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

(Previously titled: International Consistency and Convergence in the Application of International Auditing Standards: Evidence from Going Concern Modifications)

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Contents:

Final Progress Report

The following document summarises our research findings addressing the research question, to what extent is there consistency in the implementation (application) of audit reporting standards related to going concern across various countries and to what extent do audit firm networks promote international consistency? Based on our research proposal we have collected and analysed audit reports from Australia, US and UK and for two code law countries, France and Germany for the period 2001-2009. We have structured our final report of our research findings based on feedback from our second progress report as an executive summary, a short-form description of our research findings and a long-form research findings. These documents follow.

We would like to thank members of the Program Advisory Committee, the IAASB, IAAER and ACCA for their support of our project. We have found the feedback and advice received throughout the project to have been timely and helpful and we hope that our final report provides some useful input into the decision-making processes of the IAASB.

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1. Executive Summary

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

Elizabeth Carson, Roger Simnett and Per Christen Trønnes

Using a sample of 27,703 observations over the period 2001 to 2009 from the United States, the United Kingdom, Australia, France and Germany, this study investigates the consistency of audit reporting behaviour across countries, between audit firms and over time. The first three countries have been chosen because they have very similar culture and legal systems, and therefore represent a worst-case scenario for examining consistency in the application of ISAs in that inconsistencies will not be because of these factors, but despite these factors. France and Germany have been selected as being representative of code law countries. We define consistency as the uniformity of the auditor's decision to modify an audit report for reasons of going concern holding a range of financial characteristics constant. We find that there are significant differences in auditor reporting behaviour between countries and legal regimes, 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 there are still future challenges in ensuring international consistency in audit reporting behaviour, especially for audit firms that are not members of international audit networks.

2. Short-Form Research Findings

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

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Research Objective

To what extent is there consistency in the implementation (application) of audit reporting standards in relation to going concern across various countries and legal regimes and to what extent do audit firm networks promote international consistency? We define consistency as the uniformity of the auditor's decision to modify an audit report for reasons of going concern holding a range of financial and risk based characteristics constant using models well established in the academic literature. The IAASB has made significant progress since its inception in writing a single set of high-quality, principles-based international auditing standards. This is a necessary but only the first step towards achieving consistency of audit practice across the globe.

Research Methodology

Using a sample of 27,703 listed companies available on Compustat which have reported losses over the period 2001 to 2009 from the United States, the United Kingdom, Australia, France and Germany, we obtain financial data and collect audit opinions to enable us to investigate the consistency of audit reporting behaviour across countries and legal regimes, between audit firms and over time. The first three countries have been chosen because they have very similar culture and legal systems, and therefore represent a worst-case scenario for examining consistency in the application of ISAs in that inconsistencies will not be because of these factors, but despite these factors. France and Germany have been selected as being representative of code law countries.

Descriptive Results

Of the five countries over this period, France has the lowest percentage of loss-making firms (on average, 22%), whilst Australia has the highest with a mean of 59%. A clear trend of increasing loss-making firms is observed for all countries over the global financial crisis period (2007-2009). For loss-making firms, the annual going concern modification rate ranges from a low of

8% (France in 2009) to 28% (Australia in 2009). We calculate a probability of bankruptcy score which is a composite measure of a firm's financial health. The highest probability of bankruptcy for loss-making firms is observed in the US in 2002 (during the dot-com stock market bubble) and the lowest is observed in Australia in 2006/2007 (a time of resources boom in the mining dominated economy). Of interest is the ratio of going concern modified opinions issued relative to the financial distress measure calculated. This analysis reveals that auditors are least conservative at reflecting financial distress in modified opinions in France, then the US and UK, Germany and most conservative in Australia. Given that much of the risk associated with mining companies is not reflected on the balance sheet (that is, it is related to future successful research and development endeavours and commodity prices) it is not surprising that Australian auditors appear to be the most conservative on these measures. Whilst these descriptive findings are interesting and *prima facie*, these results indicate that there is a lack of consistency in audit reporting behaviour across countries and across time. In our view, the multivariate analysis performs a more sophisticated job of analyzing the underlying relationships in the data and controlling for a broad range of financial and other risk-based characteristics to enable a better understanding of level of consistency between auditors in different countries, across time and across different types of audit firms.

Multivariate Results

There is a significant academic literature which uses publicly available information to model the auditor's going concern decision. We use a model based on this prior literature (see e.g. Hopwood et al. 1994; Carcello and Neal 2000; DeFond et al. 2002; Carey and Simnett 2006) to provide insight into whether, holding all else constant (that is the financial characteristics of the firms in the sample) there are differences in auditor reporting behaviour between countries, across legal frameworks, types of audit firms and whether these differences have changed over time. We believe that these formal tests, while being complex, enable more reliable conclusions to be drawn on these issues. The descriptive results discussed above reveal systematic differences between the countries examined and as such, a multivariate approach which controls for these factors is more appropriate.

Results for RQ1: Are there differences between countries in the propensity to modify the audit opinion for reasons of going concern?

To examine whether there are systematic differences in auditors' propensities to issue going concern opinions between countries, holding the factors known to be associated with going concern modification constant, we include all observations from all countries in a single model and we can clearly answer that there are differences between these five countries. In particular, we can identify that relative to auditors in the other countries examined, for a given set of characteristics, auditors in Germany are most likely to modify their audit report for reasons of going concern, with Australian auditors the next most likely and both of these countries are statistically significantly different from the United States. There is no significant difference between the US and France, however auditors in the UK are significantly less likely to issue a going concern modification for a given level of financial distress relative to auditors in the US.

From a review of the individual country level models, it is clear that auditors weight differently the variables analysed in the going concern prediction model. There is consistent support that if a client received a going concern modified opinion in the previous financial year (LOPINION) that auditors are more likely to issue a going concern opinion in the current financial year. Also extent of current year losses (ROA, recall that all firms in the sample had losses so for all observations ROA is negative) is associated with increased likelihood of being issued a going concern modification across all countries. Some variables are fairly consistently important across countries, for example, the larger the assets of a client (SIZE) the less likely a going concern opinion will be issued (with France as an exception to this). Another consistent finding is that high levels of working capital (WC) are associated with a lower likelihood of going concern issuance in four of the five countries (Germany being the exception). Another interesting finding is that high leverage (LEV) is associated with going concern issuance in France, Germany and the UK (but not in Australia or the US). This would be consistent with a greater focus on creditor rights particularly in France and Germany.

Results for RQ2: Are there systematic differences between countries with a code law tradition (France, Germany) compared with those from a common law tradition (Australia, UK, US)?

We find that holding all other factors constant, firms in code law countries are significantly more likely to receive going concern modified audit opinions relative to those in common law countries. A more accurate description when we combine these results with our findings on RQ1, we would conclude that the result that firms in code law countries are on average more likely to receive going concern modified opinions is primarily driven by German auditors being more conservative than French auditors.

Results for RQ3: What is the role of global audit firm networks in moderating such differences between countries?

We examine the role of networks across the two groups of legal regimes. For common law countries we find evidence of increased consistency of going concern issuance across countries by audit firms that are members of networks compared to audit firms which are not members of networks. Specifically we find that the difference between the three countries (measured by the difference between the lowest and highest co-efficient) is lower for network member firms compared to non-network member firms showing that there is less between country variation in the modification practices of network member firms. A similar finding is drawn for code law countries. This provides some preliminary evidence that global audit firm networks provide a more consistent approach to the application of going concern audit reporting standards.

Results for RQ4: Have differences between countries changed over time?

Our results suggest that, relative to 2001 and holding other factors constant, auditors are significantly more likely to issue going concern opinions in 2007 (at the beginning of the global financial crisis) and less likely to issue going concern opinions in 2003 and 2006 (times of relative economic prosperity) and 2009 (towards the end of the global financial crisis). We further analyse these differences in time period across countries and find for common law countries, the differences between the three countries decrease from 2001-2002 to the smallest difference between countries in 2003-2004 a time of relative economic prosperity and prior to adoption of International Financial Reporting Standards. The difference between countries increased slightly in 2005-2006 and despite the global financial crisis which would increase differences between countries due to the differing commencement and actual impact of the crisis we find a decrease in 2007-2009. This suggests that differences between common law countries

are decreasing over time. This analysis is repeated for code law countries. Starting from a later time period (2003-2004), we find that the greatest difference between France and Germany occurs in 2005-2006 and that this difference declines in 2007-2009 to a level lower than that observed in 2003-2004. Again, this provides evidence that differences in the application of audit reporting standards as they relate to going concern between code law countries are diminishing over time.

Additional Analysis: Relationship between Country Differences and Clients' Level of Financial Distress

We further examine how country differences changes depending on audit clients' level of financial distress. Although country differences exist at the various levels of financial distress, we find that the country differences between auditors are much less pronounced if the clients' level of financial distress is either extremely high or very low. In such situations, there is less ambiguity in the auditors' decision as to whether to issue a going concern or not.

Conclusion

Overall, we find that there are significant differences in auditor reporting behaviour between countries and legal regimes, 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. While these differences have narrowed over time and for members of network firms, differences in audit reporting behaviour remain between countries. The observed lack of consistency in audit reporting behaviour across national boundaries is vital information for regulators, financial users, and the audit firms to understand and to act upon. To the extent that there are valid reasons for these differences these should be documented and communicated so that users of audit reports can take these into account in their decision-making behaviour. To the extent that there are unanticipated differences, the IAASB needs to identify these and communicate them back to the appropriate national bodies for education and/or corrective action. Our findings are of importance to regulators, financial statement users and audit firms alike. 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 there are still future challenges in

ensuring international consistency in audit reporting behaviour, especially for audit firms that are not members of international audit networks.

