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Managerial Ownership, Corporate Monitoring and Audit Pricing

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Managerial Ownership, Corporate Monitoring and Audit Pricing

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Managerial Ownership, Corporate Monitoring and Audit Pricing

Abstract:

We study whether managerial ownership and corporate monitoring (board quality and analyst coverage) relate to audit pricing. Managerial ownership has been identified as a fraud risk factor under SAS 99. However, the role of ownership is not clear. Under an alignment view, high levels of stock ownership align management with shareholders. Under an entrenchment view, high levels of ownership may motivate management to be self interested. Corporate monitoring, as measured by analyst coverage and overall board quality (Gomper's index), are associated with information quality. Audit pricing will be affected to the extent that auditors perceive monitoring as being relevant to managers' reporting incentives. Our tests use a large sample over the period of 2000-2004 and control for regulatory changes over that period. Our results indicate that lower fees are associated with higher levels of management ownership. We also find a negative relationship between fees and measures of corporate monitoring.

Managerial Ownership, Corporate Monitoring and Audit Pricing

1. Introduction

Auditors are a unique type of insider with both access to information and specialized knowledge. Although the primary product of the auditor/client relationship is the audit report, an auditor may convey information to the markets about the client through audit pricing. We study whether managerial ownership and corporate monitoring (i.e., shareholder rights and analyst coverage) relate to audit pricing. Extant literature on audit pricing identifies a host of firm characteristics that determine audit pricing (e.g. Defond 2002, Whisenant et al. 2003, Francis and Wang 2005). Hay et al. (2006) call for additional research on how corporate governance factors influences fees. The primary governance studies in the audit fee literature have primarily focused on audit committee characteristics (Carcello et al. 2002; Abbott et al, 2003), CEO domination (Tsui et al. 2001), and how factors identified on client acceptance checklists impact *planned* fees (Bedard and Johnstone 2004). This study examines whether auditors price level of managerial ownership, a fraud risk factor under Statement of Auditing Standards 99 “Consideration of Fraud in a Financial Statement Audit”; external monitoring as measured by analyst coverage; and overall board quality as measured by the Gomper’s index (Gompers et al., 2003), all factors associated with information quality (e.g., Warfield et al. 1995, LaFond and Roychowdhury 2008, Yu 2008). To the extent that auditors perceive these firm characteristics as being relevant to managers’ financial reporting incentives, audit pricing will be influenced by those factors. This motivates our investigation.

In the wake of corporate scandals at the turn of the century, corporate governance and auditor behavior have received a considerable amount of attention from academics and regulators. Understanding auditors’ fee setting mechanisms in general, and more specifically, how auditors price firm governance characteristics, is important for several reasons. First, since fees have been used in research as a proxy for auditor independence (Frankel et al. 2002, Defond et al., 2002, Ashbaugh et al., 2003, Higgs and Skantz 2006) to assess possible bonding between the client and the auditor, identifying factors that determine the “normal” level of fees is important. Second, we extend the existing literature on corporate governance by providing

evidence on how auditors, one important stakeholder group of the company, associate corporate governance characteristics with information risk of the firm's financial reporting system (Bedard and Johnstone, 2004; Carcello, et al, 2002; Tsui, et al. 2001). Hay et al. (2006) note that additional research in the area of audit fees and governance could be useful (p.179).

External audits contribute to financial reporting reliability by providing an independent assessment of the financial statements and internal controls (e.g., Abdel-Khalik and Solomon 1988). In pricing an audit, fees are based on effort, level of personnel required to perform the job and risk and reward of working with the client (Dickens, et al., 2008). Auditors are required to assess risks of material weaknesses and misstatements. Because these risks are partly unobservable, auditors may infer the likelihood of potential misstatement in the financial statements from corporate ownership and monitoring characteristics. That is, possible increases (reductions) in agency costs from managerial ownership (corporate monitoring) can be relevant to the assessment of financial reporting reliability, affecting audit pricing.

Jensen and Meckling (1976) argue that the demand for auditing results from a desire to reduce the management shirking which results from information asymmetries between shareholders and managers, and demonstrate that managers will voluntarily increase the observability of their actions by hiring independent auditors to monitor their actions. While this is likely to be the case when managers' interests are aligned with those of shareholders, it is less likely when managers' interests are entrenched. The literature generally suggests that managerial ownership can play a role in aligning managers' interest with those of shareholders (*the alignment view*), but sometimes managers' self-interest dominates (*the entrenchment view*). Under *the alignment view*, managerial ownership aligns the interests of managers and shareholders, reducing agency problems and improving a firm's information quality (e.g., Warfield, et al. 1995, Han, Kang and Lobo 2008). Consistent with *the entrenchment view*, Bergstresser and Philippon (2006) associate poor financial reporting quality with equity-based compensation, and LaFond and Roychowdhury (2008) find that accounting conservatism declines with managerial ownership. Consistent with the alignment view, Statement of Auditing Standards 99, "Consideration of Fraud in a Financial Statement Audit," specifically discusses how financial

interests of management are an incentive/pressure that should be considered when evaluating fraud risk (AICPA, AU 316.85 A.2.c).

We also examine how auditors price shareholder rights in audit engagements. As Gompers, Ishii, and Metrick (2003) note, shareholder rights entitle shareholders to have control over the choice of directors, who delegate most decisions to managers. When shareholder rights are strong (weak), shareholders have a stronger (weaker) voice for the appointment and dismissal of management and can more (less) quickly and easily replace directors. Stronger shareholder rights might translate into less audit risk given that shareholders have more control (albeit “indirect” through their selection of director) over securing management who will work to maximize shareholder wealth. Managers who try to maximize shareholder wealth will likely provide higher quality disclosure as management has less to conceal from the public (i.e., fewer private control benefits). For this purpose, we use Gompers et al.’s G-Index (2003), which is an index of shareholder rights/governance. They construct the index by assigning points for provisions that restricts shareholder rights.

Finally, we investigate the relation between analyst monitoring and audit fees (the analyst monitoring hypothesis). Prior research shows that financial analysts play a monitoring role in corporations (e.g., Knyazeva 2007, Yu 2008). The literature suggests that financial analysts who have financial expertise track corporate financial statements on a regular basis are likely to act as external monitors of managers (Jensen and Meckling 1976, Healy and Palepu 2001). As Yu (2008) notes, they tend to interact directly with management and raise questions on different aspects of earnings numbers through earnings release conferences. For example, it is known that financial analysts are directly involved in the discovery of corporate fraud in companies including Compaq, CVS, Electronic Data System, Gateway, Motorola, etc. (e.g., Dyck et al. 2008). Yu’s evidence (2008) supports the monitoring hypothesis, indicating less earnings management as analyst coverage increases. Thus, it is possible that auditors perceive less audit risk in the presence of external monitoring by analysts. This leads us to predict that analyst coverage and audit fees will be negatively related.

