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**Cross-Country Analysis of Auditor Specialization Premium: Effect of Legal,
Extra-legal and Political Environments**

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Cross-Country Analysis of Auditor Specialization Premium: Effect of Legal, Extra-legal and Political Environments

Abstract

Previous literature has provided mixed evidence of a premium in audit fee for industry-specialist auditors in US and other developed countries. In this cross-country study spanning twelve non-US countries, we provide evidence of such a premium in the international context, implying that specialist auditors provide a higher level of investor assurance than non-specialists. Further, we show that the average audit fee in countries with effective legal, extra-legal and political institutions is higher but the specialization premium is lower than in other countries. We interpret this finding as evidence that while effective institutions increase the demand for average level of audit assurance, they substitute rather than complement the incremental assurance provided by specialist auditors. This finding is reinforced by additional analysis that shows no significant specialization premium in the US, a country where institutions are most conducive to high financial statement assurance.

Keywords: Audit specialization, Legal protection, Extra-legal institutions, Political Economy

JEL Codes: G15; L11; M41; M49

I. INTRODUCTION

There has been much recent interest in how country-wide legal, extra-legal and political institutions affect average earnings quality of all the firms listed in that country. At the firm level, auditing is one of the primary mechanisms used to provide assurance on earnings quality. There are two ways in which these institutions might interact with the audit function. First, every auditor operating in a country with strong legal, extra-legal and political institutions will face higher legal consequences and greater reputation loss in case of an audit failure. This increased institutional demand for audit quality is likely to provide every auditor a stronger incentive to acquire both industry-specific and client-specific audit-relevant knowledge and deploy such knowledge to produce an audit of higher quality. We expect this demand to be manifested as higher audit fees in countries with strong institutions. Second, effective institutions also improve the quality of clients' pre-audit reports by imposing a higher risk for mis-reporting. Jointly, the incentive for non-specialist auditors to acquire industry knowledge and improved pre-audit information provided by clients are likely to reduce the *incremental* value of assurance provided by specialist auditors. In the context of very effective institutions and strong enforcement mechanisms, the value of such incremental industry knowledge might disappear altogether.

The above reasoning suggests a substitutive effect of institutional strength on the premium fees paid to an industry specialist. Such a substitutive effect, however, is not a foregone conclusion. Strong institutions improve transparency in reporting and could thereby increase the value of a specialist in interpreting firm-level disclosures. This possibility of complementary effect of institutions on specialist premium makes

the examination of their role in the determination of specialist auditor premium an empirical question.

In this paper, we investigate the role of institutions¹ in the production and demand functions for audit services. Using twelve non-US countries, we investigate the role of institutions on both the average audit fees and the fee premium paid to specialist auditors. First, we find evidence that specialist premium exists in these countries. Second, we find that average audit fee is higher but the specialist audit fee premium is lower in countries with relatively stronger institutions. This evidence is supportive of a substitutive relationship between institutional strength and the demand for incremental assurance from specialist auditors. In additional analysis, we expand the sample to include US² and find that the evidence continues to support a substitutive relationship. Further, consistent with the literature, the specialist premium completely disappears when only US and/or UK data is used. As such, these findings provide a vital step in understanding the role of institutions in the audit production function and through that, their effect on earnings quality.

This paper's primary contribution to the literature is the insight it provides on the role of the country-wide legal, extra-legal and political institutions in the determination of average audit fees and the fee premium paid to specialist auditors. First, it provides evidence consistent with the current literature that strong institutions increase average audit fees. Second, it provides evidence that in the presence of strong institutions a

¹ We refer to legal, extra-legal and political institutions in this paper as "institutions".

² We include US only in the additional analysis because the data in the US is available only after 2000. We use the US data from 2000 to 2004. Another limitation of the US data is that these years for which audit fee is available spans the passage of the Sarbanes-Oxley Act which significantly changed the audit fee structure.

lower premium is commanded by specialist-auditors over non-specialist auditors. We interpret this evidence as indicating that the market perceives improved reporting environment resulting from strong institutions as a substitute for incremental assurance provided by specialist auditors over non-specialist auditors. Put another way, the value of specialist auditor is higher in jurisdictions where the supporting legal, extra-legal or political systems are less effective. To the auditors, the results indicate that audit specialization is incrementally more (less) valuable when the institutional environment is weak (strong). To the analysts, the results suggest that the credibility of financial statements depends both on the auditor as well as on the underlying institutional structure in that jurisdiction.

The paper is organized as follows. Related work is given in the next section. The third section provides the conceptual framework, the measures of legal, extra-legal and political institutions and our expectations. The models, analysis and the results are given in the fourth section. The findings are discussed and the conclusions are provided in the fifth and final section.

II. RELATED WORK

Investors demand assurance of financial statements provided by auditors (See Brown and Pinello 2007) to reduce information asymmetry and systematic information risk (Chen et al. 2008). The demand for audit assurance is transmitted by the investors to the firm through its board. In countries with effective institutions, the board members face greater personal legal and reputation risks. These risks make them demand a higher quality of audit (Carcello et al. 2002).

Prior literature from the US and other advanced economies with strong institutions gives mixed evidence about the existence of specialist premium. Carson and Fargher (2007) find evidence of specialist fee premium in Australia but Ferguson and Stokes (2002) find only limited support for it. Ferguson et al. (2006) find evidence of a premium for city level industry leaders but not for national level industry specialists. Using US data, Casterella et al. (2004) employ Porter's framework (Porter 1985) and argue that industry specialization by auditors is a sustainable differentiation strategy that will lead to higher audit fees only if clients perceive them as providing a higher level of assurance than non-specialists. They find evidence of such premium. Huang et al. (2007) provide supporting evidence for Casterella et al. (2004) in the post-SOX period. A number of studies in the literature provide direct evidence of higher assurance levels provided by specialist auditors. Balsam et al. (2003) show that clients of specialist auditors have lower discretionary accruals and higher earnings response coefficient after controlling for auditor brand name. Craswell et al. (1995) and Beasley and Petroni (2001) provide additional support for higher levels of assurance supplied by specialist auditors incrementally over non-specialist brand name auditors. Many other studies provide indirect but yet compelling supportive evidence for higher assurance levels supplied by specialist auditors. For example, Lim and Tan (2008) show that specialist auditors are likely to exhibit greater independence than non-specialist auditors vis-à-vis non-audit fees. Knechel et al. (2007) show that client firms switching to a big-4 specialist auditors show significant positive abnormal returns in the market that is indicative of lower information risk and a higher perceived level of audit assurance. Dunn and Mayhew (2004) argue that the choice of an industry-specialist auditor is associated with enhanced client disclosures which in turn, increase the assurance level. We argue that the specialist auditors have both the

incentive and the ability to provide greater assurance. Specialist auditors are often market leaders in that client industry and the consequences of audit failure are likely to be more severe for them compared to non-specialists. This provides them the incentive for exerting higher effort and providing greater assurance. Further, their superior specific industry knowledge gives them the ability to provide greater assurance than non-specialists.

A different strand of literature has documented the role of legal, extra-legal and political institutions in reducing the consumption of private control benefits by insiders (Dyck and Zingales 2004; LaPorta *et al.* 1998; Haw *et al.* 2004). The potential for private control benefits provides incentive to insiders to distort the financial reports and thereby decrease their credibility (Leuz *et al.* 2003). By reducing the private control benefits, the institutional factors improve the credibility of financial statements. Furthermore, stronger legal enforcement supported by extra-legal institutions that promote dissemination of information and a compliance culture and political institutions that prevent unhealthy interference by the political system increase the legal and reputation consequences faced by auditors. By providing incentives for better reporting by managers and increasing the adverse consequences for negligent auditing, strong institutions improve the overall reporting environment in which the financial statements are prepared and disseminated. Surprisingly, there has been little research to date on the interplay between auditing and these institutional factors, given that both are involved in improving the assurance in reporting.

III. FRAMEWORK, MEASURES AND EXPECTATION

The Framework

The quality of audit provided by the auditor has been defined as the market-assessed joint probability that an auditor will both discover a breach in the client's accounting system and then report the breaches that are found (DeAngelo, 1981). The probability that an auditor will discover a breach is determined by his knowledge and the probability that he will report such a breach is determined by his independence. An auditor's knowledge is composed of two components: industry-specific knowledge and client-specific knowledge. Industry-specific knowledge is valuable for the auditor in identifying a client's accounting outcomes that might be inaccurate in the context of client's industry. The value of an auditor's specialized industry knowledge derives from this increased ability to identify inaccuracies and direct his detection effort to them thereby providing greater assurance to the investor and to the board.

In countries where the institutional framework is strong, the members of the board will face more personal litigation risk and will, through the audit committee and through discussions with the management, translate the demand for higher audit quality to decisions involving the appointment and the terms and conditions of the auditor. Further, they will be willing to compensate the auditor for providing the higher audit quality. In response to this demand, auditors will supply the required quality in terms of both higher knowledge and greater independence. If the country-wide demand for audit quality is high, the *average* auditor will be induced to supply this quality through more knowledge and independence. Alternately, strong institutions assume strong enforcement and auditing could be viewed as one of the enforcement mechanisms. In other words, institutions may owe their strength to a

strong audit mechanism in place.³ These arguments support a positive relationship between effective institutions and average audit fees.

Recent literature shows that the reporting environment is shaped by country-specific institutional structures (Ball et al. 2000; Ball et al. 2003; Gul 2006; Dyck and Zingales 2004) that include the legal and judicial systems, product-market competition, press coverage, tax compliance and political economy. However, it is not clear *ex-ante* how the institutions relate to specialist audit fee premium. The relationship could be substitutive if we assume that the demand for assurance of financial statements can be satisfied by the audit quality at the firm level and a better reporting environment at the country level. To elaborate, if the country-wide demand is weak, investors and board members in some firms will still need that assurance and will, through the board, seek out independent auditors with specialized knowledge who can supply that quality. Hiring highly credible auditors is perhaps one of the few ways that a firm can pre-commit to convey firm-specific information (Jin and Myers, 2006). In such countries, the supply of specialized knowledge is limited and scarce, making it more valuable and sought after by some firms' board members who are willing to pay a premium. This is the essence of the substitution argument. A number of studies support the substitution argument in other related contexts. A recent cross-country paper by Choi et al. (2008) provides evidence that the big-4 premium is lower in countries with good legal environment. Choi and Wong (2007) find that Big 5 auditors fulfill a strong governance function in weak legal environments. Anderson et al. (1993) show substitutive effects among external auditing, internal auditing and board governance. Chambers and Payne (2008) show bigger earnings quality gains in firms audited by

³ We are grateful to the reviewer for pointing this out.

non-specialist auditors in the post-SOX period – a result that indicates substitution between overall assurance provided by effective regulation and incremental assurance provided by specialist auditors.

On the other hand, strong institutional structures encourage more timely disclosure and greater transparency (Pagano and Volpin 2001; Pagano and Volpin 2005; Darrough and Stoughton 1990). Firm-specific disclosures could become more meaningful and potentially more valuable if the information is interpreted in the context of industry expertise.⁴ In effect, a strong institutional structure could make industry-specific knowledge more valuable, introducing a complementary relationship between specialist audit fee premium and the institutional variables.