3. Long-form Research Findings

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Summary of Research Findings

Using a sample of 27,703 observations over the period 2001 to 2009 from the United States, the United Kingdom, Australia, France and Germany, this study investigates the consistency of audit reporting behaviour across countries, between audit firms and over time. The first three countries have been chosen because they have very similar culture and legal systems, and therefore represent a worst-case scenario for examining consistency in the application of ISAs in that inconsistencies will not be because of these factors, but despite these factors. France and Germany have been selected as being representative of code law countries. We define consistency as the uniformity of the auditor's decision to modify an audit report for reasons of going concern holding a range of financial characteristics constant. We find that there are significant differences in auditor reporting behaviour between countries and legal regimes, 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 there are still future challenges in ensuring international consistency in audit reporting behaviour, especially for audit firms that are not members of international audit networks.

1. Research Question

To what extent is there consistency in the implementation (application) of audit reporting standards in relation to going concern across various countries and to what extent do audit firm networks promote international consistency? Our research directly addresses Issue 3 in the Programme Objectives as it examines the international adoption and implementation of International Standards on Auditing. This research project assists in addressing the work program issue of "responding to concerns about the implementation of the standards by activities designed to improve the consistency with which they are applied in practice" (IAASB 2009, 5).

2. Research Objective

The IAASB has made significant progress since its inception in writing a single set of high-quality, principles-based international auditing standards, with especial importance for listed and public interest entities. This is a necessary first step towards achieving consistency of audit practice across the globe. The expectation of users of financial statements is that uniform standards will result in uniform application of these standards across national boundaries and firms. Our research provides evidence to regulators and users by empirically investigating whether there is consistency in the application of auditing reporting standards across countries, between audit firms and over time. This will enable us to examine forces that impede or promote consistency of application of auditing standards.

The results of our research aim to inform the process of international adoption and implementation of ISAs. In particular, we seek to examine the consistency of audit reporting practices in the presence of near identical auditing standards with respect to auditors' evaluation of the going concern assumption across five key countries (UK, USA, France, Germany and Australia). While auditing standards are harmonised in over 100 countries (that is, *de jure* harmonisation), there are issues to be considered regarding harmonisation of audit practices of corporations and audit firms within a given auditing framework (namely, *de facto* harmonisation). Despite numerous studies on audit reporting behaviour, audit quality and harmonisation of accounting practices, no identified academic research has yet been conducted which examines whether international auditing standards are inconsistently applied or interpreted. Our study aims to give some empirical measurement of the degree to which auditor

behaviour has become uniform given the existence of similar requirements in auditing standards. In essence, we seek to objectively evaluate the success or otherwise of ISAs' ability to achieve consistency in audit reporting behaviour. Possible areas, trends and factors may be identified where IAASB efforts should be concentrated in the future in order to achieve international consistency in audit reporting behaviour.

3. Motivation

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 borders[1], maintaining a narrow national view of financial reporting and auditing is considered no longer sustainable (Ball 2006; Nobes and Parker 2006; Camfferman and Zeff 2007). Academics, practitioners, regulatory bodies, politicians, and investors as well as public and private sector domestic and international firms are increasingly advocating the benefits[2] 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 125 countries now either claim to be using ISAs, or are in the process of implementing them into their national auditing standards (IFAC 2011a). Yet there are still potential impediments to the adoption and implementation of globally consistent auditing standards such as different regulatory and

[1] As evidenced by an increase in number of foreign listings on the world's largest stock exchanges and an increasing number of companies providing 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 requirements; easier consolidation and auditing of multinational companies; and higher economic growth (Wong 2004; Nobes and Parker 2006).

litigation risks (Hegarty et al. 2004)[3] and cultural backgrounds, as well as there being forces which potentially promote consistency of implementation such as the quality controls imposed across all members of audit firm networks (Carson 2009). We examine these issues in our research questions.

4. Our Test for International Consistency

In this research study we confine our investigation to 'consistency in issuing audit reports modified on the basis of going concern considerations'. In examining the consistency of application of international standards more broadly, we are challenged by the availability of data. We choose consistency on the basis of going concern modifications for the following reasons:

- It is observable (and publicly available);

- The basis of any modifications to the audit report for reasons of going concern considerations should be disclosed in the financial statements. As such, the report issued on the basis of going concern considerations is capable of being modelled to a relatively high degree of explanatory power, and there is a significant academic literature to support such modelling;

- The form of the audit report, especially with regards going concern considerations, is one of the most important decisions made by the auditor from the perspective of the financial statement user; and

- If there are differences (between countries, or between global audit firm networks, or over time) in the propensity to issue audit reports modified for going concern considerations, then these differences are not widely known, and are unlikely to be taken into account by any financial statement user confronted by such a modified audit report.

The auditing reporting standards related to modification for reasons of going concern for the five countries of interest are included in Appendix 1.

[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).

5. Research Questions

The following research questions are addressed in the multivariate analysis reported in detail in Appendix 3 to this report.

It is possible that systematic differences in audit reporting behaviour may arise due to differing 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 types of national regulation or levels of litigation risk. For example, in the absence of 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 national regulation and/or litigation risk between countries may be an impediment to *de facto* harmonisation of auditing.

RQ1: Are there differences between countries in the propensity to modify the audit opinion for reasons of going concern?

Although the many similarities between the institutional environments of the countries in the main analysis strengthens the internal validity of the analysis, it is nevertheless limited in its scope. Prior research has shown that country differences with regard to legal system impact accounting and auditing practices, for example, disclosure practices (Jaggi and Low 2000); earnings management (Leuz et al. 2003); and, assurance on sustainability reports (Simnett et al. 2009). It is conceivable that the application of international auditing standards in relation to audit opinion formulation may also be responsive to such factors.

Prior research has shown that in the period 1987-1991, the US had a higher going concern modification rate compared to Germany and France (Martin, 2000). Legal systems, and in particular the distinction between common law countries and code law countries are heavily correlated with the source of capital provision (LaPorta et al. 1999; 2000) and may also influence the decision to include a going concern modification when it is warranted. In code law countries, large capital providers are heavily represented on corporate boards. This enables those capital providers to obtain information directly from managers, reducing the relevance of, and demand for the auditor's inclusion of a going concern modification.

RQ2: Are there systematic differences between countries with a code law tradition (France, Germany) compared with those from a common law tradition (Australia, UK, US)?

On the other hand, any differences in audit reporting behaviour between countries 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, such reporting reduces moral hazard (Lenz and James 2007) by subjecting affiliates of the international audit firm networks to policies that promote consistent reporting behaviour and protect the reputation of the network. Further, the affiliates of international audit firm networks[4] are subject to quality assurance and internal quality reviews. They also 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). Membership of the Forum of Firms also requires consistent quality control over audit practices within the network irrespective of national borders (IFAC 2011b). 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). By contrast, smaller domestically located audit firms do not benefit from the inputs from an international audit firm network, nor do they engage in audits of large multinational corporations. Further, such firms are not under the stringent conditions imposed by Forum of Firms.

RQ3: What is the role of global audit firm networks in moderating such differences between countries?

In addition, many of the world's major capital markets have come to accept the use of ISAs for foreign issuers. As a result, the international audit firm networks have become more prevalent

[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 environments, as well as differing legal regulations (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).

and integrated (Lenz and James 2007; Advisory Committee on the Auditing Profession 2008), and the Forum of Firms (created in 2002) has become more established with its members committed to the promotion of ISAs (IFAC 2011a). The formation of the IAASB in 2002 also signified a global approach to standard setting in the auditing environment which has been adopted by a large number of countries over this time period such that currently more than 125 countries use or are in the process of adopting ISAs as issued by the IAASB. Several studies report that auditors in the United States have changed their audit reporting behaviour and have become more likely to issue going concern opinions since 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 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), the 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 the subprime crisis in late 2007 – have transformed the global legal environment that auditors operate in and indicate that the issue of litigation is not unique to the United States.

RQ4: Have differences between countries changed over time?

6. Research Methodology

The choice of situating this study in the audit reporting environment is a deliberate one. The audit report is the only judgement made by the auditor that is publicly available for users of financial statements to observe. The audit report is the culmination of all the judgements made by the auditor throughout the audit process. It is the principle means of communicating the work undertaken by the auditor and the results of such work to financial statement users. 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 (DeFond et al. 2002). Inherent to the issuance of a going concern modification is the auditor’s subjective judgement 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 from disagreements with management, which can be negotiated). In this respect, the issuance of going concern modifications provides an appropriate framework for investigating consistency in application of auditing standards.

7. Descriptive Results

We have analysed going concern audit reports in five key countries (United States, United Kingdom, Australia, France and Germany) over the period 2001 to 2009. The first three countries have been chosen because they have very similar culture and legal systems, and therefore represent a worst-case scenario for examining consistency in the application of ISAs in that inconsistencies will not be because of these factors, but despite these factors. These countries are examined over the period 2001-2009. France and Germany have been selected as key economies using a code law tradition and are examined over the period 2003-2009.

Country	Legal System	Mean GDP per Capita (USD)	Wingate Litigation Index	% Energy or Materials Industry	Mean Firm Total Assets (USD)	Median Firm Total Assets (USD)
Australia	Common Law	33,151	10.00	48%	335.30	13.25
UK	Common Law	35,841	10.00	17%	1,574.85	57.05
US	Common Law	41,857	15.00	18%	8,054.01	229.23
France	Code Law - French	36,910	4.82	8%	3,970.41	138.21
Germany	Code Law - German	36,785	6.22	8%	3,722.09	120.13

As shown above, the selected countries are similar in terms of GDP per capita and come from differing legal systems. In terms of auditor litigation risk, the Wingate (1997) Litigation Index provides a means of comparing insurer-assessed litigation risk across a range of countries (scale is from 1 to 15 with a maximum score of 15). On this scale, the US has the very highest level of auditor litigation risk, Australia and UK have high but similar levels of litigation risk and France and Germany have relatively lower litigation risk. Other differences between the publicly listed companies in these countries relate to industry composition – Australia has a large number of firms in the mining industry relative to the other countries examined. American publicly listed companies are very large relative to those in the other countries examined and Australian listed

companies are very small – each of these systematic differences between countries may impact the base level of profitability of firms in a country and thus, impact the baseline rate of going concern modified audit opinions issued by audit firms.