Our evidence shows the following. First, consistent with the alignment view of managerial ownership, it suggests that auditors charge less fees as managerial ownership increases, *ceteris paribus*. This suggests that auditors view managerial stock holdings as decreasing managerial incentives to misstate the financial

statements and hence audit risk. Second, audit fees decrease with shareholder rights, suggesting that auditors perceive less likelihood of misstatement when shareholders are more likely to exercise the authority to appoint a stronger board. Third, supporting the monitoring hypothesis, audit fee decreases with the extent of coverage by financial analysts who are known to play a corporate governance function (Knyazeva 2007, Yu 2008).

By documenting these associations, we contribute to the literature in the following respects. First, we extend the literature on audit pricing of corporate governance characteristics (Tsui et al, 2001, Carcello et al. 2002; Abbott et al. 2003, Bedard and Johnston 2004).¹ While the prior studies in this line of research focus primarily on board and audit committee characteristics, we examine ownership characteristic (i.e., managerial ownership), broader set of corporate governance characteristics (as captured in the Gompers index) and the possible effects of analyst monitoring. Our evidence suggests that managerial holdings, shareholder rights, and analyst coverage are all priced by auditors. Specifically, our results suggest that auditors perceive lower audit risk when manager interests are aligned and corporate monitoring is strong. This study also contributes to the literature by identifying another economic benefit of having better corporate governance, i.e., lower audit fees. That is, better governance not only lowers cost of capital (e.g., Ashbaugh et al. 2004), increase firm value (e.g., Gompers et al. 2003, Core et al. 2006) but also reduces the amount of fees charged by the auditor. Third, unlike the evidence from market pricing tests of corporate governance, which are susceptible to endogeneity bias,² our study provides evidence on how an important stakeholder group infers the likelihood of financial statement misstatement from corporate governance characteristics in a setting where such bias is less likely to be an issue.

This paper is organized as follows. In Section 2, we develop hypotheses. In Section 3, we describe the sample and the research design. In Section 4, we discuss the results. In Section 5, we conclude.

2. Hypotheses Development

¹ Exceptions are Palmrose (1986), who discusses and documents that auditors charge higher fees for public companies than for non-public companies due to greater risk exposure, and Han, Kang and Rees (2008) who show that short-term institutional ownership relates positively to audit fees.

² Here, the bias refers to the fact that it is not clear whether good corporate governance leads to higher firm value or firms with higher value adopt better governance, as those firms likely have more resources available to improve governance.

Simunic (1980), using survey data, examines empirically how audits are priced. After February 2001, the SEC mandated that companies disclose fees paid to their auditor. Since that time, a number of studies have examined the determinants of audit fees (Whisenant et al, 2003; Francis and Wang, 2005,). Current models explain approximately 70-80% of the variation in audit fees (Whisenant et al., 2003, Francis and Wang, 2005). Hay et al (2006), use a meta-analysis to identify the constructs identified in the literature that explain fees.

Under the current audit standards, the auditor is required to report material misstatements whether due to error or fraud.³ As such, audit effort is going to be directed to areas that are deemed to be higher risk. Further, when the auditor is unable to adequately manage the higher risk through testing, fees will be adjusted upward. Thus, we expect to see higher fees if the auditor has to do additional work (either because of complexity or risk) or if the auditor is charging the client a risk premium for risk that cannot be managed through additional testing. Higher fees may also result because the audit committee requests the auditor to perform additional services in the conduct of the audit. This is based on the premise that boards may demand differential levels of audit quality and the quality levels may not be directly observable.

Recent research has begun to focus on the relationship between audit fees and corporate governance. Hay et al. (2006, p. 182) note the need to extend the fee model research in the area of corporate governance. Understanding the relationship between board quality and fees is difficult. On the one hand, stronger governance, will lead to lower risk which will lead to lower fees. However, audits are not commodities and strong audit committees may purchase more than normal amounts of audit services.

Tsui et al. (2001) argue high quality corporate governance will result in better internal controls which in turn leads to lower risk and fees. Their results indicate that firms with independent boards (without CEO domination) have lower fees. Carcello et al. (2002) also find that board characteristics influence audit fees. However, they find a positive relationship between fees and strong governance characteristics -- board

³ Clients with a market capitalization in excess of \$75 million are also required to get an audit of internal controls over financial reporting under the provisions of Section 404 of the Sarbanes Oxley Act. For simplicity, we focus the remainder of this discussion on the auditor's opinion on financial reporting.

independence (outside directors), diligence (number of board meetings) and expertise (number of other positions held by non-management directors).

Bedard and Johnston (2004) document a relationship between companies with higher corporate governance risk and *planned* audit fees suggesting that auditors factor in the quality of the board in hourly rates and number of planned hours.

Abbott et al, (2003) conclude that there is a positive relationship between fees and audit committee independence, financial expertise and meeting frequency. The results of their study suggest that strong audit committees purchase differential quality audits.

This study examines other monitoring mechanisms that may influence the information environment, and hence the risk of the firm. The corporate governance characteristics we examine are managerial ownership; shareholder rights, as proxied by the Gompers index; and analyst coverage.

The relation between the level of management ownership and managers' commitment to improve shareholder wealth is not clear ex-ante (e.g., Jensen and Meckling, 1976). On one hand, management equity ownership has the potential of aligning the interests of managers with those of shareholders, reducing the agency problem that arises from separation of ownership and control (the alignment hypothesis). As equity ownership increases, managers pay a larger share of the costs of deviating from value-maximization and thus are less likely to squander corporate wealth. In our context, the alignment hypothesis predicts that managers will be less likely to misstate earnings as (s)he is unlikely to accumulate private control benefits when the interests are aligned.

On the other hand, below a certain threshold level of managerial ownership managers do not have sufficient claims on the outcome from their business decisions, managers may make decisions to optimize their personal benefit and make non-value-maximizing corporate decisions (the entrenchment hypothesis). This hypothesis predicts that managers will have an incentive to accumulate private control benefits and take actions, including possibly misstating the financial statement in order to conceal those benefits.

The entrenchment hypothesis is consistent with a fraud risk factor outlined in Statement of Auditing Standards 99 (AU Section 360), "Consideration of Fraud in a Financial Statement Audit." According to the

fraud theory, three elements must be present for fraud to occur: incentives/pressure, opportunity, and rationalization. SAS 99 lists some of the elements the auditor should be aware of when considering the possibility of fraudulent financial reporting. Equity ownership and earnings targets by management are specifically listed as a fraud risk factor as a type of incentive or pressure. Recent research has supported the inclusion of equity ownership as a fraud risk factor. Burns and Kedia (2006) find that the sensitivity of the CEO stock option portfolio is positively related to the propensity to misreport (magnitude of the restatement on income). Also, Cheng and Warfield (2005) find that equity incentives are associated with earnings management.