A number of studies have shown that the corporate governance environment limits discretionary earnings management (Agrawal and Chadha 2005; Leuz et al. 2003; Yeo et al. 2002), decreases the cost of capital (Andersen et al. 2004; Ashbaugh et al. 2006), improves disclosure (Ajinkya et al. 2005) and improves the pay-performance relationship in compensation contracts (Antonio DavilaFernando 2006; Bebchuk and Fried 2006). *Ceteris Paribus*, audit fee is lower for firms with low discretionary earnings management (Gul et al. 2003) and for firms with better disclosure (Ascioglu et al. 2005), indicating that a good governance environment improves the inherent quality of financial statements and thereby reduces the demand for additional audit assurance. Some governance variables, such as the board size, independence, CEO duality are primarily firm-specific. At the country-wide level, the governance characterized primarily by the legal protection of shareholder rights (Gompers et al.

⁴ For example when new product milestones are disclosed, only a discerning specialist could better estimate which of the existing products might become obsolescent at what future time. Those estimates are essential for assessing the inventory values.

2003; Bebczuk et al. 2004; LaPorta et al. 1998) is subsumed by the legal, extra-legal and political economy variables. The country-level ownership concentration and anti-director rights (LaPorta et al. 1998) are used as additional governance variables.

Consistent with prior literature on legal environment (LaPorta et al. 2002; LaPorta et al. 1997), Kwon et al. (2007) study twenty eight countries over twenty industries and show that the improvement in earnings quality by engaging industry-specialized auditors is lower in countries with strong legal protection. This lends credence to the argument that the legal protection offered to shareholders improves the inherent quality of financial statements. In a similar vein, Haw at al. (2004) examine the extra-legal institutions such as competition laws, media pressure and tax enforcement (See Dyck and Zingales 2004 regarding the extra-legal institutions) and find that these factors constrain earnings management. Further, Pagano and Volpin (2005) argue that both the legal system and economic outcomes are determined by the political system. Bushman et al. (2004) use risk of expropriation, state ownership and the cost of entry as variables to measure the political economies of countries and find an impact of these variables on the corporate transparency of firms operating in those political environments. A number of other recent studies also identify country-specific political variables as determinants of political development and reporting incentives (LaPorta et al. 2000a; LaPorta et al. 2000b; LaPorta et al. 2002; Rajan and Zingales 2003). These studies suggest that the reporting environment is likely to be better in countries with less risk of expropriation, lower state ownership and lower cost of entry.

Effect of legal variables on the specialist fee premium

We list here four possible effects of legal variables on specialist premium. First, Haw et al. (2004) provide evidence that legal variables such as the rule of law index and judicial efficiency (LaPorta et al. 1998) could reduce the extraction of private control benefits by controlling shareholders and thereby reduce the agency problem between insiders and outsiders. Consequently, the need for insiders to “hide” their transactions (now that there are fewer of them) by earnings management is reduced. If there is less opportunistic earnings management (used to hide private transactions that help insiders but hurt outsiders), investors perceive greater assurance in the reported earnings thereby reducing the incremental assurance value added by the specialists. Second, in countries with strong legal institutions, both the reputation risk faced by managers and the expected cost of litigation for not promptly revealing value-relevant bad information are high. Therefore, we expect a speedier disclosure of any information that might adversely affect the current or future performance of the firm. From the investor’s viewpoint, the cost of undisclosed bad news is typically higher than the cost of unrealized good news.⁵ The asymmetric conservatism in reporting whereby bad news is reported more promptly than good news, is shown to reduce verification costs (Holthausen and Watts 2001; Roychowdhury and Watts 2007; Watts 2003a, 2003b). Given that the firm has incentives to report conservatively even without audit input, the incremental value added by specialist auditors in this context is correspondingly reduced. Third, legal regimes that give more rights to investors promote shareholder activism and support constraints placed on financing by creditors. These limitations constrain managers in their accrual estimates, mitigating the need for additional assurance on the veracity of reported

⁵ Promptly reporting bad news but deferring the good news in accounting earnings is studied extensively in the Conservatism literature (Basu 1997; Ball and Shivakumar 2005). Watts (Watts 2003a, 2003b) have shown that such conditional conservatism reduces verification costs by auditors and is associated with lower cost of capital for the firm.

earnings by specialist auditors. Fourth, strong legal regimes encourage strong markets for corporate control which also limit managers from deviating from shareholder interest (Coffee 2001; Monga 2006). This also improves the value relevance of earnings (Srinidhi and Sen 2007) and reduces the incremental demand for assurance by specialist auditors. These four linkages between legal variables and specialist fee premium all suggest a negative (substitutive) association between them.

In contrast to the above arguments, a strong legal environment induces more disclosures from managers. A specialist auditor might possess the requisite industry knowledge to better interpret these disclosures. In turn, a better interpretation of additional disclosures could make the services of a specialist auditor more valuable and thereby increases the specialist fee premium. It is therefore essentially an empirical issue as to whether the substitutive or the complementary relationship dominates.

The legal variables we use to measure the legal system are both from LaPorta et al. (1998): (i) the Rule of Law index and (ii) the efficiency of the judicial system. The detailed descriptions of all the variables are given in Exhibit 1. These two variables capture the legal system and tradition as well as the efficiency of enforcement.

Effect of extra-legal variables on the specialist fee premium

The extra-legal institutions considered in this study are drawn primarily from Dyck and Zingales (2004). They include the effectiveness of product competition, the per-capita circulation of daily newspapers and the rate of tax compliance. While an effective legal system impedes opportunistic actions and expropriation devices that

are clear and detectable, a number of executive actions fall in the “grey” areas that are not clear and detectable by law. Rather, they can be constrained more effectively by the marketplace and reputation effects. Haw et al. (2004) show how these extra-legal institutions, in conjunction with the legal systems, can constrain opportunistic earnings management.

We argue that these three extra-legal variables can affect the specialist fee premium. Consistent with Haw et al. (2004), we argue that product competition effectively reduces the consumption of private benefits because such consumption will make the firm less competitive, less profitable and in turn, less attractive to the managers. Further, in a competitive market, the costs and prices are both easy to estimate and the market is likely to significantly penalize managers involved in any deliberate distortion of prices. These forces limit opportunistic behavior and reduce the opportunity for earnings management. Reduced earnings management in turn reduces the value of incremental assurance from specialist auditors to investors. Furthermore, higher product competition could result in greater disclosures on products⁶ (Darrough and Stoughton 1990). These additional disclosures reduce the verification cost for investors further reducing the incremental demand for specialist auditor monitoring.

We have argued above that discipline is imposed on managers partly by the fear of reputation loss resulting from opportunistic actions and reporting. Higher newspaper coverage and educated investor population that reads newspapers affect the

⁶ There is a debate on which of the two effects is stronger: (i) higher disclosures could benefit the firm by increasing the cost of entry in that product for competitors or (ii) higher disclosures could reduce the rents from proprietary information and thereby increase the cost. This question has not been generally resolved but the literature has identified contexts in which one or the other effect might be stronger.

magnitude of this reputation loss. Free, fair and extensive press diffusion therefore leads to more accurate reporting by managers that could reduce the incremental demand for assurance by specialist auditors under the substitution argument or increase it under the complementary relationship argument.

Tax authorities have the objective of verifying the income produced by the firm (Dyck and Zingales 2004), albeit as per tax rules rather than GAAP. However, the verification role carried out by tax authorities produces a degree of assurance for investors in regimes where tax regulation enforcement is strong. Strong tax law enforcement is measured by the degree of tax compliance. Therefore, under the substitution argument, the incremental demand for assurance by specialist auditors could be lower in a country with strong tax compliance.

Effect of Political Economy variables on Specialist fee premium

Consistent with Bushman et al. (2004), we measure political involvement of the government in business by the risk of expropriation, state ownership of enterprises and the cost of entry into the market. Bushman et al. (2004) show that these variables are significant in determining the financial transparency in a country, defined as the intensity of financial disclosures and their interpretation and dissemination by analysts and the media. First, the pressure to protect the expropriation and corruption by politicians and their cronies could adversely affect the accuracy of reported financial information in state ownership of enterprises. Second, government could impose additional cost on entrants to shield the economic rents of politically connected firms from competition and in the process restrict flow of information to the public to avoid undesirable scrutiny. Further, if there is a high

potential for direct expropriation by the government, more transparent firms face higher risk of expropriation both because it would be seen as being non-cooperative with corrupt politicians and because the transparency allows the government to muster arguments for expropriation of the firm's assets and profits. Therefore, we expect all the three variables, the state ownership, cost of entry and the risk of expropriation to be associated with decreased accuracy of reporting. Specialist auditors could use their knowledge and leadership position to improve the assurance to outside investors under these circumstances. We therefore expect the specialist fee premium to be positively associated with political involvement by the government if substitutive relationship holds. In summary, we expect these three variables to decrease the average audit fee but increase the specialist premium with greater political involvement, consistent with a substitutive relationship.

Our expectations

Based on the above arguments, we expect a specialist fee premium that reflects the incremental assurance value of specialized industry knowledge. We expect the value of specialized industry knowledge and therefore the resulting specialist premium to vary between different countries. Specifically, we expect a greater demand for audit assurance leading to higher average audit fees in countries with effective legal, extra-legal and political institutions. Further, in those countries, we expect even non-specialist auditors to acquire greater audit-relevant knowledge thereby reducing the incremental value of specialist knowledge. We expect this substitutive role of specialist auditor to outweigh its complementary role.

IV. THE MODEL, ANALYSIS AND RESULTS

The Basic Audit Fee Model

We use the basic audit fee model developed in prior studies (Craswell and Francis 1999; Simunic 1980; Seetharaman et al. 2002).⁷ The primary fee determinants are the client firm attributes that include size (the log of total assets in US dollars), inherent risk (inventory and receivables relative to total assets), control and other misstatement risks (proxied by audit opinion), operating risk (loss propensity and leverage – ratio of total liabilities over total assets), liquidity (quick ratio), profitability (return on assets) and complexity of operations (foreign operations, cross-listing in the US, utility firm). Client size, complexity, diversity in operations, higher inherent risk, greater volatility in operations and low liquidity and/or profitability increase the needed audit effort *to ensure a given assurance level*. In addition to these client-level attributes, we include audit tenure that is shown to affect the quality of reported accounting earnings (Ghosh and Moon 2005; Myers et al. 2003; Carey and Simnett 2006; Srinidhi et al. 2008).

In addition to the above variables which are client and auditor-specific, we include two country-specific variables. We include the country's disclosure index because the required disclosures proxy for the demand for information by the market (Knechel and Willekens 2006; Seetharaman et al. 2002). Consistent with Taylor and Simon (1999), we use the disclosure index developed by the Center for International Financial Analysis and Research (CIFAR 1995). Our second country-wide variable is the country's stock market capitalization relative to the gross domestic product (GDP), which is a proxy for market maturity (Beck et al. 2000).

⁷ There are over a hundred studies on the determinants of audit fees. For a more complete description of audit fee studies, see Hay et al. (2006).

