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AUDITOR OFFICE LEVEL SIZE AND AUDITOR REPUTATION

By

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I dedicate this to my beloved Autumn, whose unending support and love was a necessary element for my success.

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ABSTRACT

I test for the existence of an investor valued assurance component of auditor reputation that is separate from the well documented insurance value component of auditor reputation. More specifically, I test whether office level auditor size is a characteristic being used by the market to assess the assurance component of auditor reputation, while controlling for insurance value effects. I find both higher earnings response coefficients (ERCs) and lower cost of equity for clients audited by Big 4 auditors from larger offices compared with clients audited by Big 4 auditors from smaller offices. I also find evidence that investors in firms with less predisclosure information assign higher values to the additional assurance that auditors from larger offices provide. Such evidence supports the theory that investors value the assurance that auditors provide (in addition to the implicit auditor provided insurance), extends the current model of auditor reputation to include a component related to the size of the auditor's office, and shows that investor values for auditor reputation are increasing in information asymmetry.

CHAPTER 1

INTRODUCTION

Recent archival audit literature expresses disagreement about the assurance value component of auditor reputation (Lennox, 1999; Willenborg, 1999; Khurana and Raman, 2004; and Weber et al., 2008)[1]. Most of these studies find no evidence that the assurance that auditors provide is valued by investors (Lennox, 1999; Willenborg, 1999; and Khurana and Raman, 2004). Instead, these authors suggest that auditor reputation is dominated by the auditor's insurance value. However one study, Weber et al (2008), suggests a positive value for the assurance component of KPMG's reputation among German investors. Although Weber et al. (2008) present some limited evidence consistent with an investor valued assurance component of auditor reputation, they cannot rule out the possibility that their results may have been driven by insurance value rather than assurance value effects. Therefore, more conclusive evidence regarding the valuation of the assurance component of auditor reputation is needed.

This paper tests for an effect of auditor office level size on auditor reputation of Big 4 audit firms. This setting is interesting for two reasons. First, by holding constant the national level auditor size, I effectively hold constant the insurance value[2]. Because the insurance value of an audit is unlikely to differ from office to office within the Big N, differences in auditor reputation between offices of differing size are likely due to differences in the assurance value component of auditor reputation[3]. Therefore, this setting allows me to control for the insurance value component and focus my test on the market's valuation of auditor provided assurance.

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[1] I use the term auditor reputation to refer to the market's impounding into stock price any relevant factors related to the client's use of a particular auditor. I assume that auditor reputation includes an assurance value component and an insurance value component. I use the term assurance value to refer to the component of auditor reputation related to the expected precision of financial statement information resulting from the use of a higher quality auditor. I use the term insurance value to refer to the component of auditor reputation related to the expected value of damages awarded to plaintiffs in a shareholder suit against an auditor for negligent audit work.

[2] Previous studies that have examined the insurance versus assurance value of auditor reputation have made arguably weaker attempts, frequently assuming the insurance value is zero in lower auditor litigation countries, to attempt to control for the insurance value (Khurana and Raman, 2004 and Weber et al., 2008).

[3] Legal liability of partnerships (and Limited Liability Partnerships, LLPs) includes damages done by any partner (or agent) of the firm in the ordinary course of business. In such a case, the partnership's assets and professional liability insurance, are the primary source of funds used to pay the plaintiff's claim. Although individual partners may be held liable (only those directly involved in the tortuous act, if the firm is an LLP), the assets of individual

Second, prior research provides evidence that audit firms with larger, national level operations both provide higher quality audits and have better reputations than smaller firms (Teoh and Wong, 1993 and Becker et al., 1998). These studies are motivated by the theoretical auditor size analyses in DeAngelo (1981). Additionally, two recent studies examine auditor office level size. They conclude that larger auditor offices provide both better audit quality and charge higher audit fees (Choi et al., 2007 and Francis and Yu, 2009). However, to date no study has examined the differential auditor reputation possessed by auditors working from large versus small offices. Therefore, the second reason for examining auditor reputation in this setting is that such an examination would extend the current auditor reputation model, showing that it includes a component related to the size of the auditor's office.

I hypothesize that auditors operating in larger offices have better reputations than do auditors operating in smaller offices. I expect such a relation because prior analytical models suggest that a rational investor will incorporate the assurance value of an auditor's reputation into valuation (Titman and Trueman, 1986 and Teoh and Wong, 1993). Since recent studies have shown that auditor office size is positively related to audit quality I expect investors' valuations are positively related to the size of an auditor's office (Francis and Yu, 2009 and Choi et al., 2007).

Additionally, prior research suggests that demand for audit quality is increasing in client agency costs (Jensen and Meckling, 1976; Francis and Wilson, 1988; and Watkins et al, 2004). However, no study that I am aware of directly investigates the valuation effects of differential auditor reputation values across agency cost levels. Such evidence would also extend the auditor reputation literature. I hypothesize that auditor reputation effects of auditor office level size are increasing in agency cost. I test this prediction in four settings where prior literature suggests agency costs vary. Agency cost is expected to be high in firms with high levels of research and development (R&D), low levels of predisclosure information, low levels of managerial holdings, and weak corporate governance (Godfrey and Hamilton, 2005; Atiase, 1985; Pacini and Hillison, 2004; and Jensen and Meckling, 1976).

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partners are generally insignificant relative to the damages paid for an auditor's negligence claim (Roszkowski, pps 768-769). Therefore, because individual offices are just subsets of the partnership as a whole, I suggest that the insurance value of an audit does not vary significantly from office to office within a public accounting firm.

To test my predictions, I use two alternative measures of auditor reputation. I use earnings response coefficient (ERCs) regressions to assess the degree of reliance the market places on earnings audited by a given auditor operating from a given office. I also use cost of equity capital estimates to assess the differential information risk perceived by investors in clients audited by a given auditor operating from a given office. Then, to test the hypothesized relations between valuation of auditor office size and agency cost, I re-estimate these same regressions within subsample portfolios partitioned into quintiles of variables proxying for the level of agency cost.

The results of my tests suggest that auditor reputation is increasing in the size of the auditor's office. Specifically, I find that ERCs (cost of equity) are increasing (decreasing) in the office size. These results are robust to the inclusion of audit-firm specific controls, controls for industry audit expertise, an alternative proxy for the market's expectation of earnings (in the ERC model), and controls for prior period audit quality (in the ERC models only). Additionally, I find evidence that the market's valuation of auditor office level size is negatively related to the level of predisclosure information available, suggesting that the market values this extra audit quality more when the agency cost of information asymmetry is highest.

This research is likely interesting to academic accountants because it extends the archival audit literature in three ways. These findings extend this literature by providing evidence suggesting that the assurance component of auditor reputation is valued by investors, even when controlling for auditor provided insurance value. Additionally, these results extend the current model of auditor reputation by showing that investors consider the size of the auditor's office an important indicator of the assurance that the auditor provides. These findings also extend the auditor reputation literature by demonstrating that investor valuation of auditor reputation is positively related to information asymmetry.

Additionally, management and audit committees of publicly traded companies would likely be interested in these findings. Since client companies sell equity shares in their firms to generate capital, they want to achieve the highest possible level of proceeds for a given equity offering. My findings suggest a higher level of capital offered (lower cost of equity and higher ERCs) for a given amount of equity. Such findings would likely influence the auditor and office selection process of publicly traded client firms.

These results may also interest auditors, whose livelihood is influenced by the clients who retain them. The auditors of larger offices may be able to use this information to better market their office's audit services. At the same time, auditors working in smaller offices may recognize the need to either market themselves differently, grow their office, or perhaps merge with another office.

The remainder of this dissertation is organized as follows. Section 2 provides a description of the relevant literature to date. In Section 3, I motivate and describe the hypotheses. Section 4 describes the data sources, variable calculation, and tests of hypotheses. Section 5 describes the results, and Section 6 gives sensitivity tests conducted. Lastly, section 7 summarizes the conclusions of this study.

CHAPTER 2

LITERATURE REVIEW

Jensen and Meckling (1976) describe an agency relationship as any contract between individuals where one party is engaged to do something on behalf of another. The problem in such a relationship is that, because of the lack of the agent's ownership of the results of operations, the utility maximizing agent has incentives to perform suboptimal work, thus creating costs for the principal. The principal may recognize this natural result and choose to implement a system of monitoring, to reduce these costs. Financial statement auditing is a common monitoring device that reduces these agency costs (DeAngelo, 1981; Wallace, 1980; and Watts, 1977).

2.1 Auditor Size

Significant volumes of prior literature suggest that larger auditors provide higher quality audits. DeAngelo (1981) theorizes that larger auditors have lower incentives to compromise their independence than do smaller auditors because larger auditors have more to lose if their compromised independence is made known to the public.

Many researchers have investigated the audit quality implications of auditor size. These studies generally find that larger auditors are less likely than smaller auditors to allow clients to issue financial statements that contain accounting errors and misstatements, to be sued for poor quality audit work, to allow aggressive earnings management, and to fail to give a going concern audit opinion to a financially distressed audit client (Defond and Jiambalvo, 1991; Palmrose, 1988; Becker et al., 1998; Krishnan et al., 2008; and Boone et al., 2008a). Historically, these studies have separated firms into large and small classes based on whether or not they were in the Big N (Defond and Jiambalvo, 1991; Palmrose, 1988; and Becker et al., 1998)[4]. However, a

[4] I use the general term "Big N" to refer to the shrinking group of audit firms that have generally been considered as large, prestigious, and high quality in the auditing literature. These have previously been called the "Big 8", "Big 6", "Big 5", and now the "Big 4".

few recent audit quality studies have examined audit quality differences across Big N/second tier/third tier groupings (Krishnan et al., 2008 and Boone et al., 2008a) [5] .

Additionally, other archival studies investigate the auditor reputation implications of auditor size. These studies find that clients of larger auditors have lower costs of equity, higher ERCs, and managers who expect lower IPO underpricing than do clients of smaller auditors (Carpenter and Strawser, 1971; DeAngelo's, 1981; Teoh and Wong, 1993; Cassell et al., 2008; and Boone et al, 2008a). Most of them use the generally accepted Big N/non-Big N classification to denote large/small auditors (Carpenter and Strawser, 1971; DeAngelo's, 1981; Teoh and Wong, 1993). However, two recent studies broadened their classifications of auditor size to include second tier firms (Cassell et al., 2008 and Boone et al, 2008a).