To the extent that the auditors are aware of and factor in such managerial incentives to report faithfully depending on the level of management stock holdings, the fees charged will reflect the auditor assessment of audit risk. However, given that the association between managerial stock ownership and their incentives to misstate financial statements is not clear, we formulate our first hypothesis as non-directional:

H1: Managerial stock ownership level relates to the fees charged by the auditor

As noted earlier, the separation of ownership and control creates agency costs because managers pursue their own interests rather than those of the shareholders. If the shareholders have strong rights and hence are better able to monitor and discipline the managers, the divergence of interest can be reduced. In many cases, shareholder rights entitle shareholders to voice their opinions on the appointment and dismissal of management and replacement of directors. Since shareholder rights are not directly observable, we infer the balance of power between shareholders and managers from several corporate governance provisions (Gompers et al. 2003).

The above reasoning suggests that an auditor's perception of risk in conducting an audit might decrease with shareholder rights, *ceteris paribus*, given that the shareholders have more control (albeit "indirect" through their selection of director) over securing management who will work to maximize shareholder wealth. A manager who tries to maximize shareholder wealth and who likely accumulates less, if

not little, private control benefits and hence engages in more truthful reporting, lowers audit risk. This reasoning leads us to the following hypothesis:

H2: The strength of shareholder rights relates negatively to the fees charged by the auditor

Prior research suggests that financial analysts who have financial expertise track corporate financial statements on a regular basis are likely to act as external monitors of managers (Jensen and Meckling 1976, Healy and Palepu 2001). For instance, Knyazeva (2007) finds that greater intensity and quality of analyst following contributes to higher profits, lower degree of diversification, M&A activity, and investment, lower leverage and more equity issuance, higher cash holdings, and less earnings management. Since firm policies are relevant for future firm performance and part of analyst compensation relies on forecast precision, analysts have an incentive to analyze the effect of these policies on performance such as earnings (Knyazeva 2007). Consistent with this idea, Yu (2008) also finds that firms followed by more analysts manage their earnings less, suggesting that financial analysts play a monitoring role, constraining managers' opportunistic reporting behavior. Thus, to the extent that managers have less incentive to engage in opportunistic earnings management, it is likely that auditors perceive less audit risk in the presence of external monitoring by analysts. This leads us to predict that analyst coverage and audit fees will be negatively related.⁴

H3: Analyst coverage relates negatively to the fees charged by the auditor

3. Data and Research Design

3.1 Sample Selection

The sample used in this study is from six different databases and consists of 4,979 firm-year observations for the period 2000 to 2004. During this period, the fee structure of audits changed significantly

⁴ While we present a directional hypothesis, we recognize that studies on behavioral biases in analyst coverage, which includes investment banking affiliation and optimism (e.g., Lin and McNichols 1998, O'Brien, McNichols, and Lin 2005, Clarke and Subramanyam 2006), suggest possible conflicts of interest associated with analyst coverage. As Lin and McNichols (1998) note, analysts' independence might be compromised in the presence of other interests such as investment banking relationship with the firm. To the extent that auditors price this factor, the predicted negative association between analyst coverage and audit fee in H3 will be attenuated.

due to several events. The passage of the Sarbanes Oxley Act had several ramifications. Audit firms were no longer allowed to perform a variety of non-audit services thus impacting any fee dependence between audit and non-audit service documented by Whisenant et al 2003. The risk of performing an audit changed because of the shift in the regulatory environment. Audit firms became aware that large firms could fail as a result of Andersen's demise and regulatory scrutiny became more acute as the PCAOB took over the registration, standard setting, and inspection functions. Audit effort increased as the requirements for auditing internal controls over financial reporting became effective under PCAOB Auditing Standard 2. Because of these factors that had an impact in audit fees over our sample period, we test our sample on a year by year basis. We also pool the years but control for the events described above.

We obtain managerial ownership data from Compact Disclosure, institutional ownership data from Thompson Financial database, data on the number of analysts following a firm from I/B/E/S, auditor changes and audit fees data from Audit Analytics, Gompers, Ishii, and Metrick (2003)'s Governance Index data from Investor Responsibility Research Center (IRRC), and accounting and all other data from Compustat.

3.2 *Measurement of Total Audit Fee*

We use the natural logarithm of total audit fees from Audit Fees File of Audit Analytics as a main audit fee variable for our empirical analysis. The SEC issued the new audit fee disclosure rules in January 2003 that require companies to disclose fees paid to the principal auditor in four categories – Audit, Audit-related, tax, and all other fees.⁵ Previously, companies were required to disclose fees in three categories. The new category, audit related fees, is for fees related to the performance of the audit or review of the registrant's financial statements. Since audit related fees are assurance and related services that are traditionally performed by the principal auditor, we use the natural logarithm of audit fees and audit related fees as an audit fee variable for our empirical analysis for the years 2003 and 2004. For years prior to 2003, we use the category audit fees, and for years after 2003, we combine audit and audit related. Dickens and Higgs (2005) document the variance in the way companies classify fees into categories. In other words, some companies classified

⁵ Please refer to the SEC's rules on *Strengthening the Commission's Requirements Regarding Auditor Independence* (Release No. 33-8183, January 28, 2003) for more details.

fees for the auditor to attend the shareholder meeting as an audit fee while other companies classified it as an audit related fee. Therefore, we believe that combining audit and audit related fees in 2003 and later does not make those years substantially different from earlier years in terms of the fee measurement. Therefore, we believe the tests across years are comparable for our variables of interest.

3.3 *Measurement of Managerial Ownership*

The managerial ownership variable, *MGR*, is measured by the total proportion of equity held by the executives and the board members and was collected manually from the Compact Disclosure database.⁶ Prior studies show that there is possible presence of both the convergence of interest and entrenchment effects as the level of managerial ownership increases. In order to control for this non-linearity inherent in managerial ownership, we use two alternative approaches. First, we add the managerial ownership squared variable (MGR^2) assuming that conditions for entrenchment (e.g., voting power, control for the board of directors, status as a founder, etc) are significantly correlated with increase managerial ownership beyond a certain threshold. Second, we construct the following three variables, high-ownership (*MGR_H*), medium-ownership (*MGR_M*), low-ownership (*MGR_L*) to estimate the piecewise linear regressions:

$$\begin{aligned}
 MGR_L &= GR \text{ if } MGR < 5\%, \\
 &= 5\% \text{ if } MGR > 5\%; \\
 MGR_M &= 0 \text{ if } MGR < 5\% \\
 &= MGR - 5\% \text{ if } 5\% < MGR < 25\% \\
 &= 20\% \text{ if } MGR > 25\% \\
 MGR_H &= 0 \text{ if } MGR < 25\%, \\
 &= MGR - 25\% \text{ if } MGR > 25\%;
 \end{aligned}$$

3.4 *Measurement of Shareholder Rights*

Gompers et al. (2003) develop a governance index of agency conflicts between managers and shareholders using various anti-takeover related activities that restrict shareholder rights, so called G-Index. Following prior studies (e.g., Gompers, Ishii, and Metrick, 2003; Core et al., 2006;), we form 10 portfolios

⁶ Specifically, stock ownership by officers, directors, and beneficial owners are included in measuring managerial ownership if they hold at least 1,000 shares.

such that we classify firms as the strongest shareholder rights group when G-Index is less than 5 ($G \leq 5$) and the group is coded as 10, and as the weakest shareholder right group when G-Index is greater than 14 ($G \geq 14$) and coded as 1. We use this reconstructed categorical variable (*GINDEX*) as a proxy for outside shareholder rights and expect that the larger the index, the stronger the shareholder rights. Since the G-Index is available in the IRRC database only in three publication years (2000, 2002, and 2004) during our sample period, we assume that the G-index does not change until the next G-index publication year.⁷ For example, we use G-Index published in 2000 for the year 2000 and 2001 since the new G-index is only available in 2002.