The specialist auditor identifier is included in the model as the treatment variable. Consistent with prior studies (Knechel et al. 2007; Ferguson and Stokes 2002), we determine auditor industry specialization by each auditor's industry market share in a specific year, based on the percentage of companies audited in the industry.⁸ We do not use client sales to measure market share to avoid a mechanical association between client sales and audit fees. Instead, we compute market share based on number of clients audited by the auditors in the industry, a measure that is less correlated with audit fees. Moreover, using the number of clients as the base avoids the bias toward larger clients that is implied by using sales as the base (Balsam et al. 2003). Specialization variable, *SPEC*, is coded as '1' if the auditor has the largest market share in that industry. We also use alternative measures of specialization in our robustness tests. The audit fee model, based on the above variables is as follows:

$$LFEE = a_0 + a_1SPEC + a_2SIZE + a_3INVREC + a_4OPIN + a_5LOSS + a_6LEV + a_7QUICK + a_8ROA + a_9FOREIGN + a_{10}DISCOP + a_{11}CROSS + a_{12}UTILITY + a_{13}TENURE + a_{14}LCIFAR + a_{15}SMDEV + \varepsilon$$

Model 1

The definitions of the variables are given in Exhibit 1.

[Insert Exhibit 1 here]

The specialist fee premium is given by the coefficient a_1 . The effects of legal, extra-legal and political variables are measured by interacting *SPEC* with the corresponding variable (denoted *MEASURE*) in the following model:

⁸ The industry is as defined as in Frankel et al. (2002)'s classification, based on SIC codes as follows: agriculture (0100–0999), mining & construction (1000–1999, excluding 1300–1399), food (2000–2111), textiles & printing/publishing (2200–2799), chemicals (2800–2824, 2840–2899), pharmaceuticals (2830–2836), extractive (2900–2999, 1300–1399), financial institutions (6000–6999), durable manufacturers (3000–3999, excluding 3570–3579 and 3670–3679), transportation (4000–4899), utilities (4900–4999), retail (5000–5999), services (7000–8999, excluding 7370–7379), computers (3570–3579, 3670–3679, 7370–7379).

$$\begin{aligned}
LFEE = & a_0 + a_1SPEC + a_2SIZE + a_3INVREC + a_4OPIN + a_5LOSS + a_6LEV \\
& + a_7QUICK + a_8ROA + a_9FOREIGN + a_{10}DISCOP + a_{11}CROSS + a_{12}UTILITY \\
& + a_{13}TENURE + a_{14}LCIFAR + a_{15}SMDEV + a_{16}MEASURE + a_{17}SPEC * MEASURE + \varepsilon
\end{aligned}$$

Model 2

In Model 2, the coefficient of the interaction measure, a_{17} measures the effect of the variable in question on the specialist premium. Based on our substitutive relationship hypothesis, we expect a_{17} to be negative when *Measure* is a legal or extra-legal variable and positive when it is a political economy variable as defined in this study.

The Sample

Our sample spans the period from 1993 to 2004 across twelve countries for which the audit fee data is available in the Global Vantage database. The selection of the countries and periods is limited by fee data availability. To meaningfully compute and compare auditors' market shares, across industries and countries, we require at least 10 observations in each industry, for a particular year to be included in the sample. To control for the Big N brand name, we only include those firms audited by Big N in our analyses. The final sample consists of 20,459 firm-years from the following twelve countries: Australia, Denmark, France, Hong Kong, Malaysia, New Zealand, Norway, Singapore, South Africa, Spain, Sweden, and the United Kingdom.

Table 1, Panel A, provides the distribution of sample firms (individually) by year, country, and industry, and Panel B provides the joint distribution of firm-years by country and year. Predictably, the industries in which the firms function are distributed across countries in accordance with their competitive strengths. Resource-rich economies such as Australia have a preponderance of mining firms and trading

economies such as Hong Kong and Singapore have a preponderance of retail firms. Countries such as UK where the data availability is good are represented in the sample more than the countries where the data availability is poor. The increase in the number of firms in later years is driven both by the improved data availability and by the growth in the economies over this period. The sample, therefore, might not be fully representative of the actual distribution of firms across different countries and industries over the period. This is admittedly a limitation resulting from the availability of required data.

[Insert Table 1 here]

The descriptive statistics of the variables used in the study are given in Table 2. The definitions of all the variables are given in Exhibit 1. We report the values of the country-specific institutional variables, namely the legal, extra-legal and political economy variables in Panel A. These values are constant for each country over the sample period. The only exception is the stock market development variable (*SMDEV*) which is computed yearly and the mean values are reported. The factors *LEG*, *ELEG*, and *POLITICAL* are derived principal components from the legal, extra-legal and political variables respectively. Out of the twelve countries, Australia, and some European countries exhibit relatively higher scores in all three categories whereas Malaysia and South Africa exhibit relatively poorer scores. This clustering suggests strong correlations between these different treatment variables. Countries with higher scores represent relatively more informative reporting environments and countries with poor scores represent less informative reporting environments.

Panel B of Table 2 gives the mean levels of audit fees and other firm-specific control variables for all the twelve countries. The audit fees are higher in France and the

United Kingdom, and lowest in Malaysia. A greater proportion of audit specialists are employed in some European countries (e.g., Denmark, Spain) and newly developed economies such as Hong Kong and Singapore. On the other hand, the employment of specialists is lower in France and Malaysia. Mean values for other variables used in the regression analysis are also reported in Panel B.

[Insert Table 2 here]

Pearson's correlation coefficients for the variables used in the regression analysis⁹ shows that the correlations are higher among the country-specific institutional variables, an issue that is common in cross-country research. We address the issue by analyzing the impacts of institutions one at a time. In addition, we construct a principal component for each set of variables representing the legal, extra-legal, and political institutions.

We determine an industry specialist auditor as the auditor with the largest proportion of clients audited in that industry in any given country in any given year. Our tests require that market leadership in any industry be related to industry specialization and not driven by other parameters such as language or ethnicity. We constructed the distribution of industry market leaders¹⁰ in three sub-periods (before 1998 when there were six big auditors; between 1998 and 2001 when there were five big auditors; and after 2001 when there are four big auditors) across industries for each country. An examination of these distributions shows that generally within each country, there is industry dispersion among specialists and this changed across the three sub-periods.

⁹ Available with the authors. The correlation matrix has not been given in the paper in the interest of brevity.

¹⁰ The tabulation of specialist auditors in the three sub-periods in each country is available from the authors on request.

Based on this distribution, we conclude that specialization is not likely to be driven by language or ethnicity parameters.

We report the effect of legal variables on audit fees and specialization premium in Table 3. The regressions employ multiple observations over time. Such observations are unlikely to be fully independent, and thus regression residuals may be serially or cross-sectionally correlated. We run the regressions with clustered robust errors to account for both serial and cross-sectional correlations (Rogers 1993; Williams 2000; Petersen 2008). Petersen (2008) demonstrates that clustered standard errors are robust after adjusting for correlation of residuals over time and across firms. Following Petersen (2008), all our tests correct for both serial and cross-sectional correlations in the residuals by using the t-values based on clustered standard error (clustered by country and year).

The first model shows the results of the basic audit fee model. Consistent with our expectations, firm size, inherent risk (inventory and receivables as a proportion of total assets), complexity (foreign operations), risk (loss), liquidity (quick ratio) and performance (ROA) are associated with audit fee in the predicted directions. The dummy for utility industry shows, as expected, a negative association because the audit effort needed for regulatory industries is lower, on average. Audit tenure, which proxies for client-specific knowledge, is not significant. Cross-listed firms have higher audit fees consistent with their binding themselves to a higher standard of reporting and verification. Our variable-of-interest, the specialization variable is positive and significant at 1% level, indicating the existence of a specialist audit fee premium.

We next augment the basic fee model with the legal variables represented by *RULE* and *EFF*, and *LEG* (which is the principal component for the legal variables derived from a factor analysis). The results for the models (without the interaction term, *SPEC*MEASURE*) indicate that all three legal variables are positive and significant at 1% level, indicating that in jurisdictions where the legal protection is higher, the litigation risk faced by the auditors is high resulting in higher audit fees. In models with the interaction term, our results show that, for all the three regressions, the interaction between the legal variable and specialization variable is negative and significant at 1% level. This result is consistent with the substitution argument that the specialist premium is reduced in countries with strong legal protection because these countries are likely to have a more informative reporting environment, *ceteris paribus*. The result also refutes any complementary relationship between the legal environment and specialist fee premium.

[Insert Table 3 here]

The effect of extra-legal variables is reported in Table 4. Competition laws, newspaper coverage, tax compliance and a factor, *ELEG* that is the principal component of the three extra-legal variables are the treatment variables in Table 4. Stricter competition laws discourage monopolistic tendencies and consumption of private control benefits. Further, they increase the scrutiny of firm operations and put greater pressure on full and transparent disclosure. Newspaper coverage increases the openness of the reporting environment and increases the reputation risk for managers who consume private benefits and try to cover it up with misleading disclosures. Effective implementation of tax laws also points to a culture of greater

compliance and less misrepresentation. All these attributes encourage greater transparency and informativeness in the reporting environment.

The coefficients of the control variables are similar to those reported in Table 3. In models without the interaction term, the specialization variable is significantly positive in all four regressions, indicating that the specialist audit fee premium exists. Two of the extra-legal variables, Competition and Newspaper Coverage show positive and significant associations which is consistent with the argument that under effective extra-legal institutions, the standard of verification is higher and this is reflected in the higher audit fee. The tax compliance variable does not show a significant association. In models with the interaction term, the interaction between specialization variable and the extra-legal variables are significant and negative in all the four regressions. This lends further support to the specialist fee premium substitution argument.

[Insert Table 4 here]

Table 5 gives the effect of political economy variables on audit fees and specialist audit fee premium. Political economy variables used in the study include the risk of expropriation by the government, state ownership, the cost of entry, and a principal component of the three political economy variables. Unlike the legal and the extra-legal variables, these variables are measured in a way that higher values reflect lower informativeness in the reporting environment. A greater risk of expropriation by the government reduces the incentive to give complete and full information and therefore, clouds the reporting environment. Similarly, greater state ownership and greater protection (cost of entry) reduce the incentive for informative and full reporting.

As in earlier regressions, the signs of control variables are consistent with our expectations. In models without the interaction term, the specialization premium is significant and positive. Further, each one of the political economy variables is negatively associated with audit fees indicating that they diminish the informativeness in the reporting environment and provide less incentive for audit effort. In models that include the interaction term, we find that the interaction between the political variables and the specialization variable are all positively associated with audit fee at 1% level. When the reporting environment is adversely affected by the political variables, there is a greater demand for incremental assurance from specialist auditors. This substitutive relationship is supported by the positive association of the interactions with audit fee.

[Insert Table 5 here]

Additional Tests and Results

Effect of Governance Variables on Audit Fees and Specialist Auditor Premium

The governance effectiveness is measured by the following three variables: (i) ownership concentration (*OWN*) reported in (LaPorta et al. 1998)¹¹; (ii) Antidirector Rights (*ANTIDIR*), reported in La Porta et al. (1998) ranging from zero to five, with higher scores indicating greater protection of shareholders¹² and (iii) *GOVN*, which is the principal component of the above two governance variables. Higher values for

¹¹ Ownership concentration is the average percentage of common shares owned by the three largest shareholders in the 10 largest non-financial, private owned domestic firms in a given country. For ease of interpretation, we subtract the ownership concentration from one, with higher scores indicating higher quality of governance.