Although national level auditor size is considered an appropriate measure of both audit quality and auditor reputation, much recent audit research has focused on office level auditor variables to better explain audit quality. Along this line, former SEC Chairman Steven Wallman (1996) discussed an alternative proposed paradigm for considering independence issues with auditors. His paradigm includes, among several other components, a focus on the "individual, office, or other unit of the firm making audit decisions with respect to a particular audit client." This lower level focus is suggested because, as Wallman points out, independence is impaired at the decision making level, and most audit related decisions are made at the local office level, rather than at the firm level. DeAngelo (1981) also suggests a lower level auditor focus for evaluating independence issues. She briefly suggests that the same mechanisms that impair smaller audit firms' independence also work to impair the independence of an individual audit partner when the number of clients is small.

Two recent papers examine differences in audit quality between clients of auditors from small and large offices. Choi et al. (2007) tests an extension of DeAngelo's (1981) theory related to national level auditor size, suggesting the same economic arguments also apply to the office level. These authors find that unsigned abnormal accruals are decreasing and audit fees are increasing in the size of an auditor's office. Francis and Yu (2009) investigate an office level size effect on audit quality using abnormal accruals, the likelihood of meeting or beating

[5] Cassell et al. (2008) suggests the second tier auditors included BDO Siedman, Grant Thornton, and McGladrey and Pullen. Krishnan et al. (2008) and Boone et al. (2008a) define the second tier auditors as those three firms plus the Crowe Group.

earnings benchmarks, and the likelihood of an auditor giving a distressed client a qualified opinion. In addition to the argument provided by Choi et al. (2007), they suggest that larger auditor offices are more likely to have access to in-house audit expertise. Expertise is more likely to be used if it is available at the same office than if it is located far away (Danos et al., 1989). They find results that are similar to those found in Choi et al. (2007).

In summary, recent audit literature yields several useful conclusions about auditor size. First, larger audit firms perform better quality audits. Second, larger audit firms have better reputations. Third, larger auditor offices both do better quality audit work and charge higher fees. However, this literature is silent on the auditor reputation implications of auditor office level size.

2.2 Assurance Value and Insurance Value Components of Auditor Reputation

Menon and Williams (1994) suggest that auditors provide an implicit form of insurance against investment losses via shareholder lawsuits in the event of misstatements in the financial statements. Several studies find support for this argument via negative client abnormal returns at either the announcement of the bankruptcy of their auditor or during time periods with rumors of the auditor's bankruptcy (Menon and Williams, 1994; Baber et al., 1995; and Pacini and Hillison, 2004). Additionally, Brown et al. (2009) finds significantly positive client abnormal returns at the announcement of the favorable resolution of their auditor's pending litigation. Together, these studies suggest that the market values the implicit insurance that auditors provide.

On the other hand, Titman and Trueman (1986) analytically study valuation implications of the assurance that auditors provide from initial public offerings (IPOs). They suggest that the use of better quality auditors, who assure investors of a more precise client earnings signal, provides information content to investors. Investors impound the auditor's reputation into the stock price, allowing for higher values of client firms using better quality auditors. This study's analysis suggests a role for the assurance value of an auditor's reputation.

Teoh and Wong (1993) perform some assurance value modeling, in addition to their archival work. Their analysis suggests that expected differences in audit quality between auditors results in differing investor assessments of the precision in the earnings signal. This more precise earnings signal is impounded into stock price via higher ERCs for clients using more reputable auditors.

However, several archival studies find no support for the investor valued assurance component of auditor reputation. One of these, Khurana and Raman (2004), examines differences in auditor reputation between Big N and non Big N auditors in a setting where auditor provided insurance value is assumed to be very low. The authors suggest that where auditor litigation costs are expected to be low (Canada, Australia, and UK), the insurance value of an auditor that is impounded into stock price should also be low. They proxy for auditor reputation using client cost of equity. The authors suggest that if the financial statement assurance that auditors provide is of value to clients then cost of equity differences between Big N and non-Big N clients should be present in low auditor litigation countries. The authors find no cost of equity difference between clients of Big N and non-Big N auditors operating in low auditor litigation countries. The authors use this result to suggest that assurance may be of little value to investors.

Willenborg (1999) focuses on IPO underpricing for companies using large versus small auditors. Willenborg (1999) finds more underpricing for larger IPOs using smaller auditors but no difference in underpricing for small IPO clients of smaller versus larger auditors. The author suggests that his results' sensitivity to IPO deal size is the result of the strength of the insurance value component and the weakness of the assurance value component of auditor reputation.

Lennox (1999) also examines insurance and assurance values. His study investigates changes in audit fees, audit client retention, and rates of auditor litigation around public criticisms of various English auditors. The author finds that larger auditors are more likely to be sued than smaller auditors with similar criticisms, that criticized firms neither lost more clients nor charged lower fees than non-criticized firms, and that criticized firms were no less likely to have clients switch to them than non criticized firms. His findings suggest that public announcements about an auditor's poor performance are not likely to impact their reputation, and that investors are more likely to sue auditors with more resources than with fewer resources, independent of their work quality. These results also suggest that financial statement users may be more concerned about an auditor's insurance value than his assurance value.

In contrast, Weber et al. (2008) finds some evidence consistent with an investor valuation of the assurance component of auditor reputation. They examine the abnormal returns of German clients of KPMG after a public announcement of poor quality audit work on a fraudulent client, ComROAD AG. This setting is useful for examining the market's value for the assurance component of auditor reputation because Germany has significant auditor legal liability protection. The authors assume that the strong legal liability protection for German auditors results in a sufficiently small insurance value provided by the auditor that should not change upon public criticism of the auditor. The authors find significantly negative abnormal returns for German clients of KPMG around the announcement of ComROAD AG's fraud. Although the authors cannot rule out the possibility that the public criticism of KPMG influenced investor assessments of KPMG's insurance value, the authors interpret the results as evidence of an assurance value component of auditor reputation.

In summary, there is much debate about the strength of the assurance value component of auditor reputation. Several studies suggest an investor value for the implicit insurance that auditors provide (Menon and Williams, 1994; Baber et al., 1995; Pacini and Hillison, 2004; and Brown et al., 2009). However, Lennox (1999), Willenborg (1999), and Khurana and Raman (2004) find no support for the theory that the market values the assurance that auditors provide. These results suggest that prior findings of auditor reputation differences between Big N/second tier/third tier auditors are likely the result of insurance value differences. On the other hand, Weber et al. (2008) suggests the existence of an assurance value component of auditor reputation, but these authors cannot rule out the possibility that the results may have been driven by insurance value effects rather than assurance value effects. Therefore, the literature is inconclusive about whether auditor reputation includes an assurance value component.

CHAPTER 3

HYPOTHESIS DEVELOPMENT

DeAngelo (1981) defines audit quality as, "the market assessed joint probability that a given auditor will both (a) discover a breach in the client's accounting system, and (b) report the breach." However, DeAngelo suggests that because the market cannot directly observe this joint probability, the market must assess it via some imperfect, but observable, characteristic(s).

In this study I investigate whether investors value the assurance that auditors provide. I investigate this question by testing whether office level auditor size is a characteristic being used by the market to value a company's equity. If investors differentially value companies audited by different sized offices of similar auditors then it's likely that investors are valuing assurance differences rather than the insurance differences between those audit offices.

I expect that auditor provided financial statement assurance is valued by investors because prior theoretical accounting research suggests that the market impounds into a client's stock price all publicly available characteristics associated with audit quality (Titman and Trueman, 1986 and Teoh and Wong, 1993). These studies suggest that as expected audit quality increases, both the noise in the earnings signal and information risk fall. Since prior literature finds that the size of the auditor's office is positively related to audit quality, I expect that auditor office level size is being used by investors to assess the quality of audit work done (Choi et al, 2007 and Francis and Yu, 2009). Thus, I expect that auditor office level size is positively related to auditor reputation.

However, one alternative is that the market may not value the assurance that auditors provide. Many accounting researchers argue that the auditor's assurance is less valuable to investors than the auditor's insurance value (Lennox, 1999; Willenborg, 1999; and Khurana and Raman, 2004). These studies suggest that auditor reputation is mostly, or maybe entirely, a function of the auditor's insurance value to investors[6]. Francis and Yu (2009) hypothesize that the auditor's office size affects the auditor's independence, thoroughness, and the level of

[6] These insurance value studies would suggest that prior findings of auditor reputation differences between Big N/second tier/other auditors capture only differences in the auditor's relative abilities to pay client damages in the event of a shareholder lawsuit.

competence. Even so, the size of the auditor's office is unlikely to affect an investor's ability to collect damages awarded for audit failure since this ability is primarily a function of the auditor's national level size. If the market is primarily concerned about an auditor's insurance value then predictable differences in audit quality from one audit office to another are unlikely to affect auditor reputation.

Another reason that investors may not impound the size of the auditor's office into stock price is that the audit quality effect of auditor office size may be too small, although statistically significant, to concern investors. Findings in Choi et al. (2007) suggest that the audit quality effect of auditor office level size is much smaller than the effect of national level auditor size[7]. If the audit quality effect of auditor office level size is not economically significant to investors, they will not likely incorporate information about the auditor's office size into stock prices. For these reasons the relation between auditor office level size and auditor reputation is not yet clear. So I hypothesize that auditor office level size is positively related to auditor reputation. This is my first hypothesis, stated below in the alternative form.

$H1_A$: Auditor office level size is positively related to auditor reputation.

Prior literature also suggests a positive relation between the demand for audit quality and agency costs (Francis and Wilson, 1988; Defond, 1992; and Firth and Smith, 1992). If auditor reputation, for Big N auditors, is higher when the auditor operates from a larger office (Hypothesis One), then investors value the assurance that auditors provide. If investors value the assurance that auditors provide and the demand for audit quality is increasing in agency costs, then I expect the degree to which investors value auditor reputation is increasing in agency costs. More specifically, I expect a positive relation between investor valuation of auditor office level size and agency costs. I examine this prediction in four areas where agency cost is expected to be high. Since agency costs increase in the level of management's moral hazard I examine the valuation of auditor office level size in two settings where management's moral hazard is expected to be high (Jensen and Meckling, 1976). Additionally, because agency costs are

[7] Choi et al. (2007) find in three of four multivariate analyses that a one standard deviation shift in firm level size has a bigger effect on discretionary accruals than does a 1 standard deviation shift in office level size. They also find a more negative simple correlation coefficient between discretionary accruals and a Big 4 dummy variable than between either office level size variable and discretionary accruals.

increasing in information asymmetry I examine this auditor office size valuation in two settings where information asymmetry is expected to be high (Jensen and Meckling, 1976).