3.5 *Measurement of Analyst Coverage*

Analyst coverage (*ANACOV*) is measured as the number of unique analysts issuing annual earnings forecasts for each firm, based on the I/B/E/S Detailed Earnings Forecasts file. One concern in measuring analyst coverage is that it is endogenously determined so that the analysts' preference for following more transparent firms with better corporate governance may drive the result (e.g., Lang and Lundholm 1996, Healy, Hutton, and Palepu, 1999). To address the potential endogeneity problem, we use residuals from the regressions of analyst coverage (*ANACOV*) on firm size, as in Hong et al. (2000).

3.6 *Empirical Model*

Prior studies on the determinants of audit fees use various proxies for risk-, size-, and complexity-related factors that generate the outcomes of audit services evident in fees (Simunic 1980, Palmrose 1986, Defond, 2003, Francis, 2005, Whisenant, Sankaraguruswamy, and Raghunandan 2003; Khurana and Raman 2004; Higgs and Skantz 2006). After controlling the factors shown to affect audit fees in those studies, we examine the relation between audit pricing and managerial ownership and corporate monitoring activities.

⁷ This assumption may introduce the measurement errors in our empirical analysis. However, Gompers et al. (2003) claim that the error is likely to be small due to the stability of G-Index over time.

The audit fee models are as follows:⁸

$$\begin{aligned}
AFEE_t = & \alpha_0 + \alpha_1 MGR_t + \alpha_2 MGR_t^2 + \alpha_3 GINDEX_t + \alpha_4 ANACOV_t \\
& + \alpha_5 INST + \alpha_6 ADT_CG_t + \alpha_7 M \& A + \alpha_8 SIZE + \alpha_9 LNBM + \alpha_{10} LEV_{tt} \\
& + \alpha_{11} LOSS_t + \alpha_{12} ISSUE + \alpha_{13} EMPL_t + \alpha_{14} INVREC_t + \alpha_{15} FOROPS_{tt} \\
& + \alpha_{16} BIG4_t + \alpha_{17} N_BIZ + \alpha_{18} N_GEO_t + \alpha_{19} AA_CG_t + \alpha_{20} ICFR_t \\
& + \alpha_{21} ADVS_t + \alpha_{22} SOX_t + FixedEffect + v_t
\end{aligned} \tag{1}$$

$$\begin{aligned}
AFEE_t = & \alpha_0 + \alpha_1 MGR_L_t + \alpha_2 MGR_M_t + \alpha_3 MGR_H_t + \alpha_4 GINDEX_t + \alpha_5 ANACOV_t \\
& + \alpha_6 INST + \alpha_7 ADT_CG_t + \alpha_8 M \& A + \alpha_9 SIZE + \alpha_{10} LNBM + \alpha_{11} LEV_{tt} \\
& + \alpha_{12} LOSS_t + \alpha_{13} ISSUE + \alpha_{14} EMPL_t + \alpha_{15} INVREC_t + \alpha_{16} FOROPS_{tt} \\
& + \alpha_{17} BIG4_t + \alpha_{18} N_BIZ + \alpha_{19} N_GEO_t + \alpha_{20} AA_CG_t + \alpha_{21} ICFR_t \\
& + \alpha_{22} ADVS_t + \alpha_{22} SOX_t + FixedEffect + v_t
\end{aligned} \tag{2}$$

As discussed in the hypotheses development section, the coefficients on managerial ownership, shareholder rights, and analysts monitoring ($\alpha_1 \sim \alpha_4$ for Model 1 and $\alpha_1 \sim \alpha_5$ for Model 2) test whether and how our treatment variables are associated with audit pricing. Control variables (explained in Table 1) included in the regression model are total institutional ownership (*INST*), as a proxy for monitoring management, auditor change (*ADT_CG*) since the new auditor may set the first period audit fees below the audit costs (low balling) in order to win the client, a dummy variable for big 4 auditors (*BIG4*). We also include various proxies for audit risk as they are known to affect both auditors' client acceptance decisions and audit fee pricing (e.g., Simunic and Stein 1987, Whisenant, Sankaraguruswamy, and Raghunandan 2003). These variables are the natural logarithm of a firm's market value of equity (*SIZE*), the natural logarithm of a firm's end-of-year equity book-to-market ratio (*LNBM*), a dummy variable for a firm that incurs a loss in year t (*LOSS*), and the leverage of a firm (*LEV*). In addition to risk related control variables, the literature provides additional guidance on audit fee determinants, which are related to the size and complexity of the business operations of the audited firm (e.g., Higgs and Skantz 2006). Such variables are the square root of the total number of employees (*EMPL*), the natural logarithm of one plus the number of business segments and geographic segments (*N_SEG*), the sum of inventory and accounts receivable divided by total assets (*INVREC*), an

⁸ Some of these variables may only apply to one year. For example, *ADVS* and *ICFR* only apply to 2004 since audits on internal controls over financial reporting were not required until that year.

indicator variable for a firm with foreign operations(*FOROPS*). For a similar reason, we control for the firm's financing activities (*ISSUE*) by using a dummy variable set equal to 1 when the firm issued equity or long-term debt during the year that is greater than 5% of total assets and a firm's mergers and acquisitions activities (*M&A*).

During our period from 2000-2004 there were a number of events that had an impact on the audit market that we control for in the fee model. In 2002, the clients of Arthur Andersen were forced to obtain a new auditor. When a new auditor is retained, the new auditor may audit some of prior years, particularly if comparative financial information is presented. AU 508, Reports on Audited Financial Statements (AICPA) requires the predecessor auditor to perform certain work (§ 71). As Andersen was no longer a viable firm, the successor would have audited the years presented for comparative purposes. Thus, we include a control variable, *AA_CG*, for former Andersen clients.

Research also indicates that compliance with Sarbanes Oxley section 404 also increased fees substantially (Krishnan et al, 2008). The last year of our study includes the implementation year of section 404 so we include a control variable, *ICFR*, for firms that acquired that service from their auditor during our sample period. We use an indicator variable for any firm that had an opinion on internal controls over financial reporting in Audit Analytics.

Studies also indicate that firms with material weaknesses in internal control also face higher fees (Hoitash et al. 2008, Raghunandan and Rama 2006). Finally, we control for firms that had a material weakness in internal controls *ADVS*. We use an indicator variable for firms that had an adverse opinion on the opinion on internal controls over financial reporting.