¹² The index aggregates the following components of shareholder rights: (1) the ability to vote by mail; (2) the ability to gain control of shares during the shareholders' meeting; (3) the possibility of cumulative voting for directors; (4) the ease of calling an extraordinary shareholders meeting; and (5) the availability of a mechanism allowing minority shareholders to make legal claims against the directors.

OWN, *ANTIDIR*, and *GOVN* indicate better governance quality. The results are shown in Table 6.

The governance variables (*OWN* and *GOVN*, but not *ANTIDIR*) are positive and statistically significant, indicating that the higher the governance score, the more informative is the reporting environment and hence the higher is the verification standard. Correspondingly, the audit fee is higher. More importantly, the interactions between all three governance variables and the specialization variable are negative and significant, which supports the substitution hypothesis between the assurance provided by the specialist auditor and the assurance provided by the informativeness of the reporting environment.

[Insert Table 6 here]

Incremental Effect of Legal and Extra-legal variables over governance

Table 7 reports the results of incremental effects of legal and extra-legal variables over the governance variable. In the first column, we have included both the governance variable (*GOVN*) and the legal variable (*LEG*), both are principal components from the respective governance and legal variables. *LEG* is positively associated and the interaction between *LEG* and Specialization is negatively associated with audit fees. The governance variable and its interaction with specialization remain significant. This result indicates that the legal institutions seem to further contribute to the informativeness of reporting environment after controlling for governance. Furthermore, the substitutive effect of the legal variable on specialist audit fee premium is incremental to the substitutive effect of governance. The second column includes the extra-legal variable, *ELEG* (the principal component of extra-legal variables), and its interaction with specialization.

The interaction terms, *GOVN*SPEC* and *ELEG*SPEC* are both significant and negative indicating incremental substitutive effect. The interaction term *LEG*SPEC* is not significant though the sign is negative. In summary, these results show that the substitutive effect on specialist fee premium is incremented by extra legal variables over the governance variables but the effect of legal variables seems to be subsumed by governance and extra-legal variables. Further, in untabulated results, we added the political variable but the variance inflation factor became too high for a meaningful interpretation of the coefficients.

[Insert Table 7 here]

Alternative Measure of auditor specialization

Consistent with prior studies, the tests reported hereto define specialist auditor as the industry leader, with the maximum number of audit clients in each industry. As a robustness check, we use an alternative measure of specialist auditor based on industry market shares (share of the number of audit clients in each industry) of more than 20% for the period 1993 to 1997, 24% for the period 1998 to 2001, and 30% for the period 2002 to 2004.¹³ We replicated all the analyses (untabulated) with this alternative definition of specialization. None of the results changed substantially.¹⁴ Further, the specialization variable could be picking up industry effects instead of specialist auditor effects. To control for this, we included twelve industry dummies. The results were not qualitatively altered.

¹³ Following Neal and Riley (2004), we employ a cut off for ‘large’ market shares of $(1/N)*1.2$, where N is the number of big international audit firms. The largest firms are the Big 6, during the period 1993-1997, the Big 5 after the merger between Coopers and Lybrand and Price Waterhouse in 1998, and Big 4 after the demise of Arthur Andersen in 2002.

¹⁴ The definitions of auditor specialization assume that the auditor with industry-specific knowledge will be the market leader in that industry. Another possibility is that the specialization variable might reflect client size and could become significant because size is not linearly related to audit fee. In order to guard against this possibility, we split the sample in each country at median size and conducted the tests on both large and small firms. The same significant results were obtained for both the large and small firms. This provides another control for potential non-linearity in the relationship. We thank the discussant for pointing this out.

Endogeneity of auditor choice and Clients' characteristics

The relation between auditor choice and clients' characteristics would be endogenous if the characteristics of clients who choose to be audited by specialist auditors are systematically different from those of other firms. We use the Heckman correction (Heckman 1976) to correct the resulting self-selection bias by conducting a two-stage least squares analysis. In the first stage, we model the choice of specialist auditor by clients following Krishnan (2005), by the following logistic regression for each country:

$$\begin{aligned} SPEC = & \gamma_0 + \gamma_1 LEV + \gamma_2 CAPINT_j + \gamma_3 LSALE_j + \gamma_4 MB + \gamma_5 LOSS_j + \gamma_6 CR4 \\ & + \gamma_7 REG + e \end{aligned} \quad \text{Model 3}$$

where *LEV* is the total liabilities-to-asset ratio, *CAPINT* is capital intensity measured by gross property, plant and equipment divided by sales, *LSALE* is the log of sales in US dollars (proxy for size), *MB* is the market-to-book ratio (proxy for growth opportunities), *LOSS* is an indicator variable that equals one if net income is negative and zero otherwise, *CR4* is the four-firm concentration ratio in an industry, *REG* is a dichotomous variable that equals one for regulated industry and zero otherwise.¹⁵ Larger firms, firms with high capital intensity, firms that are likely to derive rents from concentration, high-growth firms and loss making firms have higher agency costs. The agency problem is likely to make the investors rely less on their financial statements. Therefore, these firms have a greater need to employ specialist auditors and pay premium fees to signal reliability of their financial statements. We expect the associations of these variables with the probability of specialist auditor choice to be positive. In the same vein, firms in regulated industries and firms with high leverage

¹⁵ Similar to Francis et al. (1999) (1999), and following Eichenseher and Danos (1981), *REG* is coded 'one' if the industry is railroad (SICs 4011 and 4100), trucking (4210 and 4213), airlines (4512, 4513, 4522, and 4581), telephone communications (4812 and 4813), electric companies (4911), gas companies (4922, 4923, 4924), and 'zero' otherwise. We do not include a variable that captures the operating cycle as the inclusion of that variable reduces our sample by more than 50%.

are monitored by the regulatory agencies and creditors respectively and therefore have less need for signaling through specialist auditors. We expect the associations of these two variables with the probability of specialist auditor choice to be negative.

We compute the inverse Mills ratio (*IMR*) for each country from the first stage regression. The reason for using country-specific first stage models is that the country-wide legal, extra-legal and political variables could be relevant in the choice of specialists. This would get reflected in the specialist choice models in different countries. In accordance with Heckman (1976), we re-estimate model (2) with *IMR* as an additional country-specific independent variable in the second stage. The coefficients in the first stage are generally consistent with our expectations for each country. The large chi-squared statistic indicates that the model is significant.

The results for the second stage regression are reported in Table 8. The interactions between legal, extra-legal, and political variables with the specialization variable are all statistically significant in the predicted direction in the corresponding regressions. Hence our main results are not likely to be driven by the endogeneity between auditor choice and firms' characteristics.

[Insert Table 8 here]

United States, United Kingdom and Australia Samples

Given that firms in the United Kingdom constitute 42% of the total sample, and that UK might represent a country with far more effective institutions than other countries, we excluded UK firms in a sensitivity test. The untabulated results indicate that the interaction between specialization variable and legal variables (*RULE*, *EFF*, *LEG*) are all negative and significant at 1% level. Further, the interaction between

specialization variable and extra-legal variables (*COMP*, *NEWS*, and *ELEG*) are also negative and significant at 1% level. The interaction between specialization and tax compliance is not significant. For the set of political variables (*RISKEXP*, *SOE*, *COE*, and *POLITICAL*), the interaction with specialization variable are all positive and significant at 1% level. Overall, our results are not affected by the exclusion of the U.K. firms in our analysis. Further, we also deleted Australian firms but the results continued to hold.

Our argument of specialist auditors substituting for the weaknesses in corporate governance, legal and extra-legal, and political institutions implies that when these institutions are stronger as in the US, the fee premium for specialist auditors is correspondingly reduced. To address this issue, we included data consisting of both US and non-US firms from Global Vantage database and conducted two sets of tests. The first set focuses only on 9, 831 US firms from 2000-2004 (the audit fee data for US is available only from year 2000 onwards). The second set includes US data from 2000-2004 and other countries' data from 1993-2004. As noted in footnote 1, we present this only as an additional analysis because US audit fee data is available only for the post-2000 period and this data spans the passage of the Sarbanes-Oxley Act with significant effects on the audit process and audit fees. This might impair the interpretability of the results which include the US data.

[Insert Table 9 here]

The first column in Table 9 gives the results of regression using only US data. As expected, the main variable of interest *SPEC* is not significant, supporting our argument that specialist auditors and institutions are substitute mechanisms in

improving the assurance in financial reporting.¹⁶ The remaining columns in Table 9 provide the results of regressions using both US and non-US data. The results indicate that the interaction between specialization variable and legal variables (*RULE* and *EFF*) are negatively significant at 1% level. Further, the interaction between specialization variable and extra-legal variables (*COMP* and *NEWS*) are also negative and significant at 1% level. However, the interaction between specialization and tax compliance is significant only at 5% level. For the proxies of political variables (*RISKEXP*, *SOE*, and *COE*) the interactions with specialization variable are all positive and significant at 1% level. Further, we also carried out tests on the sample of firms that included both UK and US firms in addition to all other countries with data from 2000-2004. The (untabulated) results of this analysis also provide evidence supporting substitutive relationship between specialist auditors and legal, extra-legal and political institutions.

Other robustness tests

The specialist auditors in France did not often belong to the big-4 and could have distorted the results. Our results did not change when we removed France from the sample. In order to ensure that our results are not driven by some countries, we also used weighted least squares with white-adjusted heteroskedasticity-consistent coefficient variance but the results were robust to this specification.

V. CONCLUSIONS

In this paper, we examined the relationship between the roles of country-wide legal, extra-legal and political institutions on the one hand, and the role of auditors on the other hand, in imparting credibility to reported financial statements. We first provide

¹⁶ We also conducted a similar test using UK data and found that the *SPEC* is not significant in UK as well.

evidence of the existence of specialist premium in our sample of non-US firms. We use the specialist premium as the variable to examine the effect of country-wide institutional variables on firm-level audit fees. The institutional variables have a general effect on the reporting environment in the country but the auditor has an effect on a particular client firm's reporting. We show, consistent with the prior literature that when these institutions are effective, they increase the threshold of verification by the average auditor, and consequently, the average audit fee. Then, we use the specialist audit fee premium to examine whether specialist auditors *substitute* or *complement* the effects of these institutions. We show a decrease in specialist auditor premium when the institutions are stronger and the reporting environment is better, a finding that supports the substitution argument. Our findings imply that the demand for incremental assurance by specialist auditors is reduced by a stronger reporting environment resulting from effective legal, extra-legal and political institutions. These findings are inconsistent with the view that stronger institutions and better reporting environment increase the value of specialist knowledge in auditing and thereby increase the specialist premium.

An implication of these findings is that when the supporting governance, legal, extra-legal and political institutions are stronger, the overall reporting environment becomes better and the credibility of reported financial statements, audited by even non-specialist auditors is improved. The firms do not need to seek out specialist auditors at a high premium to signal the credibility of their reports. Furthermore, the findings imply that analysts and investors who conduct cross-country comparisons of financial statements need to consider the effectiveness of supporting legal, extra-

legal and political institutions in each country in conjunction with whether the audit of the financial statement is carried out by a specialist auditor or not.