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. DeFond et al. 2002; Geiger and Rama 2003; Carey and Simnett 2006), we restrict our sample to financially distressed firms. Financially distressed firms are defined as firms with a current year loss[5].

In the following table, for each country of interest the available population of listed companies to be analysed is outlined (the number of firms with data available on Compustat), the number of firms reporting losses in each year is shown together with an analysis of the percentage of loss-making firms. The sample of firms included in our subsequent analyses is also shown – this is lower than the total number of available loss-making firms as the financial services industry is excluded as the going concern prediction models and probability of bankruptcy scores used in our analyses are not designed to be applied to firms in these industries. Firms with missing data or for whom we were unable to locate their audit opinions from commercial data providers or from the corporate annual report or website were also excluded from analysis. From this a going concern modification rate for loss making firms in each country by year can be assessed and compared to a calculated probability of bankruptcy score[6]. This enables a comparison of the level of average financial distress amongst loss making firms within a country with its modification rate.

[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 – whilst 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] The probability of bankruptcy score is calculated as $X = - 4.3 - 4.5 X_1 + 5.7 X_2 - .004 X_3$ where: X_1 = net income/total assets; X_2 = total debt/total assets; X_3 = current assets/current liabilities and then converted to a probability from the resultant Z score obtained.

Australia

Year	Compustat Total	Compustat Loss Firms	% of Loss Firms	Sample Loss Firms	GC Rate Loss Firms	Mean PBANK	Ratio of GC to PBANK
2001	1,043	601	58%	453	18%	22%	0.83
2002	1,136	672	59%	519	21%	23%	0.94
2003	1,208	671	56%	423	20%	18%	1.09
2004	1,310	718	55%	493	23%	16%	1.41
2005	1,418	810	57%	564	21%	16%	1.27
2006	1,502	856	57%	561	19%	15%	1.31
2007	1,527	938	61%	662	16%	15%	1.07
2008	1,513	972	64%	786	27%	16%	1.68
2009	1,458	999	69%	932	28%	18%	1.58
Mean			59%		21%	18%	1.24

UK

Year	Compustat Total	Compustat Loss Firms	% of Loss Firms	Sample Loss Firms	GC Rate Loss Firms	Mean PBANK	Ratio of GC to PBANK
2001	1,499	698	47%	445	8%	24%	0.33
2002	1,512	685	45%	432	9%	29%	0.32
2003	1,565	678	43%	388	10%	26%	0.39
2004	1,657	681	41%	342	15%	22%	0.68
2005	1,757	730	42%	307	16%	23%	0.70
2006	1,736	752	43%	235	15%	24%	0.61
2007	1,627	673	41%	221	13%	22%	0.57
2008	1,449	640	44%	270	19%	28%	0.69
2009	1,315	602	46%	489	20%	25%	0.82
Mean			44%		14%	25%	0.57

US

Year	Compustat Total	Compustat Loss Firms	% of Loss Firms	Sample Loss Firms	GC Rate Loss Firms	Mean PBANK	Ratio of GC to PBANK
2001	11,878	5,203	44%	2,650	22%	38%	0.57
2002	11,566	6,176	53%	2,487	22%	39%	0.58
2003	11,411	4,177	37%	2,040	20%	35%	0.57
2004	11,227	3,676	33%	1,788	21%	37%	0.56
2005	11,163	3,580	32%	1,746	22%	37%	0.61
2006	11,061	3,417	31%	1,644	21%	36%	0.59
2007	10,943	3,546	32%	1,426	18%	31%	0.59
2008	10,542	4,202	40%	1,814	21%	38%	0.56
2009	9,995	3,952	40%	2,067	19%	32%	0.60
Mean			38%		21%	36%	0.58

France

Year	Compustat Total	Compustat Loss Firms	% of Loss Firms	Sample Loss Firms	GC Rate Loss Firms	Mean PBANK	Ratio of GC to PBANK
2003	650	168	26%	82	11%	34%	0.32
2004	676	131	19%	69	14%	37%	0.39
2005	650	111	17%	66	11%	34%	0.31
2006	634	99	16%	58	10%	31%	0.34
2007	608	101	17%	64	9%	22%	0.42
2008	578	162	28%	109	14%	28%	0.49
2009	560	192	34%	130	8%	24%	0.33
Mean			22%		11%	30%	0.37

Germany

Year	Compustat Total	Compustat Loss Firms	% of Loss Firms	Sample Loss Firms	GC Rate Loss Firms	Mean PBANK	Ratio of GC to PBANK
2003	644	203	32%	148	22%	28%	0.78
2004	666	157	24%	105	20%	26%	0.78
2005	663	162	24%	111	23%	28%	0.79
2006	656	170	26%	136	26%	27%	0.97
2007	638	160	25%	131	23%	25%	0.91
2008	606	186	31%	151	27%	36%	0.75
2009	565	210	37%	159	18%	22%	0.80
Mean			28%		23%	27%	0.83

From this table it can be seen that France has the lowest percentage of loss-making firms (on average, 22%), whilst Australia has the highest with a mean of 59%. A clear trend of increasing loss-making firms is observed over the global financial crisis period (2007-2009), however the

data tabulated here is for surviving firms only, firms which did not survive are not included in this analysis (for each country there is a decline in the number of firms in the Compustat listed company total between 2008 and 2009). This is consistent with the slight reduction in going concern modification rates for some countries between 2008 and 2009. The going concern modification rate ranges from a low of 8% (France in 2009) to 28% (Australia in 2009) for loss-making firms. The probability of bankruptcy score is a composite measure of a firm's financial health. The highest probability of bankruptcy for loss-making firms is observed in the US in 2002 (during the dot-com stock market bubble) and the lowest is observed in Australia in 2006/2007 (a time of resources boom in the mining dominated economy). Of more interest is the ratio of going concern modified opinions issued relative to the financial distress measure calculated. This reveals that auditors are least conservative at reflecting financial distress in modified opinions in France, then the US and UK, Germany and most conservative in Australia. Given that much of the risk associated with mining companies is not reflected on the balance sheet (that is, it is related to future successful research and development endeavours and commodity prices) it is not surprising that Australian auditors appear to be the most conservative on these measures. Whilst these descriptive findings are interesting and *prima facie*, these results indicate that there is a lack of consistency in audit reporting behaviour across countries and across time. In our view, the multivariate analysis performs a more sophisticated job of analyzing the underlying relationships in the data and controlling for a broad range of financial and other risk-based characteristics to enable a better understanding of level of consistency between auditors in different countries, across time and across different types of audit firms.

8. Multivariate Results

We have collected data for five countries (Australia, United Kingdom, United States for the period 2001-2009 and for France and Germany for the period 2003-2009). Data were obtained for loss-making listed companies from each of these countries. Our sample consists of 27,703 observations[7] and of these 5,586 (20.1%) contain a going concern modification to the audit report. Of the sample observations, 5,393 (19.5%) are observations from Australia, 3,129 (11.3%) are from the United Kingdom, 941 (3.4 %) are from Germany, 578 (2.1%) are from

[7] Observations with total assets less than one million US$ and financial firms are excluded from the sample. Financial firms and smaller firms have a different capital structure that will affect their ratios.

France, and the United States is represented with 17,662 (63.7%) observations.[8]

There is a significant academic literature which uses publicly available information to model the auditor's going concern decision. We use a model based on this prior literature (see e.g. Hopwood et al. 1994; Carcello and Neal 2000; DeFond et al. 2002; Carey and Simnett 2006) to provide insight into whether, holding all else constant (that is the financial characteristics of the firms in the sample) there are differences in auditor reporting behaviour between countries, across legal frameworks, types of audit firms and whether these differences have changed over time. We believe that these formal tests, while being complex, enable more reliable conclusions to be drawn on these issues[9]. The descriptive results tabulated above reveal systematic differences between the countries examined and as such, a multivariate approach which controls for these factors is more appropriate.

Results for RQ1: Are there differences between countries in the propensity to modify the audit opinion for reasons of going concern?

To examine whether there are systematic differences in auditors' propensities to issue going concern opinions between countries, holding the factors known to be associated with going concern modification constant, from Table 1, All Countries Combined model we can clearly answer that there are differences between these five countries. In particular, we can identify that relative to auditors in the other countries examined, for a given set of characteristics, auditors in Germany are most likely to modify their audit report for reasons of going concern, with Australian auditors the next most likely and both of these countries are statistically significantly

[8] Australian financial data is drawn from Aspect Financial and audit data from the UNSW Audit Fee Database; for the United Kingdom, France and Germany financial data is from Compustat Global and audit data is hand-collected from annual reports through MergentOnline and various company websites; the United States financial data is drawn from Compustat NA and audit data from Audit Analytics.

[9] Our descriptive analyses are conducted at the country level and examine the relationship between a country's rate of going concern modifications and the country's average level of probability of bankruptcy. Although, Zmijewski's (1984) bankruptcy model allows us to estimate the probability of bankruptcy, it is only based on three factors (see footnote 6). This descriptive analysis also focuses on the *average* probability of bankruptcy and therefore is sensitive to differences in the distribution of client characteristics across countries. In our multivariate analysis, the analysis is firm specific: it detects the likelihood of observing a going concern modification given that particular firm's specific financial distress characteristics. In effect, we are able to discern marginal differences in firms' likelihood of being issued with a going concern modification depending on the country of domicile, while holding the remaining firm-specific distress characteristics constant. These models are described in detail and the complete empirical results are provided in Appendix 3. Further interpretation of the empirical results is provided in Appendix 4.

different from the United States. There is no significant difference between the US and France, however auditors in the UK are significantly less likely to issue a going concern modification for a given level of financial distress relative to auditors in the US.