We also include a variable, *SOX*, for any company that had a fiscal year end after the Sarbanes Oxley Act was passed. The motivation for including this variable is that SOX increased the regulatory complexity of audits and would have thus had an impact on fees. Examples where SOX would have changed the audit include additional meetings between the audit partner and the audit committee, greater scrutiny of the controls over the whistle blowing process, and tests for loans to corporate officers and directors.

4. Empirical Results

Tables 3 and 4 report the results of models 1 and 2 respectively. Model 1 includes the managerial ownership variables (*MGR*) as a main treatment variable after controlling for non-linearity using the squared ownership variable (MGR^2) and Model 2 includes the three different levels of managerial ownership (*MGR_L*, *MGR_M*, *MGR_H*) for piecewise regressions, allowing for two changes in the slope coefficient on managerial ownership. In each table we report the model regression results for each year from 2000 to 2004. We also report the composite regression results for the entire period.

4.1 *Sample Characteristics*

Our sample consists of 4,979 firms over the 2000-2004 period. For each of the years from 2000 to 2004, we had 596; 894; 1,200; 1199; and 1090 firms in each respectively. Our data was constrained primarily by the availability of managerial ownership, institutional ownership, Gompers Index information and analyst data. Table 2 reports in panel A the sample characteristics for the total data set. Panel B reports Pearson Correlations.

The mean proportion of equity held by managers for our sample is 6.8% and a median of 1.7. The smaller median stake than the mean in our sample suggests that the distribution is skewed to the right. Although the majority of the firms have small managerial ownership, in 19% of the total sample firms managers owned more than 10% of the firm, which confirms the prevalence of significant managerial ownership in the United States. Our analyst coverage variable has a mean and median of 1.93 and 2.07 respectively indicating approximately two analysts following each firm.

The mean and median of Gompers index (*GINDEX*) for our sample are 5.85 and 6.00, respectively. Consistent with the distribution statistics in Gompers et al. (2003, Table II on page 116), the ten deciles are similar but not identical in size and more democratic portfolio (weaker anti-take over provision groups) are bigger in size for our sample.

Concerning our dependent variable, audit fees, the mean (median) audit fees is 13.67 (13.55). Approximately 92% of firms in the sample are audited by the big four.

4.2 Control Variables

As discussed previously, fees over that period increased significantly because of various regulatory changes impacting the conducts of audits. These changes included the collapse of Arthur Andersen and subsequent absorption of its clients by the remaining firms, the passage of the Sarbanes Oxley Act, the creation of the PCAOB, the requirements of Auditing Standard 2 to report on internal control over financial reporting in accordance with Sarbanes Oxley section 404 and the identification of companies that had material weaknesses in internal controls. As such, we have included variables to control for the effect on fees for these events and the impact on audit fee.

The variable AA_CC, for firms that switched from Andersen after January 11, 2002, was significant in the 2002 year for both years but not in the composite regression. In both models the other three variables (ICFR, ADVS and SOX) that we use to control for changes in fees over time are highly significant. The variable, ICFR, indicating whether a company had a report on internal controls over financial reporting was highly significant in 2004, the year that regulation began to be phased in, and in the overall composite regression. ADVS, an indicator variable for firms that had an adverse opinion on internal controls was highly significant in 2004 and in the composite regression. This result is consistent with the results of Raghunandan and Rama 2006 and Hoitash et al. 2008. The variable SOX, representing any company that had a fiscal period after the passage of the Sarbanes Oxley Act, is highly significant in the composite regression. We believe that controlling for these events that impact fees over time allows us to draw inferences from the composite fee model.

All of the control variables in the model are highly significant except for percentage of institutional investors, whether a firm had a Big 4 auditor, and whether a firm issued stock or debt during the year, none of which were significant.

4.3 Managerial Ownership and Audit Fees

We model managerial ownership under the two models. In model one, we use the squared managerial ownership in order to control for a presumable non-linear relationship between managerial ownership and

audit fees, up to certain ownership threshold. The results of model one indicate that fees are negatively related to managerial ownership. This result holds for 2001 to 2004 and the composite model. In model two, we run piecewise regressions to show the non-linearity using various cut-offs in managerial ownership. In table 4, we use 5% and 25% as main cut-off points and find the negative effect of managerial ownership on audit fees for the lower level of ownership (*MGR_L*). The results are consistent with the alignment hypothesis whereas audits are priced consistent with the view that management who is compensated to align his/her interests with shareholders will act to maximize shareholder wealth.⁹ Note that we find some limited evidence on the entrenchment effect for firms with higher managerial ownership exceeding 25% (*MGR_H*). Further analysis shows that the positive coefficient between managerial ownership and audit fees are mainly driven by the firms whose ownership level is between 30% and 60%. This result is consistent with prior studies that show the non-linear relation between ownership and agency costs. Considering the fact that managerial ownership is well diversified for firms in the United States, the number of firms that exceed the alignment effect thresholds would be very small.¹⁰ Thus, our results are consistent with the alignment effect argument. With regard to economic significance of the impact of managerial ownership on audit fees, the reported coefficient on *MGR* of -0.0094 in Table 3 translates into a decrease in audit fees by 1.61% if *MGR* increases by 1.71% (i.e., the median *MGR* as reported in Table 2). As shown in Table 4, the coefficient on *MGR_L* is -0.0356 and thus audit fees increase by 6.1% if *MGR* increases by 1.71%. This finding confirms not only the alignment effect of share ownership on audit fees is more pronounced when managerial ownership level is low, which is the case for most US companies, but also the effect is economically significant.

4.4 Shareholder Rights, Analysts Monitoring and Audit Fees

As shown in Table 1 and 2, the Gompers Index variable (*GINDEX*) in models 1 and 2 is significant in three of the five years and it is highly significant in the composite model. This result is consistent with the idea that auditors view the board as another form of monitoring, and price this accordingly. As a complementary monitoring mechanism, we examine the effect of analysts monitoring variable (*ANACOV*) as

⁹ We cannot find the positive association for firms in the highest ownership group, exceeding 60%.

¹⁰ From simple mathematical calculations using the estimated coefficients from the regressions (Table 3), the thresholds are all over 40% of ownership, except for the year 2000.

well. The result for *ANACOV* variable is similar for both models. The coefficient is negative and significant in 2001, 2003 and 2004 and in the composite regressions. Because auditors consciously price the risk of the firm (Bedard and Johnstone 2006, Dickens et al. 2008), the results imply that auditors implicitly view analysts' coverage as a form of monitoring that reduces information risk. Those two monitoring mechanisms also reduce audit fees with economic significance. For example, one level up in *GINDEX* deciles leads to a 1.4% decrease in audit fees, while one more analysts following reduces audit fees by 6.2%, on average.