There are three limitations that arise from data availability that warrant mention here. First, audit fee data on global vantage is limited to a few countries which could compromise the representativeness of the countries studied here. We do not however, have any reason to believe that the inclusion of other countries would alter our results here. The second limitation is the non-availability of governance data on boards in various countries. Anderson et al. (1993) argue that firms might use governance and auditing as substitutes depending on the context. For example, in firms with high investment opportunity set, accounting data is less reliable and therefore, governance could be better mechanism for limiting the agency costs and improving the reporting quality. On the other hand, in firms with more assets-in-place, auditing might be a better mechanism for quality control. Our analysis of the effect of institutions on audit fees and specialist audit fee premium assumes that auditing is the pre-eminent assurance device at firm level. The third limitation is our use of national industry-specialists. There is some evidence to show that the specialist premium is more evident at the city level rather than at the firm level (Ferguson et al. 2003; Francis et al. 2005). However, the fee data is not available at the city level for most of the countries in the sample.

Exhibit 1: Definitions of variables

Firm-specific variables

LFEE	=	Log of audit fees, expressed in thousands of US\$.
SIZE	=	Log of assets, expressed in millions of US\$.
SPEC	=	Auditor specialization based on number of clients audited. Coded as 1 if the auditor has the largest market share in the industry.
INVREC	=	Sum of inventories and receivables, divided by total assets.
OPIN	=	1 for unqualified audit opinion, and 0 otherwise.
LOSS	=	1 if firm is reporting a loss, 0 otherwise.
LEV	=	Total liabilities divided by total assets.
QUICK	=	Current assets minus inventories, divided by current liabilities.
ROA	=	Returns on assets.
FOREIGN	=	1 if foreign income tax is greater than zero, 0 otherwise.
DISCOP	=	1 if the firm reports discontinued operations, 0 otherwise.
CROSS	=	1 if the cross list in the US, 0 otherwise.
UTILITY	=	1 if the firm is in utility industry, 0 otherwise.
TENURE	=	Auditor tenure in years.

Legal variables

RULE	=	Rule of law index as reported in La Porta et al. (1998). It is the assessment of the law and order tradition in the country produced by the country risk rating agency International Country Risk (ICR). Scale from zero to 10, with higher scores for greater tradition for law and order.
EFF	=	Efficiency of Judicial system reported in La Porta et al. (1998). It is the assessment of the 'efficiency and integrity of the legal environment as it affects business, particularly foreign firms' produced by the country risk rating agency Business International Corp. It 'may be taken to represent investors' assessment of conditions in the country in questions.' Scale from zero to 10, with higher scores for higher efficiency levels.
LEG	=	Principal component extracted from RULE, and EFF.

Extra-legal variables

COMP	=	The effectiveness of product market competition reported in Dyck and Zingales (2004). Higher scores suggest general agreement that product market competition is effective.
NEWS	=	The circulation of daily newspapers divided by population, as reported in Dyck and Zingales (2004)
TAX	=	The rate of tax compliance measure from Dyck and Zingales (2004)
ELEG	=	Principal component extracted from COMP, NEWSPAPER, and TAX.

Political variables

RISKEXP	=	Risk of expropriation by government reported in La Porta et al. (1998). Computed according to International Country Risk Guide's assessment of the risk of 'outright confiscation' or 'forced nationalization'. The higher the score, the greater the risk of expropriation
SOE	=	Mean score for state ownership for the period 1993-2004, as computed in Bushman et al. (2004). The original source of data is from Economic Freedom of the World: 2005 Annual report. 1995 scores are used for the 1993-1995 period and 2000 scores are used for the 1996-2000 period. The higher the SOE investment, the higher the rating.

- COE = A linear combination of three measures of the cost of entry into a country's market from Djankov et al. (2002) (i) number of steps with which a start-up has to comply to obtain legal status; (ii) time it takes to become operational; and (iii) cost of becoming operational as a share of per capital GNP, constructed with principal components factor analysis as in Busman et al. (2004)
- POLITICAL = Principal component extracted from RISKEXP, SOE, and COE.

Country control variables

- LCIFAR = Log of CIFAR disclosure index. CIFAR creates a country-specific index by rating the annual reports of at least three firms in every country for inclusion or omission of 90 specific items. The 90 items include specific disclosures in the following seven categories: general information (8 items), income statement (11 items), balance sheet (14 items), funds flow statement (5 items), accounting policy disclosure (20 items), shareholders' information (20 items), and other supplementary information (12 items). Each country is given a score ranging from zero to 90, with higher scores indicating more disclosure.
- SMDEV = Stock market development measured by stock market capitalization divided by GDP. The data are obtained from Beck et al. (2000).

Models

Model 1:

$$LFEE = a_0 + a_1SPEC + a_2SIZE + a_3INVREC + a_4OPIN + a_5LOSS + a_6LEV + a_7QUICK + a_8ROA + a_9FOREIGN + a_{10}DISCOP + a_{11}CROSS + a_{12}UTILITY + a_{13}TENURE + a_{14}LCIFAR + a_{15}SMDEV + \varepsilon$$

Model 2:

$$LFEE = a_0 + a_1SPEC + a_2SIZE + a_3INVREC + a_4OPIN + a_5LOSS + a_6LEV + a_7QUICK + a_8ROA + a_9FOREIGN + a_{10}DISCOP + a_{11}CROSS + a_{12}UTILITY + a_{13}TENURE + a_{14}LCIFAR + a_{15}SMDEV + a_{16}MEASURE + a_{17}SPEC * MEASURE + \varepsilon$$

Table 1: Sample Distribution

<u>Country</u>	<u>N</u>	<u>Percent</u>	<u>Year</u>	<u>N</u>	<u>Percent</u>	<u>Industry</u>	<u>N</u>	<u>Percent</u>
Australia	2263	11.06	1993	598	2.92	AGR	335	1.64
Denmark	597	2.92	1994	771	3.77	CHE	327	1.60
France	136	0.66	1995	941	4.60	COM	1952	9.54
Hong Kong	632	3.09	1996	1428	6.98	DUR	4735	23.14
Malaysia	3446	16.84	1997	1884	9.21	EXT	489	2.39
New Zealand	108	0.53	1998	1999	9.77	FOO	961	4.70
Norway	677	3.31	1999	2179	10.65	MIN	1852	9.05
Singapore	2353	11.50	2000	2198	10.74	PHA	273	1.33
South Africa	483	2.36	2001	2158	10.55	RET	3036	14.84
Spain	97	0.47	2002	2135	10.44	SER	2522	12.33
Sweden	1073	5.24	2003	2098	10.25	TEX	1950	9.53
United kingdom	8594	42.01	2004	2070	10.12	TRA	1676	8.19
						UTI	351	1.72
Total	20459	100.00		20459	100.00		20459	100.00

Panel B: Distribution of firms by industry and country

	<u>Australia</u>	<u>Denmark</u>	<u>France</u>	<u>Hong Kong</u>	<u>Malaysia</u>	<u>New Zealand</u>	<u>Norway</u>	<u>Singapore</u>	<u>South Africa</u>	<u>Spain</u>	<u>Sweden</u>	<u>United Kingdom</u>
AGR	29	-	-	-	257	-	-	-	-	-	-	49
CHE	-	-	2	-	96	-	-	-	-	-	-	229
COM	97	34	34	-	133	-	127	352	41	-	291	854
DUR	354	226	25	164	1062	-	177	563	90	44	296	1750
EXT	177	-	-	-	-	-	66	-	-	-	-	246
FOO	145	54	2	-	301	-	-	102	18	3	-	339
MIN	545	-	12	-	335	-	-	168	189	10	61	532
PHA	42	-	5	-	-	-	-	-	-	-	-	226
RET	220	104	17	195	331	23	-	441	138	-	93	1476
SER	323	32	18	20	264	-	35	346	7	15	138	1326
TEX	113	95	9	104	434	17	66	145	-	30	131	810
TRA	184	64	15	149	171	68	206	236	-	3	81	502
UTI	34	-	-	-	62	-	-	-	-	1	-	255

The sample consists of 20,459 firm-years for 12 countries over the period 1993-2004. The sample only includes firms audited by Big N auditors. Following Frankel et al. (2002), industry membership is determined by the SIC code as follows: agriculture (AGR, 0100-0999), mining & construction (MIN, 1000-1999, excluding 1300-1399), food (FOO, 2000-2111), textiles & printing/publishing (TEX, 2200-2799), chemicals (CHE, 2800-2824, 2840-2899), pharmaceuticals (PHA, 2830-2836), extractive (EXT, 2900-2999, 1300-1399), durable manufacturers (DUR, 3000-3999, excluding 3570-3579 and 3670-3679), transportation (TRA, 4000-4899), utilities (UTI, 4900-4999), retail (RET, 5000-5999), services (SER, 7000-8999, excluding 7370-7379), computers (COM, 3570-3579, 3670-3679, 7370-7379).

Table 2: Descriptive Statistics

Panel A: Legal, Extra-legal and Political variables													
Country	RULE	EFF	COMP	NEWS	TAX	RISKEXP	SOE	COE	LEG	ELEG	POLITICAL	CIFAR	SMDEV
Australia	10	10	5.52	3	4.58	0.73	0.75	-1.07	0.76	0.51	-1.01	80	0.58
Denmark	10	10	5.16	3.1	3.7	0.33	2.00	-0.61	0.76	-0.29	-0.67	75	0.35
France	8.98	8	5.83	2.2	3.86	0.35	6.00	1.57	-0.27	0.39	1.10	78	0.75
Hong Kong	8.22	10	5.85	8	4.56	1.71	0.00	-0.51	0.19	1.85	-0.63	73	2.48
Malaysia	6.78	9	4.84	1.6	4.34	2.05	7.33	1.15	-0.62	-0.67	1.61	79	2.34
New Zealand	10	10	5.4	2.2	5	0.31	0.00	-1.03	0.76	0.40	-1.25	80	0.51
Norway	10	10	4.96	5.9	3.96	0.12	4.83	-0.50	0.76	0.13	-0.15	75	0.19
Singapore	8.57	10	5.21	3.2	5.05	0.7	2.00	0.18	0.30	0.39	-0.20	79	1.55
South Africa	4.42	6	4.89	0.34	2.4	3.12	5.50	0.29	-2.42	-1.72	1.15	79	1.06
Spain	7.8	6.25	5.07	1	1.91	0.48	6.00	1.78	-1.26	-1.60	1.23	72	0.71
Sweden	10	10	5.08	4.5	3.39	0.6	3.33	-0.48	0.76	-0.25	-0.29	83	1.30
United Kingdom	8.57	10	5.74	3.3	4.67	0.29	1.33	-0.78	0.30	0.86	-0.89	85	1.08