From a review of the individual country level models, it is clear that auditors weight differently the variables analysed in the going concern prediction model. There is consistent support that if a client received a going concern modified opinion in the previous financial year (LOPINION) that auditors are more likely to issue a going concern opinion in the current financial year. Also extent of current year losses (ROA, recall that all firms in the sample had losses so for all observations ROA is negative) is associated with increased likelihood of being issued a going concern modification across all countries. Some variables are fairly consistently important across countries, for example, the larger the assets of a client (SIZE) the less likely a going concern opinion will be issued (with France as an exception to this). Another consistent finding is that high levels of working capital (WC) are associated with a lower likelihood of going concern issuance in four of the five countries (Germany being the exception). Another interesting finding is that high leverage (LEV) is associated with going concern issuance in France, Germany and the UK (but not in Australia or the US). This would be consistent with a greater focus on creditor rights particularly in France and Germany as noted in Appendix 2.

Results for RQ2: Are there systematic differences between countries with a code law tradition (France, Germany) compared with those from a common law tradition (Australia, UK, US)?

In Table 2 we compare countries with a code law tradition with those from a common law tradition. Prior research (Martin 2000) finds that there is a lower rate of going concern modification in Germany and France in 1987-1991 compared to the US. Legal systems, and in particular the distinction between common law countries and code law countries are heavily correlated with the source of capital provision (LaPorta et al. 1999; 2000) and may also influence the decision to include a going concern modification when it is warranted. In code law countries, large capital providers are heavily represented on corporate boards. This enables those capital providers to obtain information directly from managers, reducing the relevance of, and demand for the auditor's inclusion of a going concern modification. As discussed in Appendix 2 there are substantial differences in the bankruptcy procedures in code law countries compared to common

law countries. In addition, there are differences in the litigation risk levels of the common law countries selected compared to the code law countries selected (on the Wingate auditor litigation risk index noted previously, the US is assessed at the maximum level and Australia and the UK are assessed as high, whereas France and Germany are relatively lower). We find that holding all other factors constant, firms in code law countries are significantly more likely to receive going concern modified audit opinions relative to those in common law countries. The inclusion of litigation risk in the model does not change this finding. A more accurate description when we combine the results reported in Table 2 with our results from Table 1, we would conclude that the result that firms in code law countries are on average more likely to receive going concern modified opinions is primarily driven by German auditors being more conservative in their modification behaviour (more likely to modify) than French auditors.

Results for RQ3: What is the role of global audit firm networks in moderating such differences between countries?

Differences in audit reporting behaviour between countries 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). The members of the international audit firm networks participate in policies that promote consistent reporting behaviour and protect the reputation of the network as well as quality assurance and internal quality reviews. The use of common methodologies and technical guidance should also contribute to a consistent approach to application of auditing standards such as the going concern modification.

We examine the role of networks across the two groups of legal regimes. This is reported in Table 3. For the common law countries (Models 1 and 2), we find evidence of increased consistency of going concern issuance across countries by audit firms that are members of networks compared to audit firms which are not members of networks. Specifically we find that the difference between the three countries (measured by the difference between the lowest and highest co-efficient) is lower for network member firms compared to non-network member firms showing that there is less between country variation in the modification practices of network member firms. A similar finding is drawn for code law countries. This provides some

preliminary evidence that global audit firm networks provide a more consistent approach to the application of going concern audit reporting standards.

Results for RQ4: Have differences between countries changed over time?

This area of analysis concerns how these country level differences have changed over time. The results in Table 1 for All Countries Combined suggest that, relative to 2001 and holding other factors constant, auditors are significantly more likely to issue going concern opinions in 2008 (at the height of the global financial crisis) and less likely to issue going concern opinions in 2003 (time of relative economic prosperity) and 2007 (during the US sub-prime crisis prior to the GFC). To analyse these differences in time period across countries further, we present in Tables 4 and 5 going concern prediction models for common law and code law countries broken into sub-periods.

For common law countries, the differences between the three countries decrease from 2001-2002 to the smallest difference between countries in 2003-2004 a time of relative economic prosperity and prior to adoption of International Financial Reporting Standards. The difference between countries increased slightly in 2005-2006 and despite the global financial crisis which would increase differences between countries due to the differing commencement and actual impact of the crisis we find a decrease in 2007-2009. This suggests that differences between common law countries are decreasing over time.

In Table 5, this analysis is repeated for code law countries. Starting from a later time period (2003-2004), we find that the greatest difference between France and Germany occurs in 2005-2006 and that this difference declines in 2007-2009 to a level lower than that observed in 2003-2004. Again, this provides evidence that differences in the application of audit reporting standards as they relate to going concern between code law countries are diminishing over time.

Additional Analysis: Relationship between Country Differences and Clients' Level of Financial Distress

In this final analysis, we examine whether country differences in auditors' probability to issue a going concern modifications are more pronounced at certain levels of financial distress. Table 6 shows that country differences between auditors are dependent on the level of financial distress exhibited by the client. In particular, we find that the country differences between auditors are less pronounced if the clients' level of financial distress is either extremely high or very low. In these situations, there is less ambiguity in the auditors' judgment in whether to issue a going concern because the client is not close to the threshold for what auditors consider to be significant/substantial doubt about the correctness of the going concern assumption. Nevertheless, the dispersion of probabilities across the five countries was lower for members of international networks then for non-members at both low and moderate levels of financial distress, and similar at extreme levels of financial distress, suggesting that network members are more consistent. Across all ranges of financial distress, from low to extreme, auditors are more consistent in the 2007-2009 time period when compared to 2003-2004 and 2004-2006 time periods. Furthermore, differences among the common law countries are lower than the differences between the code law countries. The country differences exhibited by the code law countries may be due to a lack of similarity between code law countries in terms of bankruptcy law (see Appendix 2), as well as culture and language.

9. Concluding Remarks and the Importance of this Research Project to the IAASB

Significant progress has been achieved over the past decade in writing a single set of high-quality, principles-based international auditing standards for listed and public interest entities. Over a hundred countries are now using or in the process of implementing ISAs. This is a necessary but preliminary step on the path to achieving consistency of auditor behaviour across countries and audit firms. To date, little is known about the extent to which harmonisation of auditing standards leads to the harmonisation of auditor behaviour. Our study across a range of countries suggests that there is some evidence of inconsistency in auditor behaviour in the presence of near identical auditing standards with regards to going concern modifications. Our analysis demonstrates that there are differences between countries in the manner in which going concern modified audit opinions are applied based on the financial and other risk based characteristics of the audit clients located in our countries of interest (Australia, France, Germany, UK and US). We find evidence that these differences are, in part, related to the legal

regime under which the audit is undertaken. We provide some preliminary evidence that the going concern modified audit reports issued by firms which are members of audit firm networks are issued on a more consistent basis than those issued by firms which are non-networked. We also demonstrate that the differences we identify appear to be diminishing over time. We hope that this provides the IAASB with information regarding the extent to which consistency in audit reporting behaviour has been achieved to date and identifies that further efforts are required by the IAASB, the Forum of Firm and local regulators to improve consistency in auditor behaviour.

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Appendix 1: Auditors' Evaluation of the Going Concern Assumption

Country	Standard	In Effect[1]	Evaluation Required	Evaluation Period
US	SAS 59	1988-2009	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 (s.9), but likely to be the period that management has considered in assessing going concern (s.21(ii))
UK	ISA 570	2004-2009	Auditor should consider the appropriateness of the going concern assumption when planning and performing audit procedures and in evaluating their results (s.2, s.11, s.12, s.17)	At least one year from balance date (s.18, s.19)
Australia	AUS 708	1996-2006	Auditor must obtain evidence that the going concern assumption is appropriate (s.10). Must specifically assess going concern problems as part of the audit planning process (s.17).	Approximately one year from the date of the current auditor's report (s.4)
Australia	ASA 570	2006-2009	Auditor should consider the appropriateness of the going concern assumption when planning and performing audit procedures and in evaluating their results (s.2, s.11, s.12, s.17)	Approximately one year from the date of the current auditor's report (s.53)
Germany	AuS 270	2003-2009	In planning the audit, the auditor has to assess whether evidence of events, or where conditions exist that can give rise to considerable doubts about the continuation of Business activity can give rise (s. 15)	The reference period is the period the legal representatives of the company have used for their estimates, but at least a period of twelve months from the completion date of the financial year (s. 8)

Country	Standard	In Effect	Evaluation Required	Evaluation Period
France	CNCC 2-435	2003-2007	The role of the auditor is questioning the validity of the use by management of the accounting basis of continuity of operations for the preparation of accounts and to assess whether there significant uncertainties about the continued operation must be mentioned in the annex (s. 12)	The auditor considers the same period as that used by management in its evaluation. If this period is less than twelve months after the closing date of the year, the auditor asks management to extend its assessment over a period of twelve months from that date (s. 21)
France	NEP 570	2007-2009	Upon becoming aware of the entity and the assessment of risk of material misstatement in the accounts, the auditor considers the existence of elements likely to jeopardize the continued operation and inquires from the direction of his knowledge of such elements. (s.4)	The auditor appreciates the assumptions underlying the assessment and the period over which it carries. When GAAP does not define this period, continuity of operations is assessed over a period of twelve months from the close of the exercise (s. 6)
ISA (IFAC)	ISA 570	1994-2009	Auditor should consider the appropriateness of the going concern assumption when planning and performing audit procedures and in evaluating their results (s.2, s.11, s.12, s.17)	At least one year from balance date (s.18. s.19)

1. The Table only list the relevant standards that was in effect during the period of interest up until end of 2009. Any changes to relevant standards after 2009 are not detailed.