4.5 *Robustness Checks*

We perform a variety of sensitivity checks to examine the robustness of our results. Firstly, as we discussed in 3.2, we use the category audit fees for years prior to 2003 and we combine audit and audit related for years after 2003. Since the amount of audit related fees are sometimes quite significant¹¹, it is possible that the audit fees under this new definition introduce some bias toward the hypothesized relationships. In order to make sure that our result is not sensitive to the definition of audit fees, we run the same regressions using the same audit fees variable for the whole sample period. We find that the result is virtually identical. Secondly, we employ various cut-off points in defining the low/medium/high level of managerial ownership such as 3% and 20% of ownership and top 3rd and 4th quintile of ownership. The result is qualitatively the same. Lastly, we add some more control variables such as liquidity, profitability and growth in the regression models and find the very similar result.

5. **Conclusion**

This paper answers the call of Hay et al. (2006) to address the need to further explore the relationship between audit fees and governance. We use a large sample (almost 5,000 firms) to explore the relationship between audit fees and managerial ownership, and corporate monitoring (shareholder rights and analysts coverage). We find that managerial ownership is associated with lower fees consistent with the alignment hypothesis whereas managerial ownership aligns management and shareholder interests. We also find that

¹¹ For example, according to General Electric 2007 proxy statement, audit fees paid to KPMG were \$85.8 million while audit-related fees were \$20.6 million in the year 2006.

fees are lower when corporate monitoring is stronger. In our tests of corporate monitoring, we find that shareholder rights, as proxied by the Gompers' index and analyst following are associated with lower audit fees.

The results may help assist auditor firms in identifying criteria for formally setting fees and considering factors in the client acceptance criteria. Further, our results may assist board compensation committees in understanding the relationship in management compensation and firm risk. Future research may consider the relationship between the type of managerial compensation and audit fees.

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Table 1: Variable Definitions

DEPENDENT VARIABLE	
<i>AFEE</i>	Total audit fees as measured by the natural logarithm of total audit fees (includes audit related fees in 2003 and 2004)
TREATMENT VARIABLES	
<i>MGR</i>	Total percentage of managerial and board ownership at year t as obtained from Compact Disclosure
<i>MGR²</i>	The managerial ownership squared (to control for non-linearity)
<i>MGR_L, M, H</i>	Variables for piecewise regressions; MGR-L(5% below), M (between 5% and 25%), H (25 % above)
<i>GINDEX</i>	Investor Protection Index from Gompers, Ishii, and Metrick (2003)
<i>ANACOV</i>	Analysts' Coverage measured by the natural logarithm of the number of unique analysts following the company based on the I/B/E/S detailed earnings forecasts files.
CONTROL VARIABLES	
<i>SIZE</i>	Natural logarithm of market value of equity
<i>INST</i>	Percentage of total institutional ownership obtained from the Thomson Financial Database
<i>ADT_CG</i>	Indicator variable for auditor changes (1 is an auditor change, 0 otherwise)
<i>AA_CC</i>	Indicator variable for an auditor change from Arthur Anderson after Jan 11, 2002, the date of that the firm announced that documents had been shredded.
<i>ICFR</i>	Indicator variable if the firm received an audit opinion for internal controls over financial reporting
<i>ADVS</i>	Indicator variable for an adverse opinion in internal controls over financial reporting
<i>LNBM</i>	Natural logarithm of Book-to-Market [#60 / (#25 × #199)]
<i>M&A</i>	Indicator variable set for 1 if the firm had a mergers and acquisitions [fnte#1]; 0 otherwise.
<i>LEV</i>	Leverage, measured as debt to assets [(#34 + #9) / #6]
<i>LOSS</i>	Indicator variable set to 1 if the firm had a loss for the year; 0 otherwise
<i>ISSUE</i>	Indicator variable for stock and long-term debt issuance: 1 if stock and long-term debt (#108 + #111) for past three years are more than 5% of total assets; 0 otherwise
<i>EMPL</i>	Squared root of the number of employees [#29]
<i>INVREC</i>	Inventory and Account Receivables [(#2+#3) / #6]
<i>FOROPS</i>	Indicator variable set to one if the firm had foreign operations, 0 otherwise
<i>BIG4</i>	Indicator variable set to one for firms with a Big 4 Auditors, 0 otherwise
<i>N_BIZ</i>	Natural logarithm of 1 plus the number of business segments [#4]
<i>N_GEO</i>	Natural logarithm of 1 plus the number of geographical segments [#5]
<i>SOX</i>	Indicator variable for the date after the SOX was signed into law (1 for any fiscal year after July 30, 2002); 0 otherwise

Note: numbers in the above table indicate the annual Compustat data number.

[Table 2] Descriptive Statistics

Panel A: Descriptive Statistics among Selected Variables

VARIABLE	N	Mean	Std. Dev	25%	Median	75%
<i>AFEE</i>	4,979	13.6794	1.1562	12.8479	13.5580	14.4372
<i>MGR</i>	4,979	6.8053	13.2675	0.5500	1.7100	6.5000
<i>MGR_L</i>	4,979	2.3655	1.9605	0.5500	1.7100	5.0000
<i>MGR_M</i>	4,979	2.9584	6.0724	0.0000	0.0000	1.5000
<i>MGR_H</i>	4,979	1.4815	7.8363	0.0000	0.0000	0.0000
<i>GINDEX</i>	4,979	5.8576	2.4525	4.0000	6.0000	8.0000
<i>ANACOV</i>	4,979	1.9326	0.9018	1.3863	2.0794	2.6391
<i>INST</i>	4,979	66.3891	18.6615	54.5455	68.9139	80.5627
<i>ADT_CG</i>	4,979	0.0747	0.2630	0.0000	0.0000	0.0000
<i>M&A</i>	4,979	0.4260	0.4945	0.0000	0.0000	1.0000
<i>SIZE</i>	4,979	7.4063	1.5759	6.3548	7.2764	8.3924
<i>LNBM</i>	4,979	-0.8560	0.7170	-1.2599	-0.7873	-0.4059
<i>LEV</i>	4,979	0.2331	0.1725	0.0716	0.2353	0.3540
<i>LOSS</i>	4,979	0.2342	0.4235	0.0000	0.0000	0.0000
<i>ISSUE</i>	4,979	0.8682	0.3383	1.0000	1.0000	1.0000
<i>EMPL</i>	4,979	3.3109	3.0682	1.4142	2.3664	4.0743
<i>INVREC</i>	4,979	0.2447	0.1648	0.1087	0.2217	0.3393
<i>FOROPS</i>	4,979	0.3517	0.4775	0.0000	0.0000	1.0000
<i>BIG4</i>	4,979	0.9199	0.2715	1.0000	1.0000	1.0000
<i>N_BIZ</i>	4,979	1.0788	0.6011	0.6931	1.0986	1.6094
<i>N_GEO</i>	4,979	1.1229	0.6335	0.6931	1.0986	1.6094
<i>AA_CG</i>	4,979	0.0492	0.2163	0.0000	0.0000	0.0000
<i>ADVS</i>	4,979	0.1703	0.3759	0.0000	0.0000	0.0000
<i>SOX</i>	4,979	0.4115	0.4922	0.0000	0.0000	1.0000

