1.000	0.126	.038	.819
SIZE	-0.123	.000	-.142	-0.222	.000	-.253
LEV	-2.557	.000	-.547	-1.027	.006	-.273
ΔLEV	0.126	.004	.074	-0.017	.719	-.009
CURRENT	1.267	.003	.995	0.416	.060	.898
WC	-1.205	.000	-.665	-0.570	.000	-.293
QUICK	-0.101	.015	-.134	-0.133	.002	-.158
ROA	-0.447	.000	-.338	-0.648	.000	-.509
MATERIALS	0.124	.267	.018	-0.102	.409	-.014
INFOTECH	-0.286	.000	-.039	-0.328	.001	-.043
LLOSS	0.348	.000	.046	0.271	.023	.035
NEQUITY	0.744	.000	.121	0.880	.000	.143
LOPINION	2.640	.000	.515	2.840	.000	.549
AUS	-0.215	.024	-.029	0.152	.094	.021
UK	-0.666	.000	-.079	-0.071	.298	-.010
NTW	-0.307	.000	-.044	-0.201	.032	-.028
N	10717			8440		
Pseudo r2	.481			.522		
Adj. Pseudo r2	.478			.519		
Log likelihood	-3083.2944			-2321.3198		
Prob>chi2	.000			.000		
Pr(y=1 x)	.1689			.1633		

Notes to Table 7:

1. p-values for UK and AUS 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	-0.704	5.373	1	.020
βUK	M1=M2	M1≠M2	0.106	10.660	1	.001