Appendix 2: Comparison of Bankruptcy Codes

This Appendix describes the bankruptcy codes[10] of Australia, United Kingdom, United States, Germany and France. Although some of the countries originate from the same legal system and therefore share related concepts and comparable characteristics regarding legal doctrine (LaPorta et al. 1999), there are country differences in the specific rules and regulations with respect to corporate bankruptcy. As the auditor's assessment of whether there is substantial/significant doubt regarding the going concern assumption in practical terms involves consideration of the client's probability of entering bankruptcy, the auditors assessment is made in the context of the legal framework under which bankruptcy is declared. The economic incentives to enter bankruptcy proceedings, as well as the legal entry criteria, differ to some extent between these countries. These are briefly described below.

1. U.S. Bankruptcy Code

Corporations file for liquidation under Chapter 7 or for reorganisation under Chapter 11. Although creditors may initiate an involuntary filing under Chapter 7, management is often successful in converting the case to Chapter 11, allowing an attempt to reorganise (Hotchkiss et al. 2008). Because management can challenge an involuntary petition, bankruptcy filings are more frequently initiated by management. For firms filing under Chapter 7, the court appoints a trustee that organises a sale of the firm's assets. Proceeds are distributed to claimholders according to the absolute priority rule – that is, junior claims do not receive any payment until senior claims are paid in full (Hotchkiss et al. 2008). Filings under Chapter 11 are corporate reorganisations, and the bankrupt firm is expected to continue as a going concern after leaving bankruptcy (Wood 2007). During the proceedings, the directors are still in charge of managing the company's affairs. In the US, the Bankruptcy Code does not establish insolvency as a prerequisite to filing for Chapter 11 (or any form of bankruptcy relief), but rather an implicit requirement that the filing is in good-faith (Wood 2007). The basic thrust of the good-faith requirement has traditionally been whether the debtor needs Chapter 11 relief. Although

[10] In the United States, insolvency by a corporation is described as bankruptcy, but in Australia and the UK bankruptcy, in a strict legal sense, relates only to individuals and not corporations. Corporations in the UK and in the Australia enter into insolvency proceedings. Although this technicality is noted, the word bankruptcy is used in this Appendix to describe insolvency of corporations across all three countries.

insolvency is relevant, it is the totality of circumstances that determines whether the debtor is of good or bad faith in any given case.

2. UK Bankruptcy Code

The dominant bankruptcy procedure in the UK is receivership, where a secured creditor appoints a receiver representing their interests. The receiver realises the security and, after deducting their expenses and paying any higher priority claims, uses the proceeds to pay off the appointing creditor (Hotchkiss et al. 2008). If the claim is secured by floating charge collateral, an administrative receiver gets full control over the firm and can reorganise the firm or sell assets without permission from other creditors or the court. The UK also provides court-administered reorganisation procedures, Administration and Company Voluntary Arrangements that are usually initiated by directors and which give the firm temporary relief from its creditors. However, a secured creditor can veto these procedures and instead appoint a receiver (Hotchkiss et al. 2008). Thus, in practice, the court can appoint an administrator that represents all creditors only in the absence of secured creditors initiating receivership.

Schedule B1 in the Insolvency Act 1986 states that relevant criteria for entering bankruptcy is insolvency; in particular, "[...] if the company is unable or likely to become unable to pay its debts". Section 123 of the Insolvency Act 1986 incorporates two tests: the balance sheet test (whether liabilities exceed assets) and a cash-flow insolvency test (whether debts can be paid as they fall due). Which of the two tests is relied upon depends on the context in which the question of insolvency is raised, and the information available to the party seeking to establish insolvency. The failure to pay a debt in circumstances where there is no genuine dispute regarding the debt establishes a company's inability to pay its debts. Under Section 214 of the Insolvency Act 1986, UK directors can be held personally liable if the directors continued trading the company beyond a point in time when they knew, or ought to have known, that insolvent liquidation was inevitable (known as wrongful trading).

3. Australian Bankruptcy Code

The dominant bankruptcy procedure in Australia is voluntary administration and it is usually initiated by directors, but may also be initiated by a liquidator or a provisional liquidator or a secured creditor with a charge over substantially all of the company's property. The

administrator takes full control of the company to try to work out a way to save either the company or the company's business. If it isn't possible to save the company or its business, the aim is to administer the company in a way that results in a better return to creditors than they would have received if the company had gone straight into liquidation. A company may also go into receivership if a receiver is appointed by a secured creditor who holds security over some or all of the company's assets. The receiver's primary role is to collect and sell sufficient of the company's charged assets to repay the debt owed to the secured creditor. It is not unusual that voluntary administration and receivership occur contemporaneously (with the company in administration and receivership at the same time), where the receiver takes control of an asset with a fixed charge while the remaining assets are in voluntary administration.

Section 436A of the Corporations Act 2001 states that the criteria for entering bankruptcy proceedings are if the corporation "[...] is insolvent or likely to be insolvent". Section 95A of the Corporations Act 2001 incorporates only a cash-flow insolvency test (whether debts can be paid as they fall due). Under Section 588 of the Corporations Act 2001, directors in Australia can be held personally liable if the directors continued trading the company beyond a point in time when they knew, or ought to have known, that the company was unable to meet its debts (known as insolvent trading).

4. German Bankruptcy Code

German insolvencies are governed by the German Insolvency Code 1999 enacted in 1994. Upon entering formal bankruptcy, the court appoints a creditor's committee and an insolvency administrator. Both of these can be overturned at the creditors' assembly, which is held within three months. The code opens for compulsory liquidation, insolvency/rehabilitation or self management. The most commonly used procedure is compulsory liquidation (Franks et al. 1996). In the case of the self-management proceeding, the debtor stays in charge, otherwise not. Since creditors decide which proceedings to follow, self-management is rarely used (Wood 2007).

In Germany, statutory bankruptcy proceedings are triggered when a firm cannot repay its creditors or when it is overindebted (Section 17, 18 and 19 of the Insolvency Code 1999). A firm is overindebted if ".... the value of its liabilities exceeds the value of its assets, with the latter

valued at market prices" (Franks et al. 1996, p. 92). Thus, the German insolvency code incorporates two tests: a balance sheet test (whether liabilities exceed assets) and a cash-flow insolvency test (whether debts can be paid as they fall due). The failure to pay a debt in circumstances where there is no genuine dispute regarding the debt establishes a company's inability to pay its debts (Section 17 of the Insolvency Code 1999). Managers who fail to report the indebtedness of their firms may be liable for damages (Franks et al. 1996).

5. French Bankruptcy Code

In France, under the bankruptcy provisions in ComC, compulsory liquidation proceedings and rehabilitation proceedings can be initiated by the debtor, a creditor, or the court. However, before compulsory liquidation could be started, is must be shown that the debtor cannot be rehabilitated (Wood 2007). In the case of rehabilitating proceedings, management stays in charge, but can normally only perform transactions in the ordinary course of business and is subject to supervision by an administrator.

In France, the criteria for entering bankruptcy proceedings are if the is a state of cessation of payments, i.e. is unable to meet its debts as they fall due (Wood 2007). There are no over-indebtedness or balance sheet tests.

6. Summary

From the descriptions above, there are a few propositions that could be stated. First, there are differences in the legal entry requirements for bankruptcy proceedings. Second, there are different incentives for debtors to put the company into proceedings due to variation of whether liability is attached to insolvent trading. Third, because of differences in rights of creditors across jurisdictions, different incentives exist for seeking private restructuring compared as an alternative to bankruptcy proceedings. These differences may also affect auditors' assessment of the going concern assumption, but it is difficult to disentangle the effects and thus also difficult to make any *a priori* predictions.

Appendix 3: Detailed Going Concern Prediction Models and Results

There is an extensive academic literature which models the likelihood of an auditor issuing a going concern modified audit opinion based on a series of financial and risk-based characteristics disclosed in the financial statements. The choice of control variables used in our analysis is based on this prior literature and a consideration of which factors may be correlated with the variables of interest in this study and the auditor's decision to issue a going concern modification or not. The explanatory variables have also been used in prior research (see e.g. DeFond et al. 2002; Carey and Simnett 2006). Our model is specified as follows:

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

Where:
OPINION = 1 if a firm receives a going concern 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= ratio of 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 = indicator variables for countries of interest
LITIGATION = indicator variable for high litigation risk
AUDITFIRM = indicator variable for audit firm type
TIME = indicator variables for individual years or time periods

In the following tables we outline the results of applying this model to the datasets outlined in the body of this report and we highlight the key findings of this analysis in testing our research questions outlined. In each of the analyses below, interpretation of the results should be carefully made in terms of the base-case which is included in the intercept (for example, in grouped analyses, the US is in the intercept and so the individual country level results should be

interpreted as having a propensity to issue going concern opinions as higher or lower relative to the US).

Results for RQ1: Are there differences between countries in the propensity to modify the audit opinion for reasons of going concern?

To examine whether there are systematic differences in auditors' propensities to issue going concern opinions between countries, holding the factors known to be associated with going concern modification constant, from Table 1, All Countries Combined model we can clearly answer that there are differences between these five countries. In particular, we can identify that relative to auditors in the other countries examined, for a given set of characteristics, auditors in Germany are most likely to modify their audit report for reasons of going concern (β=0.641, $p<0.01$). Australian auditors are next most likely (β=0.142, $p<0.03$) and both of these countries are statistically significantly different from the United States. There is no significant difference between the US and France, however auditors in the UK are significantly less likely (β=-0.250, $p<0.01$) to issue a going concern modification for a given level of financial distress relative to auditors in the US.