Panel B: Pearson Correlations

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]
[1] <i>AFEE</i>	1.0000																				
[2] <i>MGR</i>	-0.1542	1.0000																			
[3] <i>GINDEX</i>	-0.1647	0.1962	1.0000																		
[4] <i>ANACOV</i>	0.3945	-0.0849	-0.0176	1.0000																	
[5] <i>INST</i>	0.0982	-0.2042	-0.0395	0.2563	1.0000																
[6] <i>ADT_CG</i>	-0.0657	0.0176	-0.0009	-0.0257	-0.0158	1.0000															
[7] <i>M&A</i>	0.2040	-0.0583	-0.0903	0.0666	-0.0217	0.0132	1.0000														
[8] <i>SIZE</i>	0.6474	-0.0997	-0.1008	0.7140	0.1433	-0.0581	0.1222	1.0000													
[9] <i>LNBM</i>	-0.1381	-0.0058	-0.0283	-0.3430	-0.1455	0.0512	0.0704	-0.4985	1.0000												
[10] <i>LEV</i>	0.2320	-0.0739	-0.1318	0.0141	-0.0284	0.0269	0.1749	0.0552	0.0693	1.0000											
[11] <i>LOSS</i>	-0.0953	0.0011	0.1130	-0.1616	-0.1364	0.0214	-0.0179	-0.3184	0.2231	0.0680	1.0000										
[12] <i>ISSUE</i>	0.1168	-0.0512	-0.0534	0.1237	0.0861	0.0000	0.0918	0.0702	0.0014	0.3093	0.0359	1.0000									
[13] <i>EMPL</i>	0.5468	-0.0827	-0.1139	0.3810	0.0342	-0.0280	0.0605	0.5987	-0.1263	0.1372	-0.1512	0.0806	1.0000								
[14] <i>INVREC</i>	-0.0232	0.0108	-0.0666	-0.2315	0.0795	-0.0262	-0.0781	-0.1689	0.0674	-0.1277	-0.1122	-0.0837	0.0806	1.0000							
[15] <i>FOROPS</i>	0.1554	-0.0350	0.0302	0.0176	0.0663	-0.0013	-0.0331	0.0329	-0.0834	-0.1437	0.0337	-0.0302	-0.0410	0.0536	1.0000						
[16] <i>BIG4</i>	0.1226	-0.0502	-0.0162	0.0629	0.0681	0.0276	-0.0120	0.0675	-0.0422	-0.0381	-0.0027	0.0425	0.0273	-0.0326	0.0501	1.0000					
[17] <i>N_BIZ</i>	0.1494	-0.0731	-0.1676	-0.0473	-0.0222	-0.0043	0.1339	0.0526	0.0961	0.0655	-0.0330	0.0357	0.0399	0.0809	-0.0458	-0.0165	1.0000				
[18] <i>N_GEO</i>	0.2373	-0.0664	-0.0087	0.0582	0.0521	0.0050	0.0028	0.0965	-0.0761	-0.1096	0.0373	-0.0103	0.0241	0.0962	0.3468	0.0301	0.1164	1.0000			
[19] <i>AA_CG</i>	-0.0675	0.0191	0.0022	-0.0117	-0.0156	0.8006	0.0125	-0.0581	0.0582	0.0369	0.0343	0.0172	-0.0202	-0.0287	-0.0100	0.0637	0.0053	-0.0068	1.0000		
[20] <i>ICFR</i>	0.3278	0.0043	0.0017	0.0445	0.1615	0.0617	0.0332	0.0928	-0.0868	-0.0162	-0.0777	0.0011	-0.0155	-0.0568	0.0535	0.0904	-0.0039	0.0112	-0.1031	1.0000	
[21] <i>ADVS</i>	0.1322	0.0168	0.0315	-0.0338	0.0251	-0.0037	0.0032	-0.0242	0.0083	-0.0010	0.0396	-0.0101	-0.0189	0.0068	0.0496	0.0117	-0.0059	0.0369	-0.0331	0.3208	1.0000
[22] <i>SOX</i>	0.3010	0.2929	-0.0177	0.0080	0.0228	0.1114	-0.1274	-0.0032	0.0805	-0.1218	-0.0467	-0.0625	-0.0266	-0.0458	-0.0709	0.0935	0.1852	-0.0041	0.0372	-0.1902	0.5418

See Table 1 for definition of variables. Correlation coefficients that are statistically significant at the 5% level are shown in boldface type.

[Table 3] Regression Results by Year – Model 1

	AUDIT FEES					
	Year 2000	Year 2001	Year 2002	Year 2003	Year 2004	ALL
<i>MGR</i>	-0.0041 [0.87]	-0.0104 [2.92]***	-0.0108 [3.52]***	-0.0115 [3.49]***	-0.0085 [2.98]***	-0.0094 [6.44]***
<i>MGR</i> ²	0.0001 [1.21]	0.0001 [2.59]***	0.0001 [3.13]***	0.0001 [3.40]***	0.0001 [2.94]***	0.0001 [6.25]***
<i>GINDEX</i>	-0.0270 [2.48]**	-0.0161 [1.90]*	-0.0060 [0.74]	-0.0137 [1.75]*	-0.0070 [0.92]	-0.0139 [3.75]***
<i>ANACOV</i>	-0.0188 [0.32]	-0.0763 [1.83]*	-0.0521 [1.48]	-0.1406 [4.48]***	-0.0894 [3.09]***	-0.0617 [3.81]***
<i>INST</i>	-0.0019 [0.92]	-0.0011 [0.82]	-0.0006 [0.46]	-0.0010 [0.84]	0.0026 [2.39]**	-0.0005 [0.84]
<i>ADT_CG</i>	-0.3230 [1.42]	-0.1521 [1.35]	-0.3509 [2.24]**	-0.2329 [2.38]**	0.0509 [0.61]	-0.1281 [2.31]**
<i>M&A</i>	-0.0243 [0.39]	0.0596 [1.41]	0.1204 [3.07]***	0.1384 [3.64]***	0.1104 [3.07]***	0.0941 [5.10]***
<i>SIZE</i>	0.4379 [7.05]***	0.4469 [10.15]***	0.4356 [12.50]***	0.5478 [16.26]***	0.4774 [14.30]***	0.4589 [26.50]***
<i>LNBM</i>	0.3345 [5.70]***	0.3459 [7.01]***	0.3253 [7.42]***	0.3227 [8.58]***	0.2807 [7.07]***	0.3335 [17.32]***
<i>LEV</i>	1.4086 [5.84]***	1.3533 [7.84]***	1.2199 [8.92]***	1.3927 [10.13]***	1.1838 [8.62]***	1.3235 [19.71]***
<i>LOSS</i>	0.2846 [3.04]***	0.1822 [3.48]***	0.2782 [5.47]***	0.2217 [4.46]***	0.2499 [4.32]***	0.2289 [9.31]***
<i>ISSUE</i>	-0.1503 [1.60]	-0.0365 [0.61]	0.0535 [0.93]	0.0751 [1.58]	-0.0166 [0.34]	0.0079 [0.32]
<i>EMPL</i>	0.1046 [3.91]***	0.0970 [4.09]***	0.1012 [5.35]***	0.0774 [4.45]***	0.0859 [5.01]***	0.0933 [10.39]***
<i>INVREC</i>	0.8386 [2.98]***	0.7850 [3.76]***	0.9240 [5.33]***	0.8516 [5.03]***	0.9111 [5.51]***	0.8318 [10.12]***
<i>FOROPS</i>	0.1689 [2.72]***	0.1447 [3.18]***	0.1945 [4.69]***	0.1893 [4.78]***	0.1910 [5.02]***	0.1820 [9.52]***
<i>BIG4</i>	-0.0325 [0.43]	0.0640 [1.31]	0.0283 [0.22]	0.2512 [1.80]*	0.1557 [1.42]	0.0448 [1.24]
<i>N_BIZ</i>	0.0109 [0.22]	0.0405 [1.15]	0.0545 [1.59]	0.0883 [2.93]***	0.0625 [2.04]**	0.0485 [3.15]***
<i>N_GEO</i>	0.1652 [3.05]***	0.2174 [5.50]***	0.2018 [5.34]***	0.1952 [5.58]***	0.1399 [4.07]***	0.1813 [10.62]***
<i>AA_CG</i>			0.3383 [2.07]**			0.1182 [1.62]
<i>ICFR</i>					0.6237 [14.42]***	0.6145 [15.30]***
<i>ADVS</i>					0.3860 [5.55]***	0.3787 [5.53]***
<i>SOX</i>						0.3159 [7.26]***
<i>Constant</i>	9.7458 [27.28]***	9.4250 [23.64]***	9.3538 [30.22]***	8.8786 [17.26]***	8.7898 [32.21]***	9.1529 [50.54]***
<i>Observations</i>	596	894	1,200	1,199	1,090	4,979
<i>R-squared</i>	0.6902	0.7397	0.7037	0.7378	0.7748	0.7591