One area in which information asymmetry related agency cost is expected to be high is when a client recognizes high levels of R&D (Gu and Li, 2007). Godfrey and Hamilton (2005) suggests that R&D intensive firms have particularly high agency costs because R&D investments are both difficult to observe and difficult to value. This creates information asymmetry between management and investors because only management knows the true composition and value of the costs in the R&D expense account. Because of these R&D related information asymmetries, management tends to use the R&D account to opportunistically conceal both wealth transfers and evidence of poor performance (Godfrey and Hamilton, 2005). Investors value quality information about true R&D expenditures to protect themselves from such asset misappropriations and from poor information being used in valuation. High quality auditors insure that R&D information is fairly reported (Godfrey and Hamilton, 2005). This fair reporting of R&D leads to better investment decisions by the firm's owners. I expect that investors identify auditors operating in larger offices as higher quality. Therefore, I expect the auditor reputation effects of auditor office level size are increasing in R&D intensity. This is my second hypothesis, stated in the alternative form.

$H2_A$: The auditor reputation effects of auditor office size are higher for clients with higher levels of Research and Development intensity.

A second area where firms are expected to have high information asymmetry related agency cost is where little predisclosure information is available. Prior research suggests that investors in these firms rely more heavily upon audited financial statement information for valuation decisions (Bamber, 1987 and Atiase, 1985). These studies argue that the amount of information content in earnings announcements is decreasing in the amount of available predisclosure information about the firm. They suggest that the less predisclosure information that is available, the more investors will focus on earnings in their valuation models. These investors are more concerned about the precision of financial statement information. Accordingly, these investors are expected to value auditor reputation to a greater degree than do investors with more predisclosure information available (Atiase, 1985 and Pacini and Hillison, 2004). Thus, I expect that the more predisclosure information is available, the smaller the information asymmetry related agency cost will be, and the smaller the auditor office level size effect on auditor reputation will be.

$H3_A$**: The auditor reputation effects of auditor office size are higher for clients with less available predisclosure information.***

Weak corporate governance is likely to result in higher moral hazard related agency cost. Prior research suggests that some internal monitoring mechanisms (corporate governance) limit agency costs (Jensen and Meckling, 1976 and Core et al., 1999). Some authors find that specific governance measures reduce the incidence of managerial actions that give rise to agency costs, such as earnings management and financial statement fraud (Beasley, 1996 and Klein, 2002). Others build a more direct link between corporate governance and agency costs by showing an association between governance measures and returns (Rosenstein and Wyatt, 1990; Farber, 2005; and DeFond et al., 2005).

However, Jensen and Meckling (1976) suggests that a financial statement audit also serves to limit these moral hazard related agency costs. Because corporate governance serves to reduce management's opportunities to manipulate earnings, the level of audit difficulty likely decreases in the level of corporate governance strength. Several studies find that audit quality and corporate governance strength are considered substitutes for one another (Carey et al., 2000 and Jensen and Payne, 2003). Therefore, I expect the value that investors place on auditor reputation will vary negatively with the strength of corporate governance. If auditor reputation is increasing in the size of the auditor's office, and moral hazard related agency cost is decreasing in corporate governance strength, then I expect that the valuation effects of auditor office level size are smaller (greater) for clients with stronger (weaker) corporate governance. This is my fourth hypothesis, stated below in the alternative form.

$H4_A$**: The auditor reputation effects of auditor office size are higher for clients with lower quality corporate governance.***

The last group of high moral hazard related agency cost firms is firms with low levels of top managerial equity ownership. Managers, with full control over the financial reporting function, have incentives to manipulate earnings to opportunistically transfer investor resources (Healy, 1985). This creates agency costs. Jensen and Meckling (1976) suggest that these managerial incentives are increasing in the degree of separation of ownership and control. This separation is limited by the amount of equity that is owned by managers. Thus, managerial incentives to manipulate earnings become smaller the more managers are invested in the ownership of the firm.

As mentioned previously, the audit serves as a monitoring device over management's opportunistic wealth transfers. The greater these managerial incentives are, the more difficult the audit will be. Therefore, the quality of the audit is expected to be more important to investors when they view a greater moral hazard problem for management. In this study I predict investor valuation of the assurance provided by the auditors is increasing in the size of the auditor's office. I predict that investor valuation of auditor office level size is decreasing in the level of managerial equity holdings. This is my fifth hypothesis, stated below in the alternative form:

$H5_A$: The auditor reputation effects of auditor office size are higher for clients with lower managerial equity holdings.

CHAPTER 4

EMPIRICAL METHODOLOGY

In this paper I test for an effect of auditor office level size on Big 4 auditor reputation. I use two different approaches. In the first approach, I estimate the relation between ERCs and the size of an auditor's office. In the second approach, I estimate the relation between cost of equity capital estimates and the size of an auditor's office. Additionally, for both methods I re-estimate these relations within partitioned samples based on the values of client-year variables that proxy for agency cost levels, to test hypotheses 2-5.

Several studies examine firm specific characteristics related to ERCs. They suggest the ERC is increasing in the expected precision of earnings (Kim and Verrecchia, 1991; Kormendi and Lipe, 1987; and Collins and Kothari, 1989). Higher quality auditors increase the precision in earnings (Palmrose, 1988; Becker et al, 1998; Krishnan et al, 2008; and Francis and Yu, 2009). Thus, several studies have used ERCs to capture the added perceived precision in earnings from the use of auditors with better reputations (Teoh and Wong, 1993; Moreland, 1995; and Cassell et al, 2008). I use ERCs for a similar purpose.

I test Hypothesis one by estimating ERCs. I regress short window abnormal stock returns around the earnings announcement date on unexpected earnings, measures of auditor office level size, their interactions, and several control variables. To control for the national level auditor size effects on ERCs found in both Teoh and Wong (1993) and Cassel et al (2008), I include only client firm-year observations utilizing a Big 4 auditor. Additionally, because each regression model contains data from multiple firms over multiple years, there is a potential that the standard errors may be misstated due to either autocorrelation or cross sectional correlation in the residuals. I control for the potential cross sectional correlation by clustering the standard errors by firm, and I control for potential autocorrelation in the residuals by including fiscal year fixed effects indicator variables (Peterson, 2009).

I use two proxies for the size of an auditor's office, $OFFICESIZE_{it}$, found in recent literature (Francis and Yu, 2009 and Choi et al., 2007). Both proxies represent observable characteristics that are both correlated with the size benefits of an auditor's office and publicly available. These characteristics are the total number of clients audited by a particular audit office, $CLIENTS_{it}$, and the sum of all audit fees paid by those clients to that office, $SUMFEES_{it}$.

I also use several additional empirical proxies specific to my ERC regressions. I proxy for unexpected earnings, UE_{it}, using the difference between actual earnings per share (EPS) and expected EPS from the Thompson First Call database. I proxy for the expectation of EPS using the last individual analyst forecast issued before 2 days prior to the announcement of earnings because prior research suggests that the most recent individual forecast better captures the market's expectation of earnings than does a consensus forecast (Brown and Kim, 1991)[8]. I exclude observations where the expected EPS measure was a forecast made (calculated) more than 2 months prior to the earnings announcement. This eliminates the possibility of stale forecasts which don't properly represent the market's expectation of earnings (Brown and Kim, 1991). Lastly, I scale unexpected earnings by price at the end of the trading day occurring two days prior to the earnings announcement to control for heteroskedasticity (Cassell et al., 2008). I use a three-day cumulative abnormal return, CAR_{it}, to proxy for the market's response to the earnings announcement. I adjust for the expected return using the market model (Cassell et al., 2008; Menon and Williams, 1994; and Baber et al., 1995). To proxy for the market return I use a CRSP value weighted daily return. Finally, to reduce the influence of outliers, I winsorize both of these variables at the top and bottom 1% levels.

I also proxy for correlated variables known to affect ERCs. For all but one of the following control variables, I include their interaction with UE_{it} to capture the effect of these constructs on the ERCs. I control for the lower information content in the earnings of loss firms using a dummy variable, $LOSS_{it}$, that is equal to one if the firm's income before extraordinary items is less than zero, and otherwise zero (Hayn, 1995). I expect a negative coefficient on $LOSS_{it}*UE_{it}$. Prior studies have used client size to proxy for many constructs that may be correlated with client ERCs including the information environment, firm risk, growth, and persistence of earnings (Atiase, 1985; Easton and Zmijewski, 1989; Lipe, 1990; Teoh and Wong, 1993). Therefore, I include firm size, $SIZE_{it}$, as measured by the firm's end of fiscal year total assets to control for the effects of those constructs on ERCs. These studies generally find a negative relation between firm size and the ERC. I also include a market model beta, estimated

[8] In the sensitivity analysis section I describe the results of re-running the primary tests using a mean analyst forecast instead of the last individual forecast. The results were not affected.

using daily returns from day -300 to day -45, $BETA_{it}$, to proxy for the effects of systematic risk on the ERC (Collins and Kothari, 1989). To be included in my sample, these firm-year observations must have a minimum of 100 daily returns in that window for a valid market model beta to be calculated. Since prior research generally finds a negative relation between BETA and the ERC, I expect the coefficient on $BETA_{it}*UE_{it}$ will be negative (Collins and Kothari, 1989). Next, I include the natural log of the ratio of the market value of equity to the book value of equity, $LNM2B_{it}$, to proxy for firm growth prospects and the persistence in earnings (Teoh and Wong, 1993). Prior literature finds a positive relation between market to book and the ERC, so I expect a positive coefficient on $LNM2B_{it}*UE_{it}$ (Teoh and Wong, 1993). To control for the information impounded into earnings expectations since the forecast date, I include the cumulative raw stock return, $PRERET_{it}$, from the date immediately following the earnings forecast to the trading day occurring 2 trading days before the earnings announcement (Easton and Zmijewski, 1989 and Cassell et al., 2008). Consistent with these prior studies, I do not interact $PRERET_{it}$ with UE_{it}. These prior studies find a negative relation between current period announcement returns and the cumulative returns between the forecast and the announcement. I expect the same. Lastly, because of both the obvious negative relation between the size of an auditor's office and the share of total office audit fees provided by a particular client, $FEERATIO_{it}$, and the recently documented positive relation between client significance and audit quality, I present results both with and without the inclusion of this additional control variable (Reynolds and Francis, 2001). Higgs and Skantz (2006) find that investors interpret higher levels of abnormal audit fees as the client firm's commitment to signal high quality earnings. Higgs and Skantz (2006) find a positive relation between abnormal audit fees and ERCs. Similarly, I predict a positive coefficient on $FEERATIO_{it}*UE_{it}$. Equation (1) is the regression model that I use in my ERC regressions:

$$CAR_{it}=B_0+B_1UE_{it}+B_2OFFICESIZE_{it}+B_3OFFICESIZE_{it}*UE_{it}+B_{4t}PRERET_{it}+B_5PRERET_{it}*UE_{it}+B_6SIZE_{it}+B_7SIZE_{it}*UE_{it}+B_8LNM2B_{it}+B_9LNM2B_{it}*UE_{it}+B_{10}BETA_{it}+B_{11}BETA_{it}*UE_{it}+B_{12}LOSS_{it}+B_{13}LOSS_{it}*UE_{it}+B_{14}FEERATIO_{it}+B_{15}FEERATIO_{it}*UE_{it}+\varepsilon_{it} \quad (1)$$

where:

$\boldsymbol{CAR_{it}}$ is the cumulative value weighted market model abnormal return from the day of the earnings announcement to one day afterwards for firm i and annual earnings announcement at day t.
$\boldsymbol{UE_{it}}$ is the annual earnings surprise for firm i and annual earnings announced at day t, scaled by closing stock price at t-2 days.
$\boldsymbol{OFFICESIZE_{it}}$ is the size of the office of the auditor, proxied by either the number of clients (*CLIENTS*) audited by that office or the sum of those clients' fees (*SUMFEES*), who audits client firm i for fiscal year with earnings announced at day t.
$\boldsymbol{PRERET_{it}}$ is the cumulative raw return from the latest forecast date to two days prior to the earnings announced at day t for firm i.
$\boldsymbol{SIZE_{it}}$ is the total assets for firm i at the end of fiscal year that earnings are announced at day t.
$\boldsymbol{LNM2B_{it}}$ is the natural log of the ratio of the market value of equity to the book value of equity for firm i at the end of fiscal year that earnings are announced at day t.
$\boldsymbol{BETA_{it}}$ is the market model beta for firm i estimated using all available return data during the period beginning 300 days before the announcement of earnings at day t to 45 days before the announcement. Each firm-year observation must have a minimum of 100 daily return observations during that time period to be included.
$\boldsymbol{LOSS_{it}}$ is a dummy variable equal to 1 if Compustat's income before extraordinary items (item IB) for firm i and fiscal year with earnings announced at day t is less than or equal to zero, or zero otherwise.
$\boldsymbol{FEERATIO_{it}}$ is the ratio of audit fees provided by client i in the fiscal year with earnings announced at day t to their auditor to the sum of the audit fees provided by all clients to that auditor's office in fiscal year t.
ε_{it} is a random error term for firm i fiscal year t.

Hypothesis one predicts that auditors operating from larger offices have better reputations. Since the ERC is positively correlated with auditor reputation, the effect of office size on reputation is an interactive effect between unexpected earnings and office level size. This effect is represented by the coefficient estimate of B_3. Consistent with the hypothesis, I predict B_3 is positive.

Many authors examine the information risk-reducing properties of using high quality auditors by comparing client cost of equity estimates (Khurana and Raman, 2004; Khurana and Raman, 2006; Boone et al., 2008b; and Cassell et al., 2008). These studies most commonly use the Price to Earnings Growth (PEG) method to estimate cost of equity because this method has been found to have a stronger relation with firm-specific risk factors than other cost of equity estimation methods, it has relatively unrestrictive data requirements, and it captures long run rather than short run information asymmetry effects (Botosan and Plumlee, 2005; Easton, 2004; Cassell et al., 2008; and Khurana and Raman, 2004)[9]. For these reasons, I use as my second measure of auditor reputation, estimates of client fiscal-year-specific cost of equity based on the PEG method.

I estimate the cost of equity capital, COE_{it}, using the PEG method. This estimation is described in equation (2). Simply, it is the square root of the factor of the one year ahead expectation of earnings growth divided by the end of the fiscal year price. Consistent with prior studies, I eliminate forecasts where either the one or two year ahead forecasts of EPS is negative or where the growth in EPS is negative (Easton, 2004). This ensures a positive root when calculating the PEG method cost of equity. Lastly, I winsorize the cost of equity estimates at the top and bottom 1% levels.

$$COE_{it}=\sqrt{(EPS_{2it}-EPS_{1it}/P_{0it})} \qquad (2)$$

where:

$\mathbf{COE_{it}}$ is the cost of equity capital for firm i at the fiscal year end of year t, computed using the PEG method.

$\mathbf{EPS_{2it}}$ is the 2 year ahead forecast of EPS, forecasted by analysts during the month of but before the close of fiscal year t for firm i.

$\mathbf{EPS_{1it}}$ is the 1 year ahead forecast of EPS, forecasted by analysts during the month of but before the close of fiscal year t for firm i.

$\mathbf{P_{0it}}$ is the closing price per common share at the end of the fiscal year t for firm i.

To test Hypothesis one I regress cost of equity estimates on measures of auditor office size, $OFFICESIZE_{it}$, and variables known to affect the cost of equity. I also control for potential bias in standard errors due to cross sectional and time series correlation in the residuals by using both standard errors clustered by firm and fiscal year dummy variables (Petersen, 2009).

I include several control variables. I proxy for systematic risk using firm-announcement specific estimates of the market model beta, $BETA_{it}$, estimated using a monthly market model over the 36 months ending at the fiscal year end. I control for systematic risk because the Capital Asset Pricing Model suggests that systematic risk is correlated with the cost of equity.

[9] Botosan and Plumlee (2005) compare the PEG ratio with several other common cost of equity estimates for their relation with firm specific risk characteristics. They find the PEG method is among the best. Easton (2004) compares the PEG method's relation with both a theoretically superior method and with that of the PE method. Easton also finds the PEG is superior.

Because prior literature suggests a positive relation between Beta and the cost of equity, I predict the coefficient on $BETA_{it}$ is positive (Khurana and Raman, 2004 and Cassell et al., 2008). I also include the natural log of the debt to asset ratio, $LNLEV_{it}$, as a control for leverage because firm risk, and therefore cost of equity, is expected to increase in leverage (Gebhardt et al., 2001). Prior literature also drives my prediction that the coefficient on $LNLEV_{it}$ is positive (Khurana and Raman, 2004). I control for firm size, $SIZE_{it}$, using total assets because firm size has been documented to be negatively related to the cost of equity (Banz, 1981). Therefore, I predict a negative coefficient on $SIZE_{it}$. The variability in earnings has been found to cause risk to investors (Gebhardt et al., 2001). Therefore, similar to that in prior studies, I include the standard deviation in one year ahead analyst forecasts of EPS, VAR_{it}, as a measure of the variability in earnings (Khurana and Raman, 2004). I predict the coefficient on VAR_{it} is positive. Next, I include the natural log of the book to market ratio, $LNB2M_{it}$, because Fama and French (1995) suggests that book to market may proxy for financial distress, and financial distress is risky for investors (Cassell et al., 2008). Therefore, I predict the coefficient on $LNB2M_{it}$ is positive. I expect growth opportunities to be positively correlated with cost of equity because growth opportunities are associated with risk (LaPorta, 1996). Therefore I include the expected percentage growth in earnings, $GROWTH_{it}$, as a proxy for growth opportunities. Pastor and Veronesi (2003) find that uncertainty about a firm's future profitability decreases in the firm's age. They find this uncertainty about future profitability is positively related to firm risk and return metrics (Pastor and Veronesi, 2003). Therefore, I also include the age of the firm, AGE_{it}, as an inverse proxy for this uncertainty about future profitability. I expect AGE_{it} to be negatively associated with firm risk, and therefore, I expect a negative coefficient on AGE_{it}. Khurana and Raman (2006) suggest that analysts' forecasts do not capture everything in price at the end of the fiscal year. The 12 month cumulative return over the 12 months prior to the fiscal year end should improve the specification by including a transformation of that missing information in the regression. Therefore, I include this 12 month cumulative return, $RECENTRET_{it}$, in the equation, and I expect it's coefficient to be negative (Khurana and Raman, 2006). For the reasons given earlier, I also include $FEERATIO_{it}$ in this regression. I expect the coefficient on $FEERATIO_{it}$ to be negative. Equation (3) is the regression model that I use:

$$COE_{it}=\alpha_0+\alpha_1 OFFICESIZE_{it}+\alpha_2 BETA_{it}+\alpha_3 LNLEV_{it}+\alpha_4 SIZE_{it}+\alpha_5 VAR_{it}+ \alpha_6 LNB2M_{it}+\alpha_7 GROWTH_{it}+\alpha_8 AGE_{it}+\alpha_9 RECENTRET_{it}+\alpha_{10} FEERATIO_{it}+\zeta_{it} \quad (3)$$

where:

COE_{it} is the PEG method estimate of firm i's cost of equity at the end of fiscal year t.

$OFFICESIZE_{it}$ is the size of the office of the auditor, proxied by either the number of clients (*CLIENTS*) audited by that office or by the sum of those clients' fees (*SUMFEES*), who audits client firm i for fiscal year t.

$BETA_{it}$ is the market model beta, estimated over the 36 months ending at the end of fiscal year t, for firm i.

$LNLEV_{it}$ is the natural log of the debt to asset ratio for firm i at the end of fiscal year t.

$SIZE_{it}$ is firm i's total assets at the end of fiscal year t.

VAR_{it} is the standard deviation of analysts' forecasts of one year ahead EPS for firm i at the end of fiscal year t.

$LNB2M_{it}$ is the natural log of book to market ratio for firm i at the end of fiscal year t.

$GROWTH_{it}$ is the difference between the two year ahead EPS forecast and the one year ahead EPS forecast divided by the one year ahead EPS forecast for firm i at the end of fiscal year t.

AGE_{it} is the number of years since the first year that Compustat first listed a positive value for firm i's total assets, calculated at the end of fiscal year t.

$RECENTRET_{it}$ is the 12 month cumulative raw stock return over the 12 months ending at the fiscal year end for firm i for the fiscal year t.

$FEERATIO_{it}$ is the ratio of firm i's audit fees paid for fiscal year t divided by the sum of all audit fees paid to that auditor's office for fiscal year t.

ζ_{it} is a random error term.

Since superior auditor reputation is expected to reduce investor assessments of information risk, a higher reputation auditor is expected to be associated with lower cost of equity capital estimates (Khurana and Raman, 2004). Hypothesis one predicts that auditor office level size is positively related to auditor reputation. Therefore I predict the coefficient on $OFFICESIZE_{it}$, α_1, is negative.