Panel B: Mean firm level variables over the sample period														
Country	LFEE	SPEC	SIZE	INVREC	OPIN	LOSS	LEV	QUICK	ROA	FOREIGN	DISCOP	CROSS	UTILITY	TENURE
Australia	5.43	0.18	5.06	0.24	0.94	0.29	0.50	2.21	-0.04	0.01	0.00	0.04	0.24	5.24
Denmark	5.32	0.43	4.91	0.42	0.99	0.21	0.57	1.40	0.01	0.03	0.01	0.03	0.00	3.79
France	6.92	0.01	6.54	0.38	0.67	0.31	0.70	1.29	-0.04	0.04	0.00	0.08	0.09	3.29
Hong Kong	5.39	0.38	5.69	0.24	0.96	0.28	0.45	1.86	0.00	0.64	0.01	0.07	0.00	4.97
Malaysia	3.44	0.09	4.47	0.33	0.90	0.25	0.61	2.15	-0.01	0.20	0.02	0.00	0.10	4.53
New Zealand	5.29	0.21	5.43	0.23	1.00	0.15	0.53	0.91	0.05	0.06	0.01	0.06	0.00	4.73
Norway	4.99	0.37	4.80	0.27	0.97	0.36	0.57	1.80	-0.04	0.26	0.03	0.04	0.00	4.61
Singapore	4.64	0.36	4.54	0.33	0.90	0.25	0.49	1.50	0.00	0.26	0.01	0.00	0.07	4.51
South Africa	5.68	0.24	5.99	0.33	0.97	0.14	0.47	1.53	0.07	0.41	0.01	0.10	0.39	4.63
Spain	5.74	0.43	6.36	0.35	0.82	0.12	0.60	1.09	0.04	0.00	0.00	0.02	0.10	3.79
Sweden	5.46	0.34	4.49	0.34	0.99	0.42	0.51	2.04	-0.12	0.06	0.01	0.04	0.06	3.60
United Kingdom	6.08	0.29	5.38	0.36	0.99	0.24	0.57	1.53	-0.01	0.53	0.01	0.07	0.06	5.32

Table 3: The Effect of Legal Variables on Audit Fee and Specialization Premium

	Model 1	Model 2					
	Basic	MEASURE = RULE		MEASURE = EFF		MEASURE = LEG	
Intercept	-6.926 (-5.88)***	-9.477 (-9.97)***	-9.585 (-10.34)***	-8.131 (-6.29)***	-8.624 (-6.31)***	-5.784 (-7.97)***	-5.689 (-8.03)***
SPEC	0.199 (3.33)***	0.098 (3.44)***	1.503 (4.65)***	0.160 (3.35)***	2.438 (3.19)***	0.121 (3.36)***	0.211 (4.61)***
SIZE	0.652 (55.53)***	0.644 (58.38)***	0.642 (59.45)***	0.658 (52.31)***	0.657 (52.35)***	0.653 (54.94)***	0.651 (55.54)***
INVREC	0.747 (14.06)***	0.827 (14.42)***	0.834 (14.35)***	0.787 (14.10)***	0.788 (14.03)***	0.816 (14.23)***	0.821 (14.15)***
OPIN	0.179 (2.90)***	0.053 (1.10)	0.061 (1.27)	0.132 (2.22)**	0.131 (2.17)**	0.082 (1.49)	0.087 (1.57)
LOSS	0.293 (12.35)***	0.250 (13.04)***	0.252 (13.48)***	0.278 (12.79)***	0.279 (12.93)***	0.261 (12.96)***	0.262 (13.34)***
LEV	0.026 (1.46)	0.036 (2.02)***	0.037 (2.06)***	0.028 (1.59)	0.028 (1.62)	0.032 (1.84)*	0.033 (1.89)*
QUICK	-0.008 (-2.72)***	-0.007 (-2.60)***	-0.007 (-2.61)***	-0.007 (-2.52)***	-0.007 (-2.51)***	-0.007 (-2.50)***	-0.007 (-2.51)***
ROA	-0.349 (-9.04)***	-0.301 (-8.45)***	-0.297 (-8.22)***	-0.341 (-9.04)***	-0.340 (-8.95)***	-0.320 (-8.76)***	-0.316 (-8.51)***
FOREIGN	0.486 (13.66)***	0.539 (21.76)***	0.534 (22.00)***	0.481 (15.00)***	0.480 (15.09)***	0.508 (18.60)***	0.505 (18.77)***
DISCOP	0.091 (0.68)	0.164 (1.83)*	0.170 (1.94)*	0.118 (0.98)	0.118 (0.99)	0.147 (1.44)	0.150 (1.51)
CROSS	0.369 (6.80)***	0.354 (7.35)***	0.363 (7.39)***	0.374 (6.91)***	0.381 (6.88)***	0.365 (7.20)***	0.375 (7.21)***
UTILITY	-0.394 (-11.34)***	-0.285 (-8.07)***	-0.282 (-7.76)***	-0.308 (-7.97)***	-0.300 (-7.57)***	-0.276 (-7.71)***	-0.271 (-7.37)***
TENURE	0.002 (0.47)	0.001 (0.47)	0.002 (0.53)	-0.001 (-0.04)	0.001 (0.03)	0.001 (0.03)	0.001 (0.12)
LCIFAR	0.106 (7.41)***	0.096 (12.28)***	0.094 (12.25)***	0.090 (7.87)***	0.089 (7.93)***	0.089 (10.02)***	0.088 (10.07)***
SMDEV	-0.326 (-3.04)***	0.019 (0.26)	0.008 (0.12)	-0.297 (-3.30)***	-0.292 (-3.29)***	-0.136 (-1.76)*	-0.139 (-1.85)*
MEASURE		0.360 (6.39)***	0.390 (7.00)***	0.260 (2.94)***	0.316 (3.11)***	0.553 (4.42)***	0.626 (4.79)***
SPEC* MEASURE			-0.162 (-4.54)***		-0.233 (-3.08)***		-0.353 (-4.14)***
Adj R ² (%)	68.12	73.10	73.30	69.27	69.45	71.40	71.66
N	20459	20459	20459	20459	20459	20459	20459

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

The variable definitions and Models are given in the Exhibit. Model 2 is estimated both with and without the interaction term

Table 4: The Effect of Extra-Legal Variables on Audit Fee and Specialization Premium

	Model 2							
	MEASURE = COMP		MEASURE = NEWS		MEASURE = TAX		MEASURE = ELEG	
Intercept	-7.326 (-9.60)***	-8.019 (-10.22)***	-8.812 (-8.53)***	-8.699 (-8.74)***	-6.868 (-5.82)***	-7.014 (-5.84)***	-3.321 (-4.29)***	-3.352 (-4.48)***
SPEC	0.114 (4.09)***	2.847 (5.03)***	0.089 (2.86)***	0.521 (4.62)***	0.200 (3.33)***	0.673 (2.47)**	0.117 (3.60)***	0.245 (4.94)***
SIZE	0.623 (69.26)***	0.624 (70.32)***	0.646 (55.97)***	0.647 (56.53)***	0.650 (56.14)***	0.649 (55.75)***	0.644 (61.31)***	0.644 (62.51)***
INVREC	0.794 (14.94)***	0.794 (14.71)***	0.801 (13.09)***	0.802 (13.11)***	0.736 (14.14)***	0.735 (14.15)***	0.828 (13.99)***	0.825 (13.85)***
OPIN	0.079 (1.73)*	0.076 (1.76)*	0.003 (0.05)	0.002 (0.04)	0.171 (2.78)***	0.171 (2.77)***	0.095 (1.91)*	0.092 (1.92)*
LOSS	0.263 (13.87)***	0.266 (14.29)***	0.226 (10.68)***	0.227 (10.97)***	0.292 (12.13)***	0.291 (12.13)***	0.261 (13.51)***	0.263 (13.90)***
LEV	0.030 (1.78)*	0.031 (1.83)*	0.030 (1.79)*	0.031 (1.83)*	0.026 (1.45)	0.026 (1.46)	0.029 (1.73)*	0.031 (1.79)*
QUICK	-0.007 (-2.77)***	-0.007 (-2.72)***	-0.007 (-2.51)***	-0.007 (-2.50)***	-0.008 (-2.81)***	-0.008 (-2.81)***	-0.006 (-2.39)**	-0.006 (-2.36)**
ROA	-0.323 (-7.66)***	-0.322 (-7.65)***	-0.311 (-9.21)***	-0.313 (-9.22)***	-0.346 (-9.16)***	-0.346 (-9.17)***	-0.334 (-8.42)***	-0.334 (-8.41)***
FOREIGN	0.395 (10.95)***	0.394 (11.02)***	0.399 (12.15)***	0.396 (11.94)***	0.490 (14.01)***	0.491 (14.04)***	0.399 (11.18)***	0.399 (11.26)***
DISCOP	0.253 (2.58)***	0.253 (2.59)***	0.150 (1.60)	0.153 (1.70)*	0.084 (0.63)	0.082 (0.61)	0.210 (2.11)**	0.209 (2.13)**
CROSS	0.324 (7.65)***	0.326 (7.46)***	0.326 (7.37)***	0.330 (7.41)***	0.365 (6.68)***	0.367 (6.68)***	0.347 (7.60)***	0.353 (7.47)***
UTILITY	-0.360 (-11.89)***	-0.351 (-11.61)***	-0.252 (-7.25)***	-0.249 (-7.10)***	-0.402 (-10.67)***	-0.397 (-10.45)***	-0.300 (-8.78)***	-0.289 (-8.33)***
TENURE	-0.001 (-0.42)	-0.002 (-0.50)	0.001 (0.35)	0.001 (0.37)	0.003 (0.66)	0.003 (0.66)	-0.003 (-0.72)	-0.003 (-0.74)
LCIFAR	0.021 (1.76)*	0.023 (2.00)**	0.123 (10.53)***	0.120 (10.71)***	0.110 (7.69)***	0.109 (7.72)***	0.064 (6.68)***	0.064 (6.89)***
SMDEV	-0.437 (-8.71)***	-0.415 (-8.56)***	-0.417 (-6.65)***	-0.402 (-6.67)***	-0.312 (-2.86)***	-0.310 (-2.84)***	-0.456 (-7.18)***	-0.430 (-7.06)***
MEASURE	1.440 (8.59)***	1.531 (9.41)***	0.279 (7.17)***	0.313 (7.52)***	-0.069 (-1.62)	-0.036 (-0.67)	0.547 (6.17)***	0.611 (6.69)***
SPEC*		-0.502		-0.128		-0.106		-0.294
MEASURE		(-4.97)***		(-4.43)***		(-1.91)*		(-5.02)***
Adj R ² (%)	73.84	74.03	72.33	72.52	68.16	68.19	72.12	72.38
N	20459	20459	20459	20459	20459	20459	20459	20459

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

The variable definitions and Models are given in the Exhibit. Model 2 is estimated both with and without the interaction term

Table 5: The Effect of Political Variables on Audit Fee and Specialization Premium