*, **, *** indicate significance at the .1, .05 and .01 levels respectively; Variable definitions are in Table 1. Year and industry dummies are included in the regressions but not reported for simplicity.

[Table 4] Regression Results by Year – Model 2

	AUDIT FEES					
	Year 2000	Year 2001	Year 2002	Year 2003	Year 2004	ALL
<i>MGR_L</i>	-0.0312 [1.50]	-0.0632 [4.77]***	-0.0352 [2.74]***	-0.0283 [2.28]**	-0.0243 [1.88]*	-0.0356 [5.82]***
<i>MGR_M</i>	0.0029 [0.39]	0.0046 [0.94]	-0.0027 [0.64]	-0.0051 [1.09]	-0.0016 [0.37]	-0.0006 [0.30]
<i>MGR_H</i>	0.0026 [0.78]	0.0014 [0.57]	0.0018 [0.79]	0.0031 [1.41]	0.0012 [0.60]	0.0018 [1.73]*
<i>GINDEX</i>	-0.0275 [2.52]**	-0.0162 [1.92]*	-0.0061 [0.75]	-0.0139 [1.77]*	-0.0076 [0.99]	-0.0143 [3.84]***
<i>ANACOV</i>	-0.0120 [0.20]	-0.0785 [1.88]*	-0.0465 [1.32]	-0.1383 [4.41]***	-0.0893 [3.10]***	-0.0589 [3.64]***
<i>INST</i>	-0.0019 [0.93]	-0.0008 [0.60]	-0.0006 [0.53]	-0.0010 [0.86]	0.0028 [2.58]***	-0.0004 [0.74]
<i>ADT_CG</i>	-0.3408 [1.51]	-0.1511 [1.36]	-0.3485 [2.23]**	-0.2310 [2.37]**	0.0485 [0.58]	-0.1290 [2.34]**
<i>M&A</i>	-0.0209 [0.34]	0.0536 [1.28]	0.1206 [3.08]***	0.1369 [3.59]***	0.1084 [3.01]***	0.0933 [5.06]***
<i>SIZE</i>	0.4257 [6.69]***	0.4295 [9.88]***	0.4254 [12.35]***	0.5418 [16.00]***	0.4731 [14.19]***	0.4493 [25.89]***
<i>LNBM</i>	0.3270 [5.61]***	0.3278 [6.71]***	0.3200 [7.34]***	0.3194 [8.50]***	0.2781 [6.97]***	0.3276 [17.10]***
<i>LEV</i>	1.3961 [5.89]***	1.3363 [7.89]***	1.2140 [8.94]***	1.3947 [10.16]***	1.1908 [8.69]***	1.3217 [19.80]***
<i>LOSS</i>	0.2798 [2.97]***	0.1872 [3.64]***	0.2765 [5.43]***	0.2195 [4.42]***	0.2505 [4.33]***	0.2281 [9.29]***
<i>ISSUE</i>	-0.1522 [1.61]	-0.0324 [0.55]	0.0548 [0.95]	0.0747 [1.57]	-0.0173 [0.35]	0.0088 [0.36]
<i>EMPL</i>	0.1038 [3.93]***	0.0949 [4.07]***	0.1003 [5.34]***	0.0766 [4.38]***	0.0856 [5.00]***	0.0924 [10.35]***
<i>INVREC</i>	0.8544 [3.06]***	0.8358 [4.00]***	0.9300 [5.35]***	0.8595 [5.05]***	0.9282 [5.62]***	0.8468 [10.32]***
<i>FOROPS</i>	0.1676 [2.71]***	0.1349 [2.99]***	0.1907 [4.61]***	0.1875 [4.73]***	0.1904 [4.99]***	0.1789 [9.36]***
<i>BIG4</i>	-0.0274 [0.37]	0.0760 [1.58]	0.0282 [0.21]	0.2545 [1.82]*	0.1547 [1.41]	0.0485 [1.35]
<i>N_BIZ</i>	0.0127 [0.25]	0.0451 [1.29]	0.0566 [1.65]*	0.0919 [3.06]***	0.0663 [2.15]**	0.0518 [3.35]***
<i>N_GEO</i>	0.1655 [3.06]***	0.2191 [5.57]***	0.2032 [5.38]***	0.1979 [5.65]***	0.1413 [4.10]***	0.1833 [10.73]***
<i>AA_CG</i>			0.3327 [2.04]**			0.1174 [1.61]
<i>ICFR</i>					0.6257 [14.43]***	0.6187 [15.35]***
<i>ADVS</i>					0.3846 [5.54]***	0.3773 [5.51]***
<i>SOX</i>						0.3138 [7.18]***
<i>Constant</i>	9.8726 [26.90]***	9.5535 [23.08]***	9.4385 [30.65]***	8.9203 [17.45]***	8.8078 [32.43]***	9.2240 [50.91]***
<i>Observations</i>	596	894	1,200	1,199	1090	4,979
<i>R-squared</i>	0.6914	0.7449	0.7046	0.7383	0.7749	0.7600

*, **, *** indicate significance at the .1, .05 and .01 levels respectively; Variable definitions are in Table 1. Year and industry dummies are included in the regressions but not reported for simplicity.