Additionally, Hypotheses two, three, four, and five make predictions that I address by re-estimating equations (1) and (3) for subsamples partitioned into quintile portfolios based on proxies for agency costs. Prior studies have used the ratio of Research and Development expense divided by Sales to assess Research and Development intensity (Lev and Sougiannis, 1996; Godfrey and Hamilton, 2005; and Gu and Li, 2007). Additionally, Lev and Sougiannis (1996) find that there is a high correlation between the industry average research and development intensity and the firm specific research and development intensity. Further, Godfrey and Hamilton (2005) found that the relation between the demand for audit quality and Research and Development intensity was, for some firms, sensitive to the inclusion of industry controls. Thus, it appears that firm level research and development intensity is a function of industry level research and development intensity, and therefore industry adjustment of research and development intensity may be appropriate. Therefore, I calculate Research and Development intensity, $RD\%_{it}$, using the client's industry adjusted research and development expense divided by net revenues for each year minus the industry average research and development percent for that year.

The level of predisclosure information available to investors is frequently proxied for using the number of analysts following a firm in a given year (Frankel and Li, 2004 and Barth et al., 2001). Prior research suggests that these analysts act as information intermediaries who bring predisclosure information to investors (Frankel and Li, 2004 and Dempsey, 1989). Therefore, the greater the number of analysts following a particular firm, the greater the volume of predisclosure information available about that firm, and the lower the level of information asymmetry. Additionally, Barth et al. (2001) find a positive correlation between the number of firms in an industry and the firm's analyst coverage, suggesting the potential for industry effects on analyst coverage. Thus, I proxy for the level of predisclosure information, $PREINFO_{it}$, available to investors using the industry adjusted number of analysts providing EPS forecasts for that firm/year. I industry adjust analyst following by subtracting the industry average (2 digit SIC) analyst following from each firm-year's analyst following.

Prior literature has also studied different components of corporate governance. The most common governance variables studied in accounting involve some aspect of the board of directors (Dechow et al, 1996; Beasley, 1996; Klein, 2002; and Farber 2005). The board of directors represents the highest level of monitoring over management, and outside members on the board have lower incentives to collude with management to expropriate shareholder wealth than do inside members (Fama and Jensen, 1983 and Beasley, 1996). Therefore, consistent with that done in prior studies, I use the percentage of independent board members to proxy for corporate governance strength, $CORPGOV_{it}$ (Beasley, 1996; Dechow et al., 1996; and Carcello, et al., 2002)[10].

Lastly, because managerial ownership has been documented in prior literature as a factor that reduces agency costs, I also examine the effects of top managerial ownership on investor valuation of auditor office size (Jensen and Meckling, 1976). Prior literature suggests that non-CEO managers have far less influence over firm decisions than the CEO does (Huang et al, 2009 and Core et al., 1999). These studies focus on the percentage of equity held by the CEO because it is this equity ownership that will likely influence corporate actions. Similarly, I use the CEO's percentage of shares outstanding, including the CEO's options granted, $CEOOWN_{it}$, as a measure of top managerial ownership (Huang et al, 2009; Core et al., 1999; and LaFond and Roychowdhury, 2008).

I test Hypotheses two, three, four, and five by re-estimating equations (1) and (3) on sub-samples partitioned by quintile of the above agency cost variables. Since Hypothesis two predicts a stronger auditor reputation effect of auditor office level size for more R&D intensive firms, I expect a more positive (negative) $\boldsymbol{B_3}$ $\boldsymbol{(\alpha_1)}$**,** for firms in the highest quintile of $RD\%_{it}$ relative to the firms in the lowest quintile. Hypothesis three predicts a stronger auditor reputation effect of auditor office level size for firms with lower predisclosure information levels. I expect a more positive (negative) $\boldsymbol{B_3}$ $\boldsymbol{(\alpha_1)}$ for firms in the lowest quintile of $PREINFO_{it}$ relative to the firms in the highest quintile. Hypothesis four predicts a stronger auditor reputation effect of auditor office level size for clients with weaker corporate governance. Therefore I expect a more positive (negative) $\boldsymbol{B_3}$ $(\boldsymbol{\alpha_1})$ for firms in the lowest quintile of $CORPGOV_{it}$ relative to that for firms in the top quintile. Hypothesis five predicts a stronger valuation effect from the size of an auditor's office for firms in the lowest quintile of top managerial ownership. Therefore, I predict a more positive (negative) $\boldsymbol{B_3}$ $(\boldsymbol{\alpha_1})$ for firms in the lowest quintile of $CEOOWN_{it}$.

[10] Although the independence of the audit committee is a commonly used corporate governance strength proxy, Sarbanes Oxley section 301 requires that all public companies have completely independent audit committees. This would result in a lack of variation in such a variable during the time period I examine.

CHAPTER 5

DATA AND RESULTS

To estimate these regressions, I use all available client firm-fiscal year observations from fiscal years 2003 to 2007. I use only clients of Big 4 auditors as is common in prior literature (Francis and Yu, 2009; Reynolds and Francis, 2001; and Khurana and Raman, 2006). Additionally, this will hold the auditor's insurance value constant across observations, which is uniquely important for this study. I focus on the period 2003-2007 to eliminate the effects of regime changes due to both the implementation of the Sarbanes-Oxley Act and the demise of Arthur Anderson. Either of these events could introduce noise and bias in coefficients. Additionally, I eliminate firms without sufficient data to compute the relevant variables. The final sample is 6141 firm-year observations for the ERC dataset and 8514 firm-year observations for the cost of equity dataset.

The data used is publicly available and is drawn from datasets commonly used in this type of research. The financial statement data are obtained from Compustat. Auditor, auditor fee, and auditor office data are calculated from data available in Audit Analytics. Both actual and expected earnings data in the ERC analyses are found using the Thompson First Call dataset. One and two year ahead forecasts of earnings, used in the estimation of cost of equity, are taken from Thompson First Call. Price and returns data are collected using CRSP or Compustat (if fiscal year end price). Board of Director independence data is calculated from variables available in the Risk Metrics database. Managerial ownership data is available in the Standard and Poor's Execucomp database.

Table 1 provides descriptive statistics of variables used in the analyses. Panel A presents descriptive statistics for variables used in the ERC dataset. Panel B presents descriptive statistics of variables used in the cost of equity dataset. These descriptive statistics are similar to those calculated in prior research with only two exceptions (Cassell et al., 2008; Khurana and Raman, 2004; Khurana and Raman, 2006; Godfrey and Hamilton, 2005; Frankel and Li, 2004; Francis and Yu, 2009; Klien, 2002; Wilson, 2008; and Huang et al., 2009). *RECENTRET* is larger than in Khurana and Raman (2006). However, this difference is likely attributable to Khurana and

Raman (2006) sampling from years with poor economic news (2000-2001) as opposed to my sample of years with much stronger economic fundamentals (2003-2007). The other is that the mean *RD%*, in panel A only, is much larger than that computed in prior literature (Godfrey and Hamilton, 2005). However, both the *RD%* used in panel B and the median of *RD%* used in panel A are consistent with that in prior literature. The extremely high mean *RD%* in panel A is likely due to extremely high outliers in *RD%*. These extremely high outlying observations will not affect the analyses because I use *RD%* to sort observations into portfolios rather than as a covariate in any regression.

Table 2 provides the bivariate correlation matrices for the two datasets. Panel A presents the bivariate correlations for variables in the ERC dataset. Panel B presents the bivariate correlations for variables in the cost of equity dataset. Note that both measures of auditor office size are positively (negatively) correlated with *CAR* (*COE*), as is expected. Second, note that *UE* is positively related to *CAR*, suggesting a positive ERC. Note also that in both datasets the two measures of *OFFICESIZE; CLIENTS,* and *SUMFEES*, are highly positively related. These correlations are consistent with predictions.

Tables 3-8 present multivariate analyses from equations (1) and (3). The first two columns in each table use the sum of the auditor's office's audit fees earned, *SUMFEES*, as the measure of *OFFICESIZE*. The third and fourth columns use the number of clients audited by a particular auditor's office, *CLIENTS*, as the measure of *OFFICESIZE*. Additionally, in tables 3-8, the second and fourth columns include the additional control variable, *FEERATIO*.

Table 3 presents the results of estimating equation (1) using the ERC dataset. The ERC is significantly positive in all specifications. Additionally, the coefficients on the interaction between *OFFICESIZE*UE* are all significantly positive, as predicted, at conventional levels. These results suggest that the market's reaction to a unit of unexpected earnings is increasing in the size of the auditor's office. The market appears to put more faith in earnings news that was audited by auditors working out of a larger office than if the auditor was working out of a smaller office. This evidence supports H1.

Most control variables are significant and in the predicted directions. The coefficients on *LNM2B*UE* and *BETA*UE* are insignificant. These findings are not uncommon for this type of study (Teoh and Wong, 1993; Hackenbrack and Hogan, 2002; Higgs and Skantz, 2006; Cassell et al., 2008; and Wilson, 2008). Additionally, the coefficient on *FEERATIO*UE* was insignificant, but this is not surprising given that Francis and Yu (2009) found mostly insignificant relations between audit quality and fee related influence.

Table 4 presents the results of multivariate cost of equity regressions from equation (3). Since H1 predicts a higher auditor reputation for clients serviced by auditors from larger offices, I expect less information risk for firms whose auditor operates out of a larger office than for firms whose auditor operates from a smaller office. Thus, I predict negative coefficients on *OFFICESIZE*. In all but the first model, the estimates of the coefficients on *OFFICESIZE* are significantly negative. Thus, in all of the full models the main result is significant. These results suggest that investors perceive less risk for investments in firms with auditors operating from larger offices. Additionally, because the clients are all audited by Big 4 auditors, it is unlikely that this risk reduction is attributable to correlated differences in insurance value. Thus, the investor perceived risk reduction is likely driven by additional assurance provided by auditors operating from larger offices. These results support Hypothesis one.

Additionally, all the control variables are in the predicted direction and are significant at conventional levels. This includes *FEERATIO*. Note also that the R^2 are slightly higher in the models containing *FEERATIO* than in the models without it. Therefore, *FEERATIO* appears to contain some incremental explanatory power beyond that contained in *OFFICESIZE* and the other control variables.

Tables 5-8 present the results of tests of Hypothesis two through Hypothesis five. As discussed previously, I test these hypotheses by re-estimating equations (1) and (3) on subsamples partitioned by quintile of various agency cost proxies. Then, I test the differences in the coefficients of interest between the top and bottom quintiles. For brevity, I present only the coefficients of interest for the top and bottom quintiles and the results of tests of their differences. In each table I present the same four specifications as were shown in tables 3 and 4.