	Model 2							
	MEASURE =RISKEXP		MEASURE =SOE		MEASURE =COE		MEASURE =POLITICAL	
Intercept	-1.460 (-1.78)	-1.533 (-1.91)*	-1.957 (-2.96)***	-1.987 (-3.05)***	-1.487 (-2.97)***	-1.600 (-3.23)***	-1.420 (-2.76)***	-1.520 (-2.96)***
SPEC	0.065 (2.29)**	-0.133 (-3.04)***	0.051 (2.64)***	-0.095 (-2.90)***	0.069 (3.42)***	0.137 (3.59)***	0.040 (2.28)**	0.097 (3.12)***
SIZE	0.642 (61.55)***	0.640 (62.94)***	0.634 (61.64)***	0.634 (61.58)***	0.633 (48.98)***	0.633 (49.39)***	0.633 (58.40)***	0.633 (58.52)***
INVREC	0.732 (13.38)***	0.742 (13.44)***	0.840 (14.65)***	0.847 (14.53)***	0.879 (14.49)***	0.882 (14.36)***	0.842 (14.38)***	0.846 (14.25)***
OPIN	0.097 (2.33)**	0.092 (2.29)**	0.009 (0.17)	0.007 (0.14)	-0.107 (-2.07)**	-0.105 (-2.01)**	-0.039 (-0.81)	-0.039 (-0.79)
LOSS	0.258 (14.52)***	0.262 (14.93)***	0.267 (16.96)***	0.269 (17.31)***	0.250 (15.96)***	0.252 (16.37)***	0.254 (16.98)***	0.256 (17.28)***
LEV	0.033 (1.81)*	0.034 (1.95)**	0.038 (2.04)**	0.039 (2.06)**	0.035 (2.00)**	0.036 (2.02)**	0.037 (2.06)**	0.038 (2.08)**
QUICK	-0.006 (-2.29)**	-0.006 (-2.27)**	-0.005 (-2.17)**	-0.005 (-2.18)**	-0.006 (-2.70)***	-0.006 (-2.68)***	-0.005 (-2.28)**	-0.005 (-2.27)**
ROA	-0.324 (-9.25)***	-0.321 (-9.09)***	-0.317 (-8.17)***	-0.315 (-8.08)***	-0.302 (-7.91)***	-0.300 (-7.79)***	-0.308 (-8.20)***	-0.307 (-8.12)***
FOREIGN	0.440 (12.74)***	0.437 (12.82)***	0.441 (14.68)***	0.439 (14.75)***	0.440 (16.02)***	0.437 (15.93)***	0.434 (15.12)***	0.432 (15.08)***
DISCOP	0.144 (1.75)*	0.149 (1.86)*	0.286 (3.12)***	0.284 (3.12)***	0.201 (2.58)***	0.205 (2.64)***	0.247 (3.13)***	0.248 (3.16)***
CROSS	0.358 (7.43)***	0.365 (7.34)***	0.328 (7.30)***	0.331 (7.26)***	0.289 (6.68)***	0.294 (6.70)***	0.314 (7.17)***	0.318 (7.16)***
UTILITY	-0.208 (-6.34)***	-0.203 (-6.16)***	-0.387 (-12.71)***	-0.381 (-12.52)***	-0.409 (-13.67)***	-0.407 (-13.54)***	-0.351 (-11.67)***	-0.348 (-11.51)***
TENURE	0.002 (0.51)	0.002 (0.58)	-0.002 (-0.52)	-0.002 (-0.52)	-0.001 (-0.44)	-0.001 (-0.48)	-0.001 (-0.43)	-0.001 (-0.43)
LCIFAR	0.043 (4.30)***	0.044 (4.56)***	0.055 (6.94)***	0.056 (7.12)***	0.038 (6.08)***	0.040 (6.38)***	0.038 (5.98)***	0.039 (6.18)***
SMDEV	-0.028 (-0.39)	-0.042 (-0.60)	-0.304 (-6.52)***	-0.292 (-6.37)***	-0.116 (-2.68)***	-0.116 (-2.70)***	-0.161 (-4.55)***	-0.159 (-4.50)***
MEASURE	-0.638 (-6.53)***	-0.685 (-7.29)***	-0.208 (-15.08)***	-0.217 (-16.32)***	-0.697 (-12.52)***	-0.718 (-12.67)***	-0.576 (-17.83)***	-0.590 (-18.76)***
SPEC*		0.297		0.065		0.164		0.125
MEASURE		(4.74)***		(3.79)***		(2.88)***		(3.24)***
Adj R ² (%)	72.86	73.11	75.08	75.18	75.22	75.30	75.61	75.66
N	20459	20459	20459	20459	20459	20459	20459	20459

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

The variable definitions and Models are given in the Exhibit. Model 2 is estimated both with and without the interaction term

Table 6: Effects of Country-wide Governance Variables on Audit Fee and Specialization Premium

	Model 2					
	MEASURE =OWN		MEASURE =ANTIDIR		MEASURE =GOVN	
Intercept	2.641 (2.49)**	2.164 (2.14)**	-6.585 (-5.53)***	-6.697 (-5.54)***	-2.738 (-3.57)***	-2.726 (-3.71)***
SPEC	0.142 (3.68)***	0.939 (5.13)***	0.200 (3.34)***	0.622 (2.13)**	0.155 (3.47)***	0.194 (4.47)***
SIZE	0.624 (63.77)***	0.625 (65.75)***	0.651 (55.19)***	0.652 (55.25)***	0.635 (61.70)***	0.634 (64.26)***
INVREC	0.762 (15.32)***	0.760 (14.98)***	0.757 (14.26)***	0.755 (14.14)***	0.682 (14.35)***	0.689 (14.45)***
OPIN	0.012 (0.27)	0.009 (0.20)	0.177 (2.82)***	0.170 (2.77)***	0.077 (1.69)*	0.082 (1.89)*
LOSS	0.246 (12.94)***	0.249 (13.36)***	0.294 (12.45)***	0.294 (12.47)***	0.257 (11.43)***	0.259 (11.84)***
LEV	0.027 (1.67)*	0.028 (1.73)*	0.026 (1.44)	0.026 (1.44)	0.030 (1.73)*	0.031 (1.80)*
QUICK	-0.009 (-3.41)***	-0.009 (-3.33)***	-0.008 (-2.70)***	-0.008 (-2.68)***	-0.009 (-3.32)***	-0.009 (-3.28)***
ROA	-0.306 (-8.02)***	-0.302 (-7.93)***	-0.351 (-8.99)***	-0.352 (-9.03)***	-0.301 (-8.41)***	-0.293 (-8.15)***
FOREIGN	0.424 (11.99)***	0.419 (11.99)***	0.470 (15.72)***	0.468 (15.86)***	0.559 (17.37)***	0.553 (17.82)***
DISCOP	0.096 (1.09)	0.106 (1.23)	0.094 (0.71)	0.094 (0.71)	0.071 (0.65)	0.087 (0.82)
CROSS	0.303 (7.07)***	0.306 (6.91)***	0.367 (6.93)***	0.366 (6.87)***	0.343 (7.10)***	0.346 (7.06)***
UTILITY	-0.334 (-11.92)***	-0.327 (-11.57)***	-0.401 (-11.56)***	-0.400 (-11.49)***	-0.303 (-9.65)***	-0.297 (-9.42)***
TENURE	0.001 (0.40)	0.001 (0.32)	0.001 (0.35)	0.001 (0.26)	0.006 (1.55)	0.006 (1.69)*
LCIFAR	-0.047 (-2.65)***	-0.043 (-2.56)***	0.100 (6.36)***	0.099 (6.38)***	0.050 (4.76)***	0.049 (4.98)***
SMDEV	-0.056 (-0.93)	-0.057 (-0.99)	-0.355 (-3.16)***	-0.353 (-3.16)***	0.085 (0.79)	0.079 (0.77)
MEASURE	4.229 (7.39)***	4.448 (7.95)***	0.062 (0.81)	0.095 (1.09)	0.643 (6.14)***	0.740 (6.72)***
SPEC* MEASURE		-1.146 (-4.98)***		-0.097 (-1.69)*		-0.351 (-5.17)***
Adj R ² (%)	72.91	73.14	68.16	68.19	71.24	71.64
N	20459	20459	20459	20459	20459	20459

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

The variable definitions and Models are given in the Exhibit. Model 2 is estimated both with and without the interaction term

Table 7: Incremental Effects of Legal and Extra-Legal variables over Governance

		Expanded Model 2 that includes Governance and Legal Variables	Expanded Model 2 that includes Governance, Legal and Extra- legal Variables
Intercept	α_0	-3.556 (-4.93)***	0.749 (1.03)
SPEC	α_1	0.209 (4.79)***	0.226 (5.19)***
SIZE	α_2	0.640 (63.67)***	0.624 (73.49)***
INVREC	α_3	0.755 (14.64)***	0.734 (14.81)***
OPIN	α_4	0.063 (1.35)	0.042 (1.02)
LOSS	α_5	0.258 (12.54)***	0.242 (14.09)***
LEV	α_6	0.033 (1.93)*	0.031 (1.88)*
QUICK	α_7	-0.008 (-2.98)***	-0.008 (-3.10)***
ROA	α_8	-0.296 (-8.27)***	-0.299 (-8.20)***
FOREIGN	α_9	0.540 (21.06)***	0.440 (15.78)***
DISCOP	α_{10}	0.122 (1.28)	0.179 (2.06)**
CROSS	α_{11}	0.359 (7.12)***	0.327 (7.36)***
UTILITY	α_{12}	-0.260 (-7.46)***	-0.259 (-8.63)***
TENURE	α_{13}	0.004 (1.11)	0.002 (0.61)
LCIFAR	α_{14}	0.060 (6.38)***	0.011 (1.19)
SMDEV	α_{15}	0.039 (0.47)	-0.176 (-2.57)***
GOVN	α_{16}	0.443 (5.57)***	0.674 (8.00)***
SPEC*	α_{17}	-0.155 (-2.73)***	-0.112 (-2.24)**
GOVN	α_{18}	0.389 (2.92)***	-0.335 (-2.23)**
LEG	α_{19}	-0.263 (-2.72)***	-0.102 (-1.22)
SPEC*LEG	α_{20}		0.677 (7.68)***
ELEG	α_{21}		-0.179 (-3.81)***
SPEC*ELEG			
Adj R ² (%)		72.41	74.16
N		20459	20459

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

The variable definitions and the Model are given in the Exhibit.