From a review of the individual country level models, it is clear that auditors weight differently the variables analysed in the going concern prediction model. There is consistent support that if a client received a going concern modified opinion in the previous financial year (LOPINION) that auditors are more likely to issue a going concern opinion in the current financial year. Also extent of current year losses (ROA, recall that all firms in the sample had losses so for all observations ROA is negative) is associated with increased likelihood of being issued a going concern modification across all countries. Some variables are fairly consistently important across countries, for example, the larger the assets of a client (SIZE) the less likely a going concern opinion will be issued (with France as an exception to this). Another consistent finding is that is high levels of working capital (WC) are associated with a lower likelihood of going concern issuance in four of the five countries (Germany being the exception). Another interesting finding is that leverage is statistically associated with going concern issuance in France, Germany and the UK (but not in Australia or the US). Further, the association is much stronger in Germany

and France than in the UK. This would be consistent with a greater focus on creditor rights particularly in France and Germany as noted in Appendix 2.

Results for RQ2: Are there systematic differences between countries with a code law tradition (France, Germany) compared with those from a common law tradition (Australia, UK, US)?

In Table 2 we compare countries with a code law tradition with those from a common law tradition. Prior research (Martin 2000) finds that there is a lower rate of going concern modification in Germany and France in 1987-1991 compared to the US. Legal systems, and in particular the distinction between common law countries and code law countries are heavily correlated with the source of capital provision (LaPorta et al. 1999; 2000) and may also influence the decision to include a going concern modification when it is warranted. In code law countries, large capital providers are heavily represented on corporate boards. This enables those capital providers to obtain information directly from managers, reducing the relevance of, and demand for the auditor's inclusion of a going concern modification. As discussed in Appendix 2 in detail there are substantial differences in the bankruptcy procedures in code law countries compared to common law countries. In addition, there are differences in the litigation risk levels of the common law countries selected compared to the code law countries selected (on the Wingate (1997) auditor litigation risk index noted previously, the US is assessed at the maximum level and Australia and the UK are assessed as high, whereas France and Germany are relatively lower). We find that holding all other factors constant, firms in code law countries are significantly more likely to receive going concern modified audit opinions relative to those in common law countries ($\beta=0.472$, $p<0.01$). The inclusion of litigation risk in the model does not change this finding. Combined with our results from Table 1, we would conclude that firms in code law countries are on average more likely to receive going concern modified opinions and that this result is primarily driven by German auditors being more conservative than French auditors.

Results for RQ3: What is the role of global audit firm networks in moderating such differences between countries?

Differences in audit reporting behaviour between countries 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). The members of the international audit firm networks participate in policies that promote consistent reporting behaviour and protect the reputation of the network as well as quality assurance and internal quality reviews. The use of common methodologies and technical guidance should also contribute to a consistent approach to application of auditing standards such as the going concern modification.

We examine the role of networks across the two groups of legal regimes. This is reported in Table 3. For the common law countries (Models 1 and 2), we find evidence of increased consistency of going concern issuance across countries by audit firms that are members of networks compared to audit firms which are not members of networks. Specifically we find that the difference between the three countries is 0.467 for network member firms compared to 0.505 non-network member firms showing that there is less between country variation in the modification practices of network member firms. A similar finding is drawn for code law countries. For non-network member firms the difference is modification practices between countries 1.341 which is reduced to 0.513 when network audit firms are considered. This provides some preliminary evidence that global audit firm networks provide a more consistent approach to the application of going concern audit reporting standards.

Results for RQ4: Have differences between countries changed over time?

Our final area of analysis concerns how these country level differences have changed over time. The results in Table 1 for All Countries Combined suggest that, relative to 2001 and holding other factors constant, auditors are significantly more likely to issue going concern opinions in 2008 (at the height of the global financial crisis) and less likely to issue going concern opinions in 2003 relative economic prosperity) and 2007 (at the earliest stages of the US sub-prime crisis but prior to the GFC) . To analyse these differences in time period across countries further, we present in Tables 4 and 5 going concern prediction models for common law and code law

countries broken into sub-periods.

For common law countries, the differences between the three countries decrease from 2001-2002 (0.849) to the smallest difference between countries in 2003-2004 a time of relative economic prosperity and prior to adoption of International Financial Reporting Standards. The difference between countries increased slightly in 2005-2006 (0.393) and despite the global financial crisis which would increase differences between countries due to the differing commencement and actual impact of the crisis there is a decrease in 2007-2009 to 0.332. This does suggest that differences between common law countries are decreasing over time.

In Table 5, this analysis is repeated for code law countries. Starting from a later time period (2003-2004), we find that the greatest difference between France and Germany occurs in 2005-2006 and that this difference declines in 2007-2009 to a level lower than that observed in 2003-2004. Again, this provides evidence that differences in the application of audit reporting standards as they relate to going concern between code law countries are diminishing over time.

Conclusion

The analysis presented in this appendix supports that there are differences between countries in the manner in which going concern modified audit opinions are applied based on the financial and other risk based characteristics of the audit clients located in our countries of interest (Australia, France, Germany, UK and US). We find evidence that these differences are, in part, related to the legal regime under which the audit is undertaken. We provide some preliminary evidence that the going concern modified audit reports issued by firms which are members of audit firm networks are issued on a more consistent basis than those issued by firms which are non-networked. We also demonstrate that the differences we identify are diminishing over time as harmonisation takes effect despite the disruption associated with the global financial crisis.

Table 1: Individual Country Level Analysis and Combined Analysis

	Australia		**United Kingdom**		**United States**		**France**		**Germany**		**All Countries**	
	MODEL 1		MODEL 2		MODEL 3		MODEL 4		MODEL 5		**Combined**	
	coef.	**P>|z|**	**coef.**	**P>|z|**	**coef.**	**P>|z|**	**coef.**	**P>|z|**	**coef.**	**P>|z|**	**coef.**	**P>|z|**
CONSTANT	-1.399	.000	-4.164	.000	-2.081	.000	-12.390	.000	-5.408	.000	-2.064	.000
PBANK	0.023	.624	-0.184	.034	-0.026	.353	-1.267	.010	-0.462	.077	-0.033	.136
SIZE	-0.211	.000	-0.106	.023	-0.126	.000	0.087	.450	-0.138	.095	-0.153	.000
LEV	-0.187	.558	1.641	.006	0.240	.252	8.344	.006	4.584	.004	0.292	.069
ΔLEV	-0.052	.332	0.140	.214	0.083	.077	0.490	.389	-0.069	.727	0.033	.299
CURRENT	-0.081	.000	-0.047	.337	0.007	.760	0.482	.348	-0.032	.771	-0.034	.013
WC	-1.761	.000	-0.660	.025	-1.861	.000	-2.952	.005	-0.030	.954	-1.640	.000
QUICK	-0.033	.191	-0.002	.971	-0.061	.020	-0.666	.244	-0.009	.934	-0.054	.001
ROA	-0.887	.000	-2.000	.000	-1.435	.000	-7.077	.001	-3.964	.000	-1.399	.000
MATERIALS	-0.205	.028	0.440	.033	0.461	.000	0.672	.189	-0.302	.583	0.124	.054
INFOTECH	-0.026	.856	-0.541	.004	-0.453	.000	0.018	.966	-0.095	.682	-0.385	.000
LLOSS	0.138	.281	0.382	.035	0.331	.000	0.696	.091	-0.075	.742	0.288	.000
NEGEQ	0.042	.887	-0.287	.398	0.229	.057	0.047	.945	-0.016	.971	0.212	.027
LOPINION	2.141	.000	3.333	.000	2.785	.000	2.240	.000	2.500	.000	2.675	.000
2002	0.033	.868	-0.312	.300	0.140	.152	-----	-----	-----	-----	0.056	.496
2003	-0.049	.815	-0.195	.535	-0.401	.000	-----	-----	-----	-----	-0.307	.001
2004	0.187	.346	0.249	.413	-0.319	.005	0.486	.456	0.016	.969	-0.151	.093
2005	0.231	.243	0.382	.210	-0.116	.304	0.036	.959	-0.144	.727	-0.048	.591
2006	0.476	.017	-0.154	.652	-0.364	.002	0.343	.629	0.684	.064	-0.111	.226
2007	0.050	.806	0.024	.943	-0.280	.027	0.446	.539	0.028	.944	-0.241	.013
2008	1.155	.000	0.794	.007	0.185	.088	0.948	.123	0.472	.196	0.456	.000
2009	0.726	.000	0.346	.261	-0.273	.035	0.055	.932	0.347	.367	-0.002	.981
NTW	0.225	.010	0.048	.773	-0.395	.000	0.448	.285	-0.156	.489	-0.165	.001
AUS											0.142	.026
UK											-0.250	.001
GER											0.641	.000
FRA											-0.124	.450
N	5,393		3,129		17,662		578		941		27,703	
Pseudo r2	.316		.380		.495		.357		.330		.430	
Adj. Pseudo r2	.308		.362		.493		.252		.288		.428	

Notes to Tables:

1. The variables are defined as described above in the model section of this Appendix.
2. All significance tests are reported on a two-tailed basis.
3. N = the number of observations included in each model.
4. Pseudo r2 and adjusted pseudo r2 are measures of fit of the model, the higher the adjusted pseudo r2, the better the model fits the underlying data.
5. For individual country models, the earliest year is included in the intercept (ie 2001 for Australia, UK, US, 2003 for France and Germany).
6. For the combined model, the earliest year (2001) and the US are included in the intercept.