Table 5 presents the results of tests of Hypothesis two. I re-estimate equations (1) and (3) using quintiles of industry adjusted research and development intensity, *RD%*. Note that the coefficients of interest are generally insignificant. Because the coefficients of interest are generally insignificant it is not surprising to note that the coefficient differences are also insignificant. This is true for both the tests of differences in coefficients in Panel A and in Panel B. Statistical power is reduced by both partitioning the sample into quintiles and requiring that firms disclose their research and development expense on Compustat. Thus one potential explanation for the insignificant results related to Hypothesis two is a lack of statistical power. Other potential explanations for the lack of results include the poorness of RD% as a proxy for agency cost and the possibility that a relation between agency cost and the value of auditor reputation does not exist. For whichever reason, I fail to find support for Hypothesis two.

Table 6 presents the results of tests of Hypothesis three, that investors more highly value the size of the auditor's office when predisclosure information is low. Panel A presents the results of ERC regressions, partitioned by $PREINFO_{it}$. Note again that the coefficients of interest are sometimes insignificant. However, the signs of the differences in the coefficients are all as predicted, and with the exception of the fourth model (*CLIENTS* w/*FEERATIO*) the differences were significant.

The results in Panel B are stronger. Most of the subsample coefficients of interest are significant and as predicted. More importantly, the differences in the coefficients are all as predicted and, with the exception of the second model (*SUMFEES* w/*FEERATIO*), statistically significant. These results suggest that lower levels of predisclosure information increases agency cost, and the added agency cost associated with lower predisclosure information levels drives up investor valuation of the added assurance provided by auditors from larger offices. These results support Hypothesis three.

Hypothesis Four predicts that investors will more highly value the additional assurance provided by auditors from larger offices when the client has weaker corporate governance. Table 7 summarizes the results of tests of Hypothesis Four. Again, almost all of the coefficients of interest are insignificant. Also similar to some of the previous tests, none of the coefficient differences are significant. This is the case for analyses summarized in both Panels A and B. Reduced statistical power may be contributing to an inability to find results related to Hypothesis Four, but I cannot rule out the possibility that a relation between corporate governance strength and auditor reputation valuation does not exist. I also fail to find support for Hypothesis Four.

Table 8 presents the results of tests of Hypothesis Five based on quintile portfolios of $CEOOWN_{it}$. Note that the coefficients of interest are generally insignificant in both panels. Again, reduced statistical power resulting from both partitioning the sample into quintiles and from the further data availability constraints may be contributing to an inability to find results. As was true in the *RD%* analyses, all the coefficient differences are insignificant. This is the case for both Panel A and Panel B. This may be the case because of a lack of statistical power, the use of a poor proxy for corporate governance strength, or because a true *OFFICESIZE* valuation difference between strong and weak corporate governance firms does not exist. For whichever reason, I fail to find support for Hypothesis Five.

CHAPTER 6

SENSITIVITY ANALYSES

In the previous sections I describe several tests of my hypotheses and the theory which drives them. The results suggest that investors use the size of a Big 4 auditor's office to assess the quality of audit work done and that the usefulness of auditor office size information increases whenever the client firm has lower levels of predisclosure information available. This finding implies that investors are concerned about the quality of financial statement audits, and that they bring assessments of this quality into their valuations. In this section, I provide sensitivity analyses to further support these findings.

First, recent audit research finds that the use of industry expert auditors is valued by investors (Balsam et al., 2003; Knechel et al., 2007; and Kwon et al., 2007). In the current study I find that the market positively values the size of the auditor's office. However, it is possible that the results documented in tables 3 and 4 may be driven by the omission of a correlated auditor industry expertise variable from the models. To address this concern I re-estimate the regressions from tables 3 and 4 after including controls for auditor industry specialization.

Prior research uses many different approaches to measure auditor industry expertise. Several researchers use only national level industry specialist proxies (Craswell et al., 1995; Balsam et al., 2003; Knechel et al., 2007; and Kwon et al., 2007). Others use both local level and national level industry specialist proxies (Ferguson et al., 2003; Francis et al., 2005; and Meyer, 2010). Additionally, some studies consider auditor industry experts to be the single auditor with the largest percentage of the audit market share in a particular industry (Balsam et al., 2003; Ferguson et al., 2003; Francis et al., 2005; and Kwon et al., 2007). Others use a minimum percentage of the audit market share in a particular industry to determine which, if any, auditors are the experts in that industry (Craswell et al., 1995; Knechel et al., 2007; Kwon et al., 2007; and Meyer, 2010).

I estimate auditor industry expertise using both national level and local level expertise variables. Consistent with prior studies I consider any Big 4 auditor who services at least 30% of the audit market available in a particular industry to be an industry expert[11] (Knechel et al., 2007; Kwon et al., 2007; and Meyer, 2010). I also calculate industry expertise dummies based on audit fees and based on the number of audit clients (Kwon et al., 2007). If the auditor (office) is a national (local) industry audit expert, then I code the *NATEXPERT* (*CITYEXPERT*) dummy variable as 1 (1). Otherwise the variable is coded as zero. Both dummy variables are included in both equations (1) and (3). Additionally, because equation (1) utilizes the coefficient on unexpected earnings, UE_{it}, to estimate auditor reputation effects, I also include the interaction with UE_{it} and each dummy variable in equation (1). This will control for the effects of an industry expert auditor on the ERC.

Table 9 summarizes the results of re-estimating the ERC equation (1) with the previously described auditor industry expertise variables. Columns 1 and 3 (2 and 4) show the results of regressions with auditor industry expertise variables calculated using clients' audit fees (number of clients).

Panel A presents the results of estimating the ERC model (equation (1)). The primary results, that ERCs are positively related to $OFFICESIZE_{it}$, remain in each of these specifications, regardless of the auditor industry expertise variable used. Additionally, results are stronger than those shown in Table 3. The signs and significance of the control variables are almost entirely unchanged from those in Table 3.

Panel B presents the results of re-estimating the Cost of Equity equation (3) with the auditor industry expertise controls. Again, the coefficients on $OFFICESIZE_{it}$ are consistently in the predicted direction (negative) and are significant at conventional levels. Thus, it appears that investor valuation of the additional assurance at larger offices of the Big 4 exists after controlling for auditor industry expertise.

Second, there is a possibility that the results documented in the previous tables may have been driven by auditor specific differences in insurance value that are correlated with auditor office level size. If this is the case, it is possible that such additional insurance value could be focused in one or two firms that also have the larger offices. If this is the case, then higher ERCs (lower cost of equity capital) would appear to be correlated with *OFFICESIZE* when they are actually correlated with specific audit firms that coincidentally contain the larger offices.

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[11] I also tried alternative cutoffs of 25% of industry audit fees, 25% of industry clients, ranked #1 in clients of a particular industry, and ranked #1 in audit fees in a particular industry. The main results were not qualitatively affected.

However, if I include audit firm specific controls in each specification any remaining *OFFICESIZE* effects are likely the result of variation in investor perceptions of the added value that auditors from different sized offices provide. Thus, if the *OFFICESIZE* variable retains it's significance then investors very likely value the added assurance these auditors provide.

To control for such a possibility I re-estimate equations (1) and (3) while including audit firm-specific controls. This involves including three (the intercept represents the fourth) auditor-specific dummy variables in both equation (1) and equation (3) and their interactions with *UE* in equation (1) only. These three indicator variables are equal to one if the client was audited by a given auditor in that fiscal year, or zero otherwise. These firm-specific controls are designed to capture auditor specific differences, including insurance value differences, in either model.

Table 10 presents the results of re-estimating equations (1) and (3) while including controls (not shown) for audit firm specific differences. Panel A presents the results of re-estimating the ERC regression equation (1) with audit firm specific controls. For brevity the coefficients on the auditor specific controls are not tabulated. For each model the coefficient on *OFFICESIZE*UE* is positive and significant at conventional levels. This suggests that even after controlling for different valuation effects across the Big 4 firms, investors value earnings news more when audited by a Big 4 auditor from a larger office relative to a smaller office.

Panel B presents the coefficients of interest (*OFFICESIZE*) for the cost of equity regression, equation (3). After controlling for audit firm-specific differences, the results still hold. The coefficient on *OFFICESIZE* is still significantly negative. This suggests that the results found in Table 4 are not due to correlated insurance value differences within the Big 4. The negative coefficient on *OFFICESIZE* is most likely due to higher market assessed assurance value for auditors operating in larger offices. The results described in Table 10 present further evidence in support of H_1.

Third, I expect that the market assesses assurance value using proxies related to the size of an auditor's office. This theory is consistent with that in prior audit papers (DeAngelo, 1981 and Khurana and Raman, 2004). These studies suggest that audit quality is not, ex ante, observable. However, an alternative is that the market is actually impounding other available information about audit quality into price, and that information is correlated with auditor reputation metrics. If this is the case, one may expect that measures of audit quality available before the earnings announcement may be used in place of auditor reputation proxies. I test this possibility by re-estimating equations (1) and (3) while including a lagged audit quality proxy. If the coefficient on auditor office level size becomes insignificant in the presence of a lagged audit quality variable, then auditor office level size may not reflect unique information about audit quality. I include a one year lagged audit quality variable since it is available prior to the market's assessments of both information risk and the precision of the earnings signal.

Many measures have been used in audit quality studies including: abnormal accruals, probability of a going concern audit opinion given the client is distressed, the probability of meeting or beating an earnings benchmark, the likelihood of errors or misstatements in the financial statements, and the likelihood of auditor litigation (Palmrose, 1988; Defond and Jiambalvo, 1991; Becker et al, 1998; Reynolds and Francis, 2001; and Francis and Yu, 2009). However, the most commonly used audit quality proxy is abnormal accruals.

I proxy for audit quality using abnormal accruals estimated by a cross sectional version of the modified Jones model, augmented to include ROA_t, as explained in Kothari et al (2005). I estimate an annual model, for all Compustat firms, by 2 digit SIC code, using equation (4). I estimate discretionary accruals using the model's residuals.

$$TA_{it}=\delta_0+\delta_1(1/ASSETS_{it})+\delta_2[(\Delta SALES_{it}-\Delta AR_{it})/ASSETS_{it}]+\delta_3 ROA_{it}+\delta_4 PPE_{it}+DA_{it} \quad \textbf{(4)}$$

where:

TA_{it} is total accruals, calculated by subtracting cash flows from operations from income before extraordinary items, for firm i during fiscal year t.

$ASSETS_{it}$ is total assets for firm i at the end of fiscal year t.