TABLE 8
Endogeneity of Auditor Choice and Firms' Characteristics: Two-Stage Least Squares (Second Stage results)

MEASURE =	Legal variables			Extra-legal variables				Political variables			
	RULE	EFF	LEG	COMP	NEWS	TAX	ELEG	RISKEXP	SOE	COE	POLITICAL
Intercept	-9.805 (-10.37)***	-8.969 (-6.16)***	-5.799 (-8.35)***	-7.811 (-10.11)***	-8.888 (-8.79)***	-6.929 (-5.90)***	-3.326 (-4.40)***	-1.544 (-1.89)*	-2.020 (-3.08)***	-1.417 (-2.78)***	-1.509 (-2.93)***
SPEC	1.581 (4.70)***	2.812 (3.18)***	0.227 (4.83)***	2.785 (4.94)***	0.550 (4.74)***	0.599 (2.22)**	2.249 (4.88)***	-0.135 (-3.39)***	-0.111 (-3.19)***	0.182 (4.83)***	0.124 (3.91)***
SIZE	0.641 (53.98)***	0.659 (47.49)***	0.651 (51.25)***	0.626 (63.15)***	0.648 (52.74)***	0.652 (47.38)***	0.646 (55.66)***	0.643 (56.39)***	0.627 (67.92)***	0.622 (59.59)***	0.626 (65.17)***
INVREC	0.799 (11.85)***	0.772 (11.29)***	0.797 (11.57)***	0.758 (12.48)***	0.775 (11.21)***	0.708 (11.61)***	0.803 (11.53)***	0.718 (11.28)***	0.773 (12.92)***	0.797 (12.85)***	0.773 (12.69)***
OPIN	0.116 (2.65)***	0.204 (4.03)***	0.156 (3.33)***	0.077 (1.65)*	0.072 (1.50)	0.206 (3.61)***	0.135 (2.86)***	0.144 (3.69)***	0.090 (2.48)**	-0.020 (-0.55)	0.045 (1.34)
LOSS	0.257 (12.67)***	0.275 (11.52)***	0.263 (12.20)***	0.271 (13.86)***	0.225 (9.74)***	0.282 (10.88)***	0.265 (12.78)***	0.264 (13.79)***	0.269 (15.48)***	0.249 (14.52)***	0.257 (15.48)***
LEV	0.111 (2.40)**	0.087 (1.76)*	0.100 (2.11)**	0.090 (2.19)**	0.091 (2.02)**	0.086 (1.69)*	0.088 (2.01)**	0.098 (2.25)**	0.101 (2.26)**	0.091 (2.09)**	0.098 (2.26)**
QUICK	-0.005 (-1.44)	-0.006 (-1.67)*	-0.005 (-1.48)	-0.005 (-1.65)*	-0.006 (-1.73)*	-0.008 (-2.10)**	-0.005 (-1.45)	-0.004 (-1.37)	-0.003 (-1.12)	-0.004 (-1.59)	-0.003 (-1.16)
ROA	-0.297 (-7.52)***	-0.357 (-8.28)***	-0.324 (-7.99)***	-0.337 (-7.43)***	-0.319 (-8.51)***	-0.360 (-8.03)***	-0.351 (-8.13)***	-0.332 (-8.64)***	-0.317 (-7.79)***	-0.295 (-7.57)***	-0.307 (-7.84)***
FOREIGN	0.537 (22.87)***	0.478 (15.45)***	0.507 (19.72)***	0.384 (10.58)***	0.393 (11.95)***	0.482 (13.97)***	0.394 (11.15)***	0.432 (12.79)***	0.444 (14.88)***	0.446 (16.52)***	0.438 (15.52)***
DISCOP	0.156 (1.65)*	0.098 (0.76)	0.137 (1.26)	0.228 (2.19)**	0.152 (1.54)	0.051 (0.35)	0.188 (1.75)*	0.140 (1.60)	0.269 (2.74)***	0.206 (2.51)***	0.240 (2835)***
CROSS	0.365 (7.67)***	0.385 (7.36)***	0.375 (7.55)***	0.342 (8.13)***	0.337 (7.98)***	0.381 (7.25)***	0.359 (7.93)***	0.365 (7.60)***	0.345 (7.91)***	0.309 (7.45)***	0.330 (7.77)***
UTILITY	-0.273 (-7.96)***	-0.293 (-9.17)***	-0.266 (-8.10)***	-0.319 (-10.72)***	-0.238 (-7.47)***	-0.370 (-12.18)***	-0.283 (-8.60)***	-0.204 (-6.63)***	-0.334 (-11.46)***	-0.345 (-12.17)***	-0.302 (-10.23)***
TENURE	0.002 (0.50)	-0.001 (-0.12)	0.001 (0.05)	-0.003 (-0.84)	0.001 (0.16)	0.002 (0.41)	-0.004 (-0.98)	0.001 (0.35)	-0.002 (-0.55)	-0.001 (-0.42)	-0.001 (-0.41)
LCIFAR	0.094 (12.37)***	0.087 (7.90)***	0.087 (10.20)***	0.020 (1.72)*	0.121 (10.58)***	0.110 (7.90)***	0.063 (6.69)***	0.043 (4.41)***	0.055 (6.95)***	0.035 (5.56)***	0.037 (5.80)***
SMDEV	0.015 (0.22)	-0.288 (-3.26)***	-0.130 (-1.72)*	-0.426 (-8.70)***	-0.403 (-6.71)***	-0.306 (-2.78)***	-0.435 (-7.00)***	-0.043 (-0.61)	-0.281 (-6.37)***	-0.082 (-2.49)***	-0.142 (-4.57)***
MEASURE	0.406 (6.91)***	0.342 (2.88)***	0.668 (4.61)***	1.543 (9.39)***	0.324 (7.52)***	-0.071 (-1.35)	0.616 (6.53)***	-0.694 (-7.16)***	-0.230 (-18.18)***	-0.808 (-19.53)***	-0.631 (-22.09)***
SPEC*	-0.171 (-4.60)***	-0.270 (-3.07)***	-0.391 (-4.14)***	-0.493 (-4.89)***	-0.134 (-4.45)***	-0.093 (-1.64)*	-0.298 (-4.93)***	0.305 (4.67)***	0.078 (4.25)***	0.234 (4.24)***	0.157 (3.85)***
MEASURE IMR	0.017 (0.84)	0.020 (0.55)	0.026 (0.97)	-0.029 (-1.57)	0.031 (1.56)	-0.019 (-0.46)	0.001 (0.03)	0.010 (0.70)	0.061 (5.24)***	0.094 (6.92)***	0.071 (7.30)***
Adj R ² (%)	73.17	69.15	71.50	73.86	72.37	67.91	72.10	72.86	75.37	75.99	75.96
N	19762	19762	19762	19762	19762	19762	19762	19762	19762	19762	19762

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

Table 9
Regression results showing specialist fee premium in USA and other countries

		USA only	All countries including USA							
			Legal variables			Extra-legal variables			Political variables	
			RULE	EFF	COMP	NEWS	TAX	RISKEXP	SOE	COE
Intercept	α_0	2.836 (21.73)***	-9.03 (-8.05)***	-6.621 (-4.34)***	-8.817 (-9.35)***	-3.517 (-2.34)**	-3.602 (-2.68)***	-1.883 (-1.88)*	-1.429 (-1.43)	4.537 (-5.39)***
SPEC	α_1	0.016 (1.18)	1.363 (4.75)***	2.814 (3.24)	2.562 (4.94)***	0.460 (3.51)***	0.620 (2.39)**	-0.076 (-3.04)***	-0.077 (-3.14)***	0.209 (4.32)***
SIZE	α_2	0.484 (59.42)***	0.595 (35.07)***	0.618 (32.91)***	0.575 (38.55)***	0.626 (35.34)***	0.621 (33.26)***	0.588 (35.14)***	0.586 (36.18)***	0.578 (35.58)***
INVREC	α_3	0.628 (5.92)***	0.788 (15.28)***	0.758 (14.75)***	0.757 (15.74)***	0.738 (13.25)***	0.716 (14.63)***	0.717 (14.20)***	0.802 (15.25)***	0.800 (15.74)***
OPIN	α_4	-0.205 (-1.98)	-0.117 (-3.06)***	-0.167 (-6.14)***	0.013 (0.23)	-0.290 (-6.17)***	-0.202 (-6.35)***	-0.062 (-1.23)	-0.096 (-2.74)***	-0.017 (-0.28)
LOSS	α_5	0.218 (4.34)***	0.266 (10.09)***	0.301 (11.52)***	0.267 (9.50)***	0.305 (12.68)***	0.322 (11.84)***	0.268 (10.05)***	0.280 (10.72)***	0.261 (9.45)***
LEV	α_6	0.018 (2.05)	0.017 (2.68)***	0.006 (0.91)	0.015 (2.40)**	0.002 (0.30)	0.001 (0.09)	0.015 (2.46)**	0.018 (2.85)***	0.018 (2.94)***
QUICK	α_7	-0.017 (-3.20)**	-0.011 (-4.97)***	-0.008 (-3.98)***	-0.013 (-5.70)***	-0.006 (-2.94)***	-0.008 (-3.82)***	-0.011 (-5.03)***	-0.010 (-4.64)***	-0.013 (-5.86)***
ROA	α_8	-0.044 (-1.03)	-0.132 (-3.10)***	-0.169 (-3.50)***	-0.126 (-2.96)***	-0.185 (-3.65)***	-0.184 (-3.64)***	-0.133 (-3.07)***	-0.131 (-3.01)***	-0.118 (-2.87)***
FOREIGN	α_9	0.391 (22.67)***	0.501 (19.80)***	0.486 (17.75)***	0.397 (15.46)***	0.480 (15.98)***	0.506 (16.35)***	0.429 (16.42)***	0.431 (18.63)***	0.418 (18.00)***
DISCOP	α_{10}	0.368 (6.02)***	0.330 (5.25)***	0.380 (5.30)***	0.269 (4.63)***	0.458 (5.51)***	0.416 (5.25)***	0.296 (4.90)***	0.331 (5.31)***	0.249 (4.08)***
CROSS	α_{11}		0.501 (6.40)***	0.472 (5.80)***	0.516 (7.02)***	0.348 (5.30)***	0.423 (5.46)***	0.527 (6.70)***	0.462 (6.50)***	0.520 (6.92)***
UTILITY	α_{12}	-0.132 (-3.54)**	-0.278 (-7.89)***	-0.325 (-9.35)***	-0.296 (-9.44)***	-0.411 (-10.46)***	-0.467 (-14.24)***	-0.191 (-5.94)***	-0.359 (-10.67)***	-0.324 (-10.57)***
TENURE	α_{13}	0.003 (1.73)	0.001 (0.53)	0.006 (3.22)***	-0.004 (-1.91)*	0.014 (4.56)***	0.010 (4.08)***	-0.001 (-0.42)	0.000 (0.05)	-0.005 (-2.28)**
LCIFAR	α_{14}		0.093 (8.21)***	0.061 (4.33)***	0.058 (4.51)***	0.066 (4.04)***	0.071 (4.37)***	0.054 (4.27)***	0.054 (4.56)***	0.080 (7.15)***
SMDEV	α_{15}		-0.019 (-0.25)	-0.327 (-4.17)***	-0.414 (-5.88)***	-0.431 (-5.87)***	-0.377 (-3.68)***	-0.096 (-1.16)	-0.322 (-6.31)***	-0.201 (-2.62)***
MEASURE	α_{16}		0.397 (6.82)***	0.405 (3.34)***	1.213 (7.88)***	0.221 (4.00)***	0.048 (0.69)	-0.644 (-7.09)***	-0.224 (-13.29)***	-0.509 (-7.73)***
SPEC* MEASURE	α_{17}		-0.143 (-4.73)***	-0.275 (-3.19)***	-0.441 (-4.88)***	-0.1253 (-3.58)***	-0.108 (-2.06)**	0.276 (4.67)***	0.061 (3.66)***	0.152 (3.84)***
Adj.R ² (%)		66.74	73.47	69.87	74.03	69.80	68.07	73.45	75.23	74.40
N		9381	29840	29840	29840	29840	29840	29840	29840	29840

*, **, *** denotes significance at 10%, 5% and 1% levels (two-tailed), respectively

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