Table 2: Comparison of Code Law with Common Law Countries

	MODEL 1		MODEL 2	
VARIABLES	**coef.**	**P>|z|**	**coef.**	**P>|z|**
CONSTANT	-2.060	.000	-2.134	.000
PBANK	-0.031	.155	-0.034	.126
SIZE	-0.172	.000	-0.163	.000
LEV	0.222	.161	0.241	.133
ΔLEV	0.051	.066	0.041	.203
CURRENT	-0.026	.043	-0.031	.022
WC	-1.700	.000	-1.662	.000
QUICK	-0.057	.000	-0.053	.001
ROA	-1.416	.000	-1.399	.000
MATERIALS	0.169	.006	0.176	.005
INFOTECH	-0.419	.000	-0.405	.000
LLOSS	0.271	.000	0.300	.000
NEGEQ	0.208	.030	0.226	.019
LOPINION	2.646	.000	2.678	.000
CODELAW	0.417	.000	0.472	.000
LITIGATION			0.008	.461
2002			0.057	.490
2003			-0.304	.001
2004			-0.147	.101
2005			-0.040	.655
2006			-0.097	.290
2007			-0.221	.022
2008			0.472	.000
2009			0.007	.940
NTW			-0.159	.001
N	27703		27703	
Pseudo r2	.425		.429	
Adj. Pseudo r2	.424		.427	

Table 3: Comparison of Networks across Legal Regimes

	COMMON LAW - NO NETWORKS			COMMON LAW - NETWORKS			CODE LAW - NO NETWORKS			CODE LAW - NETWORKS		
	MODEL 1			MODEL 2			MODEL 3			MODEL 4		
VARIABLES	**coef.**	**P>|z|**	**std. Err**	**coef.**	**P>|z|**	**std. Err**	**coef.**	**P>|z|**		**coef.**	**P>|z|**	
CONSTANT	-1.421	.000	.226	-2.766	.000	.245	-5.406	.006	1.950	-8.189	.000	1.914
PBANK	0.023	.454	.030	-0.074	.029	.034	-0.222	.535	.357	-1.027	.006	.375
SIZE	-0.131	.000	.026	-0.161	.000	.021	0.102	.399	.121	-0.158	.049	.080
LEV	-0.249	.274	.228	0.737	.002	.241	2.945	.182	2.209	7.556	.000	2.170
ΔLEV	0.088	.046	.044	-0.040	.436	.051	-0.027	.922	.282	0.051	.843	.258
CURRENT	-0.047	.013	.019	-0.019	.339	.020	-0.119	.618	.239	0.023	.878	.150
WC	-1.494	.000	.119	-1.977	.000	.132	-0.830	.273	.757	-0.456	.422	.568
QUICK	-0.048	.038	.023	-0.050	.032	.023	0.177	.491	.258	-0.120	.434	.154
ROA	-1.045	.000	.150	-1.693	.000	.165	-3.697	.011	1.458	-5.806	.000	1.551
MATERIALS	0.079	.427	.099	0.161	.065	.087	-0.110	.847	.567	0.362	.441	.470
INFOTECH	-0.240	.001	.075	-0.626	.000	.088	0.455	.140	.308	-0.503	.064	.272
LLOSS	0.252	.007	.094	0.329	.000	.083	-0.029	.925	.311	0.240	.352	.258
NEGEQ	0.070	.640	.149	0.295	.029	.135	0.149	.797	.578	0.088	.856	.484
LOPINION	2.740	.000	.070	2.571	.000	.076	2.454	.000	.348	2.438	.000	.266
2002	-0.086	.489	.124	0.166	.141	.113						
2003	-0.368	.006	.133	-0.301	.020	.130						
2004	-0.332	.010	.130	-0.011	.931	.130	0.204	.722	.574	0.175	.692	.442
2005	-0.097	.446	.127	0.021	.873	.134	0.203	.711	.549	-0.226	.631	.469
2006	-0.197	.133	.131	-0.163	.250	.142	0.979	.066	.533	0.485	.240	.413
2007	-0.465	.001	.142	-0.023	.871	.139	0.551	.305	.537	-0.220	.640	.470
2008	0.313	.013	.127	0.620	.000	.116	0.809	.111	.507	0.442	.267	.398
2009	-0.052	.715	.143	0.053	.702	.139	0.597	.276	.547	0.072	.862	.412
AUS	-0.178	.052	.092	0.408	.000	.093						
UK	-0.505	.000	.127	-0.059	.534	.094						
FRA							-1.341	.000	.383	-0.513	.038	.247
N	9935			16249			567			952		
Pseudo r2	.445			.373			0.379			.326		
Adj. Pseudo r2	.442			.369			0.307			.276		

Table 4: Time Period Analysis of Common Law Countries

	PERIOD 2001-2002			PERIOD 2003-2004			PERIOD 2005-2006			PERIOD 2007-2009		
	MODEL 1			MODEL 2			MODEL 3			MODEL 4		
VARIABLES	**coef.**	**P>|z|**	**std. Err.**	**coef.**	**P>|z|**	**std. Err.**	**coef.**	**P>|z|**	**std. Err.**	**coef.**	**P>|z|**	**std. Err.**
CONSTANT	-1.872	.000	.283	-2.892	.000	.369	-2.110	.000	.382	-1.424	.000	.269
PBANK	-0.003	.940	.039	-0.100	.079	.057	-0.019	.727	.056	-0.005	.887	.038
SIZE	-0.127	.000	.029	-0.151	.000	.036	-0.159	.000	.039	-0.195	.000	.027
LEV	0.249	.412	.304	0.819	.041	.401	0.161	.692	.407	-0.196	.477	.276
ΔLEV	0.038	.585	.070	-0.046	.556	.078	0.012	.863	.071	0.115	.006	.042
CURRENT	0.052	.248	.045	-0.011	.829	.051	0.073	.110	.046	-0.065	.000	.017
WC	-2.217	.000	.184	-1.282	.000	.203	-1.246	.000	.207	-1.846	.000	.147
QUICK	-0.153	.003	.052	-0.118	.036	.056	-0.191	.000	.053	-0.004	.838	.020
ROA	-1.398	.000	.208	-1.628	.000	.266	-1.423	.000	.260	-1.178	.000	.190
MATERIALS	0.233	.107	.144	0.231	.137	.155	-0.307	.056	.161	0.156	.111	.098
INFOTECH	-0.431	.000	.103	-0.427	.000	.122	-0.215	.091	.127	-0.571	.000	.112
LLOSS	0.212	.057	.111	0.434	.004	.150	0.145	.349	.155	0.277	.008	.105
NEGEQ	-0.063	.738	.188	0.515	.016	.213	0.271	.260	.240	0.164	.370	.183
LOPINION	2.702	.000	.113	2.696	.000	.106	2.888	.000	.114	2.473	.000	.086
AUS	-0.264	.060	.140	0.231	.130	.153	0.369	.014	.150	0.178	.079	.101
UK	-0.849	.000	.159	-0.037	.822	.162	-0.024	.889	.175	-0.154	.208	.122
NTW	-0.247	.016	.102	-0.280	.018	.119	-0.278	.022	.121	0.050	.551	.083
N	6986			5474			5057			8667		
Pseudo r2	.450			.460			.471			.404		
Adj. Pseudo r2	.445			.453			.464			.400		

Table 5: Time Period Analysis of Code Law Countries

	PERIOD 2003-2004			PERIOD 2005-2006			PERIOD 2007-2009		
	MODEL 1			MODEL 2			MODEL 3		
VARIABLES	**coef.**	**P>|z|**	**std. Err.**	**coef.**	**P>|z|**	**std. Err.**	**coef.**	**P>|z|**	**std. Err.**
CONSTANT	-9.451	.000	2.714	-4.274	.106	2.641	-6.309	.000	1.490
PBANK	-0.597	.211	.477	-0.557	.277	.513	-0.766	.006	.280
SIZE	0.320	.022	.140	-0.235	.069	.129	-0.156	.131	.103
LEV	5.563	.053	2.876	4.543	.154	3.188	6.147	.001	1.792
ΔLEV	-0.706	.250	.614	-0.566	.125	.369	0.293	.244	.252
CURRENT	0.364	.087	.213	-0.462	.196	.357	-0.296	.220	.241
WC	-1.562	.104	.961	-0.618	.551	1.036	-0.505	.449	.668
QUICK	-0.323	.262	.287	0.289	.377	.327	0.297	.242	.253
ROA	-6.520	.002	2.156	-6.206	.003	2.114	-4.174	.001	1.228
MATERIALS	0.521	.503	.778	0.112	.891	.819	0.038	.940	.503
INFOTECH	0.910	.028	.414	-0.265	.489	.383	-0.498	.120	.321
LLOSS	-0.054	.911	.481	-0.218	.562	.375	0.351	.195	.271
NEGEQ	-0.340	.635	.716	0.900	.173	.660	-0.475	.424	.595
LOPINION	2.619	.000	.436	1.749	.000	.387	2.800	.000	.332
FRA	-0.700	.101	.427	-1.359	.002	.444	-0.580	.040	.283
NTW	-0.187	.650	.412	0.156	.667	.363	-0.173	.556	.294
N	404			371			744		
Pseudo r2	.421			.335			.355		
Adj. Pseudo r2	.336			.248			.308		

Appendix 4: Additional Analysis and Interpretation of the Empirical Results

The results of logistic regression models (such as those utilized here) are interpreted with regard to the sign and statistical significance of the coefficients. In other words, a statistically significant positive coefficient indicates a higher likelihood of observing a going concern modification as this variable increases and vice versa for a statistically significant negative coefficient. Although interpretations of the output in forms of "more" or "less" likely are useful because of their simplicity, they do not specifically address the magnitude of country differences in a meaningful way. Because the coefficients in the logit model - log of odds ratios – are hard to interpret in a meaningful way,[11] we assess the magnitude in country differences by assessing predicted probabilities of observing a going concern modification at various levels of covariate values. Using probabilities as the focus for analysis, rather than the coefficients, allows for interpretation of how the parameters correspond to meaningful changes in the propensity to issue going concern modifications (Liao 1994). Within this frame, and by fixing the control variables at a given value, comparable country probabilities for issuing a going concern opinion for an identical, albeit hypothetical, client with the same underlying financial distress characteristics may be predicted by shift in the model's intercept by the variables of interest and the interaction between them.