$\Delta SALES_{it}$ is the change in sales for firm i over fiscal year t.

ΔAR_{it} is the change in accounts receivable for firm i over fiscal year t.

ROA_{it} is the return on total assets for firm i over fiscal year t.

PPE_{it} is the level of gross Property, Plant, and Equipment for firm i at the end of fiscal year t.

DA_{it} is the estimate of discretionary accruals, estimated as the residual from the above model, for firm i over fiscal year t.

In Table 11, I include lagged discretionary accruals in my full sample regressions in equations (1) and (3). Additionally, to insure that I've properly controlled for all audit related measures I include controls for auditor industry expertise (not shown for brevity). In Panel A I summarize the results of re-estimating equation (1) after including both lagged discretionary accruals, DA_{it-1}, and its interaction with UE_{it}. The coefficient on *OFFICESIZE* retains its significance, even when including controls for lagged audit quality, in both specifications. This further supports the theory that investors value the added assurance that auditors operating in larger offices provide.

In Panel B I summarize the results of re-estimating equation (3) after including lagged discretionary accruals, $\boldsymbol{DA_{it-1}}$. The coefficient on *OFFICESIZE* is insignificant in both specifications. The insignificant coefficients on *OFFICESIZE* may be due to either noise in my proxies or the possibility that investors do not care about *OFFICESIZE*. Considering the results in Panel A continued to support Hypothesis one after the inclusion of proxies for lagged audit quality, a noise in variables problem is likely the case in Panel B.

Next, my ERC regressions utilize the last individual analyst forecast of earnings as a proxy for unexpected earnings. Although prior research suggests this is likely the strongest proxy for unexpected earnings, many other studies have used consensus forecasts of earnings instead (Brown and Kim, 1991; Teoh and Wong, 1993; and Cassell et al., 2008). Therefore, I re-estimate the same ERC models using the last mean consensus forecast calculated before 2 days prior to and no earlier than 2 months before the earnings announcement date.

Table 12 presents the results of re-estimating equation (1) while using the mean consensus forecast of earnings as the proxy for the market's expectation of earnings. The results remain unchanged.

Last, my tests of Hypotheses Two, Four, and Five used smaller sample sizes to test differences in coefficients across portfolios based on quintile of various agency cost variables. These smaller sample sizes may have contributed to weak statistical power causing my tests to fail to find differences across the groups. It is possible that a larger sample size in a single regression, rather than smaller samples in two separate regressions, may yield the necessary statistical power to find the predicted differences.

Therefore, as an alternative approach to testing Hypotheses Two, Three, Four, and Five, I combine the top and bottom agency cost portfolios, and then I estimate regressions of equations (1) and (3) augmented to include variables that capture the differential valuation effects of *OFFICESIZE* for observations in the top quintile of each agency cost metric. Specifically, I include a dummy variable, *HIDUMMY*, equal to one if the observation is in the top quintile of the agency cost variable being tested, or zero if the observation is in the bottom quintile. I also include *HIDUMMY*'s interaction with *OFFICESIZE*. Additionally, in the augmented version of equation (1) only, I include both the interaction between *UE, HIDUMMY,* and the three-way interaction between *UE, HIDUMMY*, and *OFFICESIZE*. The coefficient on the three-way (two-way) interaction between *UE*, *HIDUMMY*, and *OFFICESIZE* (*HIDUMMY* and *OFFICESIZE*) in the augmented version of the ERC equation (cost of equity equation) will provide an alternative test of Hypotheses Two, Three, Four, and Five.

Table 13 provides the results of the supplemental tests of Hypothesis Two. Panel A presents the results of estimating the augmented ERC regressions. Oddly enough, the coefficient on *OFFICESIZE*UE* has now reversed sign and is significant. This is unexpected. All full sample tests have clearly shown a positive relationship between *OFFICESIZE* and ERCs. This appears to suggest a negative relationship between investor confidence in earnings and *OFFICESIZE* for the lowest Research and Development intensive firms. Additionally, the coefficients on the three-way interactions between *HIDUMMY*, *OFFICESIZE*, *UE* are insignificant. This may be due to the non-existence of a difference in the relationship between OFFICESIZE and the ERC between high and low R&D firms, noise in the variables, or the high levels of multicolinearity in the variables[12].

Panel B of Table 13 presents the results of estimating the augmented version of equation (3) as a supplementary test of Hypothesis Two. The coefficients on both *OFFICESIZE* and the interaction between *OFFICESIZE* and *HIDUMMY* were insignificant in both specifications. Thus, I find no support for Hypothesis Two.

Table 14 presents the supplemental tests of Hypothesis Three. Panel A summarizes the results of estimating the augmented version of equation (1). In the specification that uses *CLIENTS* to proxy for *OFFICESIZE*, the coefficients on both *OFFICESIZE*UE* and *OFFICESIZE*UE*HIDUMMY* are insignificant. However, in the specification that uses *SUMFEES* I find a significantly positive coefficient on *OFFICESIZE*UE*. This suggests that clients with lower levels of predisclosure information have a positive relationship between the size of the auditor's office and the investor's confidence in earnings news. Also as predicted, there is a significantly negative coefficient on *OFFICESIZE*UE*HIDUMMY*, suggesting that high predisclosure information firms have significantly smaller financial statement credibility effects of *OFFICESIZE*.

[12] I calculated the Variance Inflation Factors (VIFs) for all ERC models that included a three-way interaction in the regressors. All models of this type had several regressors with VIFs over 10, suggesting that multicolinearity may be a problem with all the ERC regressions that use a three-way interaction.

Panel B presents similar findings when the augmented cost of equity regression equation was used. In both specifications the coefficients on *OFFICESIZE* are significantly negative, suggesting that firms with lower levels of predisclosure information have a negative relationship between the size of the auditor's office and the level of risk. Additionally, I estimated a significantly positive coefficient on *HIDUMMY*OFFICESIZE*, suggesting that firms with high levels of predisclosure information have significantly weaker relationships between *OFFICESIZE* and cost of equity. Together, the results in Panels A and B of Table 14 support the prediction in Hypothesis Three.

Table 15 presents the results of supplementary tests of Hypothesis Four. Panel A summarizes the results of estimating the augmented versions of equation (1). In both specifications, the estimates of the coefficients on both *UE*OFFICESIZE*HIDUMMY* and *UE*OFFICESIZE* are insignificant. Panel B summarizes the results estimating the augmented versions of equations (3). Similarly, the coefficient estimates on both *OFFICESIZE* and *OFFICESIZE*HIDUMMY* are insignificant. This lack of significance may be due to the lack of a difference in the relationship between *OFFICESIZE* and the *ERC* between the groups, noise in the agency cost proxies, or the high levels of multicolinearity. These results fail to provide support for Hypothesis Four.

Table 16 presents the results of supplementary analyses performed as tests of Hypothesis Five. Panel A summarizes the results of estimating the augmented versions of equation (1). Again, both of the ERC specifications show coefficient estimates on *OFFICESIZE*UE* that are insignificantly different from zero. Also in both Panel A specifications, the coefficients on *OFFICESIZE*UE*HIDUMMY* are insignificant. Panel B summarizes the results of estimating the augmented versions of equation (3). Here, the coefficients on both *OFFICESIZE* and on *OFFICESIZE*HIDUMMY* are insignificant. Therefore, these analyses fail to provide support for Hypothesis Five.

CHAPTER 7

SUMMARY

There has been significant disagreement within the archival auditing research community regarding whether the assurance that auditors provide is valued by investors. This study investigates the issue in a unique setting that allows for me to control for the insurance value component of auditor reputation. Specifically, I ask whether investors value the assurance that higher quality auditors provide by investigating whether investors value the added assurance provided by larger offices of auditors from the same Big 4 firm.

I find that investors in clients with auditors who operate from larger offices sense and impound into stock price the greater assurance that such auditors provide. The same results are found when proxying for investor beliefs using ERCs or cost of equity. Additionally, the ERC results are robust to an alternative proxy for unexpected earnings. Further, these results are robust to the addition of audit firm-specific controls and controls for auditor industry expertise. Although the cost of equity results did not continue when including controls for lagged audit quality, the ERC results persisted. Additionally, I find that investors value this additional assurance more when predisclosure information, a proxy for client-specific agency costs, is lower.

These results suggest that investors value the added audit quality provided by auditors operating from larger offices. Further, investors appear to value this added assurance more when predisclosure information is low, suggesting investor valuation of auditor provided assurance is increasing in agency cost.

Such findings extend the current audit literature in three ways. One, these results suggest that the market does value auditor provided assurance in addition to auditor provided insurance. This is an important finding because until now there were no studies that directly controlled for the insurance value component of auditor reputation, and the results in prior literature conflicted. Two, these results suggest the auditor reputation model should include a component related to the size of the auditor's office. Three, these results also suggest that investor valuation of auditor reputation is increasing in agency cost.

These results are likely interesting to many groups. One, academics may find these results interesting because they extend prior audit quality literature. Two, managers and audit committees of publicly traded clients would likely use this information in their auditor and auditor office selection process because my findings suggest an impact of the auditor office selection on the proceeds from equity offerings. This paper's findings suggest that the choice of audit office has an effect on investor confidence in these disclosures. Three, practicing auditors, whose livelihood is based on their abilities to attract and retain clients, may be interested in the fact that investors are concerned with the size of their auditor's office.