In order to obtain the predicted probability of observing a going concern modification and their differences across all the variables of interest, we focus on all the countries over the period 2003-2009 and estimate one complete model:

[11] Without the assumptions about the mean and the variance of ε, the magnitude of βs in the logit model cannot be interpreted directly. This is because the βs reflect both the relationship between the independent variables and audit reporting behaviour, and the identifying assumptions regarding the mean and variance of ε. The logit model is a linear model in the log odds metric. It is also in this metric the coefficient output of the logit model is given. That is, given a one unit change in the variable the coefficients indicate the change in natural log of odds ratio, here the odds ratio is the odds of observing a going concern modification divided by the odds of observing a clean opinion. Clearly, it is hard to interpret such coefficients in any meaningful way beyond sign and significance. The probability that a going concern modification is issued, however, is an estimable function and invariant to the identifying assumptions of the model above and can therefore be interpreted without concern for the arbitrary scale for ε (Long 1997). However, due to the logit link function, the model is no longer linear in the estimated coefficients effect on probabilities of observing a going concern modification. Also note that the marginal effect of interaction terms cannot be interpreted by looking at the coefficient of the interaction term alone and has consequently been avoided in the previous analysis, however, there is no problem including them in the model when the interest is shifted from the marginal effect of isolated variables to the probability of observing a going concern modification given certain values of all the models variables because the value of interaction term are not separate from values of the main effects.

$$OPINION = f(\beta_0 + \beta_1 PBANK + \beta_2 SIZE + \beta_3 LEV + \beta_4 \Delta LEV + \beta_5 CURRENT + \beta_6 WC + \beta_7 QUICK + \beta_8 ROA + \beta_9 MATERIALS + \beta_{10} INFOTECH + \beta_{11} LLOSS + \beta_{12} NEGEQUITY + \beta_{13} LOPINION + \beta_{14} LITIGATION + \beta_{15} CODELAW + \beta_{16} NTW + \beta_{17} AUS + \beta_{18} UK + \beta_{19} GER + \beta_{20} FRA + \beta_{21} P0304 + \beta_{22} P0506 + \beta_{23} P0708 + \beta_{24} AUS*NTW + \beta_{25} UK*NTW + \beta_{26} GER*NTW + \beta_{27} FRA*NTW + \beta_{32} AUS*P0506 + \beta_{33} UK*P0506 + \beta_{34} GER*P0506 + \beta_{35} FRA*P0506 + \beta_{36} AUS*P0709 + \beta_{37} UK*P0709 + \beta_{38} GER*P0709 + \beta_{39} FRA*P0709 + \varepsilon)$$

Because of non-linearity, it would be unrealistic, however, to expect the same dispersion in predicted probabilities to issue a going concern modification across countries, irrespective of client variables and the relative level of the distress they signify. This makes sense: an equal change in, say, liquidity is much more likely to impact the decision of an auditor of a client with roughly equal propensity of receiving a going concern modification than the decision of an auditor with a client with already a 90 percent probability of getting a going concern modification due to other factors. In other words, there may be differences in the disparity between countries, depending on whether the clients show evidence of more or less financial distress. Thus, the predicted probabilities to issue a going concern modification across countries are obtained by holding the control variables that represent the audit client distress characteristics at three different combinations: the median, negative (positive) model coefficients at their 25^{th} (75^{th}) percentile value, and negative (positive) model coefficients at their 10^{th} (90^{th}) percentile value. These three 'archetype' combinations of client values allow us to assess the country differences in predicted probabilities across different levels of client financial distress, which we respectively label low-, moderate- and extreme levels. Thus, allowance is made for the non-linearity in predicted probabilities when audit client characteristics change and become more financially distressed. Table 6 presents the results of the predicted probabilities for observing a going concern modification at various client characteristics across Panels A to C.

Low Levels of Financial Distress

Panel A, where client financial characteristics are set to median values of the overall sample of loss-making firms, shows an average probability of .089 in the full sample: the US .082, Australia .080, the UK .070, Germany .141 and France .061. The two sub-samples for type of auditor show average probabilities of .121 for auditors not a member of an international network and .080 for auditors that are members of an international network. There are differences within and between the countries of interest. Auditors that are members of international networks are less likely to issue going concern modifications in the US, the UK and France compared to auditors that are not members of international networks. But in Australia and Germany the members of international networks are marginally more

likely to issue going concern modifications. The coefficient of variation[12], a measure of dispersion across the five countries, is marginally larger for network members than for non-network members. For the three time periods, the average probability for issuing a going concern modification across the five countries have increased from .076 in the 2003-2004 period to .087 in the 2005-2006 period to .101 in the 2007-2009 period. The coefficient of variation across the five countries is smallest in latest time period, and although the middle time period exhibits the largest coefficient of variation of all the time periods, this does suggest that auditors have become more consistent across countries over time.

Moderate Levels of Financial Distress

In Panel B, where client financial characteristics are set to 75th and 25th percentile values as per the overall sample, depending on whether the model coefficients exhibited positive or negative coefficients, shows an average probability of .227 in the full sample: US .219, Australia .216, the UK .190, Germany .341 and France .169. The two subsamples for type of auditor show average probabilities of .297 for auditors not a member of an international network and .231 for auditors that are member of an international network. Compared to country differences at the low financial distress level in Panel A, there are now more noticeable country differences. However, the coefficient of variation across the five countries is still smaller for network members than for non-network members. For the three time periods, the average probability for issuing a going concern modification across the three countries have increased from .203 in the 2003-2004 period to .225 in the 2005-2006 period to .258 in the 2007-2009 period. Again, the coefficient of variation across the five countries is smallest in latest time period, and the middle time period exhibits the largest coefficient of variation.

Extreme Levels of Financial Distress

In Panel C, where client financial characteristics are set to 90th and 10th percentile values, values as per the overall sample, depending on whether the model coefficients exhibited positive or negative coefficients, shows an average probability of .963 in the full sample: US .964, Australia .963, the UK .957, Germany .980 and France .951. The two subsamples for type of auditor show average probabilities of .964 for auditors not a member of an international network and .973 for auditors that are member of an international network. The coefficient of variations across the five countries for both

[12] Coefficient of variation is simply a normalised measure of dispersion and is calculated as the standard deviation divided by the average value. The coefficient of variation is a preferable measure to standard deviation alone because the standard deviation of any data must always be understood in the context of the mean of the data.

network members and for non-network members are similar at this level of distress. For the three time periods, the average probability for issuing a going concern modification across the three countries have increased from .958 in the 2003-2004 period to .961 in the 2005-2006 period to .969 in the 2007-2009 period. Again, the coefficient of variation across the five countries is smallest in latest time period, and the middle time period exhibits the largest coefficient of variation, but the differences are relatively small at this level of distress.

Conclusion

In sum, Table 6 shows that country differences between auditors are dependent on the level of financial distress exhibited by the client. At moderate levels of financial distress (Panel B) larger differences between countries are observed. At this level of financial distress there is more judgment involved, compared to cases with low or extreme levels of financial distress. Nevertheless, the dispersion of probabilities across the five countries were lower for members of international networks then for non-members in both Panels A and B, and the same in Panel C, suggesting that network members are more consistent. Across all ranges of financial distress in Panels A to C, auditors are more consistent in the latest time period. Country differences among the common law countries are lower than the differences between the code law countries. The differences exhibited by the code law countries may be due to a lack of similarity between code law countries in terms of bankruptcy law (see Appendix 2), as well as culture and language.

Table 6: Additional Analysis: Predicted Probabilities for Observing a GC Modification

Panel A: Low Level of Financial Distress

	US	AUS	UK	GER	FRA	Average	Std. Dev.	Coef. of Var.
All	.082	.080	.070	.141	.061	.087	.028	.327

NTW	.068	.090	.069	.135	.080	.088	.025	.279
No-NTW	.098	.072	.130	.116	.188	.121	.039	.320
2003-2004	.066	.069	.059	.126	.060	.076	.025	.330
2005-2006	.073	.084	.068	.155	.052	.087	.036	.414
2007-2009	.118	.089	.083	.144	.071	.101	.027	.264

Panel B: Moderate Level of Financial Distress

	US	**AUS**	**UK**	**GER**	**FRA**	**Average**	**Std. Dev.**	**Coef. of Var.**
All	.219	.216	.190	.341	.169	.227	.060	.264
NTW	.187	.236	.189	.329	.214	.231	.052	.226
No-NTW	.255	.196	.319	.292	.421	.297	.074	.251
2003-2004	.180	.190	.165	.311	.168	.203	.055	.271
2005-2006	.199	.224	.187	.366	.147	.225	.075	.334
2007-2009	.296	.235	.222	.346	.192	.258	.055	.215

Panel C: High Level of Financial Distress

	US	**AUS**	**UK**	**GER**	**FRA**	**Average**	**Std. Dev.**	**Coef. of Var.**
All	.964	.963	.957	.980	.951	.963	.010	.010
NTW	.956	.967	.957	.979	.963	.964	.008	.009
No-NTW	.970	.959	.978	.975	.986	.973	.009	.009
2003-2004	.954	.957	.949	.977	.950	.958	.010	.011
2005-2006	.959	.965	.956	.982	.942	.961	.013	.013
2007-2009	.976	.967	.964	.980	.958	.969	.008	.008

Notes:

1. The coefficients used to estimate predicted probabilities for the full sample is based on Model detailed in Appendix 4 (results not tabulated).

2. In order to assess the predicted probabilities for identical (although a hypothetical) audit clients, the variables values used for estimating predicted probabilities are based on the overall sample values of 20,708 audit clients from the US, Australia, the UK, Germany and France over the time period 2003-2009 (the values are not tabulated). In addition, NTW is given an arbitrary value of 0.5 in estimating the predicted probabilities for the full sample as well as the for the time periods 2003-2004, 2005-2006 and 2007-2009. P0506 and P0709 and is given an arbitrary value of 0.33 in estimating the predicted probabilities for the full sample and for members of international audit firm networks and those who are not members..