Table 1: Descriptive Statistics

Panel A: *Descriptive Statistics for Earnings Response Coefficient Dataset*

Variable	Mean	Std. dev.	Q1	Median	Q3	N
CAR	$6.24*10^{-4}$	0.070	$-3.08*10^{-2}$	$4.28*10^{-4}$	0.003	6141
UE	$-2.66*10^{-4}$	0.080	$-7.47*10^{-4}$	$3.54*10^{-4}$	0.002	6141
LOSS	0.174	0.379	0	0	0	6141
SIZE	20.8bil	112.6bil	0.4bil	1.6bil	6.0bil	6141
BETA	1.142	0.574	0.740	1.100	1.500	6141
LNM2B	0.991	0.701	0.536	0.891	1.342	6141
CLIENTS	77.88	109.56	15.000	35.000	86.000	6141
SUMFEES	75.0mm	104.4mm	14.0mm	42.8mm	89.6mm	6141
FEERATIO	0.119	0.214	0.011	0.032	0.109	6128
PRERET	0.016	0.085	$-2.09*10^{-2}$	$8.50*10^{-3}$	$4.78*10^{-2}$	6141
RD%	372.1%	7944.6%	0.7%	5.0%	16.7%	3115
PREINFO	9.32	6.72	4	8	13	6121
INDEP	0.715	0.140	0.625	0.727	0.833	2601
CEOOWN	3.13%	5.24%	0.64%	1.49%	3.21%	3107

Panel B: *Descriptive Statistics for Cost of Equity Dataset*

Variable	Mean	Std. dev.	Q1	Median	Q3	N
COE	0.102	0.060	0.071	0.090	0.116	8514
BETA	1.290	0.924	0.660	1.130	1.730	8514
LNLEV	-0.761	0.575	-1.025	-0.0626	-0.355	8514
LNB2M	-0.965	0.687	-1.350	-0.890	-0.507	8514
SIZE	20.5 bil	111.7 bil	575 mm	1.9 bil	7.0 bil	8514
GROWTH	0.403	1.820	0.110	0.168	0.284	8514
AGE	20.524	15.787	9.0	14.0	30.0	8514
VAR	0.128	2.388	0.030	0.060	0.120	8514
CLIENTS	74.964	104.851	13	34	80	8514
SUMFEES	81.0mm	111.9mm	15.4mm	46.4mm	100mm	8512
FEERATIO	0.130	0.219	0.0152	0.0416	0.123	8481
RECENTRET	0.153	0.350	-0.0279	0.149	0.330	8514
RD%	7.7%	0.118	0.003	0.032	0.120	4556
PREINFO	9.797	6.900	5.0	8.0	14.0	8514
INDEP	0.724	0.141	0.625	0.750	0.833	4509
CEOOWN	2.97%	5.83%	0.64%	1.41%	2.931%	5385

Table 1 presents descriptive statistics for variables analyzed in later tables. Panel A provides descriptive statistics for variables used in earnings response coefficient analyses (equation 1). Panel B provides descriptive statistics for variables used in cost of equity analyses (equation 3). Descriptive Statistics are calculated on unwinsorized variable values. Variables are defined as described after equations (1) and (3).

Table 2: Correlation Matrices

Panel A: *Correlation Matrix for Earnings Response Coefficient Dataset*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
CAR	1													
UE	0.02	1												
LOSS	-0.06	-0.02	1											
SIZE	0	0	-0.07	1										
BETA	0.01	-0.01	0.13	-0.02	1									
LNM2B	-0.03	0.05	0.07	-0.06	0.1	1								
CLIENTS	0.01	0	0.02	0.01	0.01	0.02	1							
SUMFEES	0.01	-0.01	-0.01	0.1	0.03	0.01	0.73	1						
FEERATIO	-0.01	0.01	-0.11	0.2	-0.04	-0.06	-0.29	-0.27	1					
PRERET	-0.06	-0.01	-0.01	-0.01	-0.05	-0.01	-0.01	-0.02	-0.02	1				
RDPERCENT	0	0	0.08	-0.01	0.01	0.01	0	0	-0.02	0	1			
NANALYST	0.02	0	-0.11	0.06	0.09	0.11	0.06	0.1	0.03	-0.09	0.01	1		
CEOOWN	0	-0.03	0.01	-0.08	0.09	0.04	-0.04	-0.06	-0.07	0.01	0.01	-0.14	1	
INDEP	-0.02	0.02	-0.01	0.03	-0.08	0.05	0.06	0.07	0.06	-0.01	-0.04	0.04	-0.23	1

Table 2 (continued)

Panel B: *Correlation Matrix for Cost of Equity Dataset*

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
COE	1															
BETA	0.23	1														
LNLEV	-0.02	-0.24	1													
LNB2M	0.25	0	0.03	1												
SIZE	-0.04	-0.04	0.17	0.08	1											
GROWTH	0.23	0.11	-0.07	-0.02	-0.03	1										
AGE	-0.13	-0.19	0.23	0.02	0.07	-0.06	1									
VAR	-0.06	0.01	0.01	-0.05	0.02	-0.04	0.04	1								
CLIENTS	-0.03	-0.02	0.03	-0.04	0.06	-0.01	0.05	0.01	1							
SUMFEES	-0.03	-0.01	0.05	-0.03	0.14	-0.03	0.04	0.02	0.75	1						
FEERATIO	-0.02	-0.03	0.16	0.04	0.17	-0.03	0.09	0.01	-0.3	-0.28	1					
RECENTRET	-0.31	0.01	-0.02	-0.33	-0.01	0.03	-0.02	-0.04	0	-0.03	0.02	1				
RD%	0.14	0.25	-0.32	-0.1	-0.06	0.23	-0.18	0.05	0.03	0.01	-0.1	-0.06	1			
PREINFO	-0.14	-0.02	0.03	-0.14	0.12	-0.05	0.19	0.24	0.06	0.1	0.04	0.05	0.1	1		
CEOOWN	-0.01	0.02	-0.11	-0.04	-0.05	0	-0.16	-0.01	-0.02	-0.05	-0.04	0.02	0.01	-0.11	1	
INDEP	0	-0.02	0.15	-0.03	0.04	-0.02	0.21	0.04	0.02	0.03	0.07	-0.02	-0.03	0.03	-0.18	1

Table 2 presents the bivariate Pearson Correlation Coefficients between variables used in this study. Panel A presents correlations between variables used in the earnings response coefficient analyses (equation 1). Panel B presents the correlations between variables used in the cost of equity analyses (equation 3). Correlations are calculated on unwinsorized variable values. Variables are defined as described after equations (1) and (3).

Table 3: Earnings Response Coefficient Regressions

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	*SUMFEES*	*SUMFEES*	*CLIENTS*	*CLIENTS*
Intercept	*?*	0.002	0.003	0.002	0.003
		(0.87)	(1.21)	(0.77)	(1.14)
		0.383	*0.225*	*0.441*	*0.126*
UE	+	0.621	0.561	0.612	0.555
		(3.53)	(3.13)	(3.37)	(2.97)
		<0.001	*<0.001*	*<0.001*	*0.002*
*OFFICESIZE*UE*	+	**$1.42*10^{-9}$**	**$1.55*10^{-9}$**	**$1.37*10^{-3}$**	**$1.51*10^{-3}$**
		(2.20)	**(2.40)**	**(1.72)**	**(1.84)**
		0.014	***0.008***	***0.043***	***0.033***
*LOSS*UE*	-	-0.645	-0.611	-0.651	-0.620
		(-4.19)	(-3.80)	(-4.24)	(-3.85)
		<0.001	*<0.001*	*<0.001*	*<0.001*
*SIZE*UE*	-	$-1.00*10^{-6}$	$-1.10*10^{-6}$	$-8.00*10^{-7}$	$-9.00*10^{-7}$
		(-3.16)	(-3.29)	(-2.79)	(-2.86)
		<0.001	*<0.001*	*0.003*	*0.002*
*BETA*UE*	-	0.078	0.073	0.100	0.097
		(0.73)	(0.67)	(0.93)	(0.89)
		0.767	*0.749*	*0.824*	*0.814*
*LNM2B*UE*	+	*0.011*	*0.015*	$-3.94*10^{-4}$	$2.51*10^{-3}$
		(0.15)	(0.20)	(-0.01)	(0.03)
		0.442	*0.420*	*0.501*	*0.487*
*FEERATIO*UE*	+		0.368		0.346
			(0.78)		(0.73)
			0.217		*0.233*
PRERET	-	-0.040	-0.041	-0.040	-0.041
		(-2.99)	(-3.04)	(-3.00)	(-3.05)
		0.001	*0.001*	*0.001*	*0.001*
R^2		2.3%	2.3%	2.3%	2.3%
N		6141	6128	6141	6128

Table 3 presents the results of estimates of regressions of short window earnings announcement period abnormal returns on estimates of unexpected earnings, measures of the size of an auditor's office, control variables, and their interactions. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3).
*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 4: Cost of Equity Regressions

Dependent Variable: *Ex Ante Cost of Equity Capital**

Parameter Estimates
(t-statistics in parentheses)
*p-value**

	E(Sign)	*SUMFEES*	*SUMFEES*	*CLIENTS*	*CLIENTS*
Intercept	*?*	0.119	0.120	0.119	0.120
		(46.83)	(47.03)	(46.13)	(46.27)
		<0.001	*<0.001*	*<0.001*	*<0.001*
OFFICESIZE	**-**	**$-6.00*10^{-12}$**	**$-1.00*10^{-11}$**	**$-7.00*10^{-6}$**	**$-1.14*10^{-5}$**
		(-1.13)	**(-1.76)**	**(-1.29)**	**(-2.00)**
		0.129	***0.039***	***0.098***	***0.023***
BETA	+	0.013	0.013	0.013	0.013
		(12.34)	(12.43)	(12.34)	12.42
		<0.001	*<0.001*	*<0.001*	*<0.001*
LNLEV	+	0.004	0.005	0.004	0.005
		(4.00)	(4.14)	(3.99)	(4.13)
		<0.001	*<0.001*	*<0.001*	*<0.001*
LNB2M	+	0.011	0.012	0.011	0.011
		(11.08)	(11.08)	(11.10)	(11.09)
		<0.001	*<0.001*	*<0.001*	*<0.001*
SIZE	-	$-2.83*10^{-8}$	$-2.57*10^{-8}$	$-2.87*10^{-8}$	$-2.65*10^{-8}$
		(-4.90)	(-4.47)	(-4.94)	(-4.58)
		<0.001	*<0.001*	*<0.001*	*<0.001*
GROWTH	+	0.007	0.007	0.007	0.007
		(2.52)	(2.52)	(2.52)	(2.52)
		0.006	*0.006*	*0.006*	*0.006*
AGE	-	$-3.66*10^{-4}$	$-3.59*10^{-4}$	$-3.65*10^{-4}$	$-3.57*10^{-4}$
		(-10.26)	(-10.02)	(-10.26)	(-10.01)
		<0.001	*<0.001*	*<0.001*	*<0.001*
VAR	+	0.079	0.080	0.079	0.080
		(7.50)	(7.56)	(7.49)	(7.54)
		<0.001	*<0.001*	*<0.001*	*<0.001*
FEERATIO	-		-0.007		-0.007
			(-2.06)		(-2.10)
			0.020		*0.012*
RECENTRET	-	-0.049	-0.048	-0.048	-0.048
		(-19.28)	(-19.06)	(-19.27)	(-19.16)
		<0.001	*<0.001*	*<0.001*	*<0.001*
R^2		32.0%	32.1%	32.0%	32.1%
N		8512	8481	8514	8481

Table 4 presents the results of estimates of regressions of PEG method cost of equity estimates on measures of the size of an auditor's office and control variables. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3).

*p-values are one tailed wherever a coefficient prediction was made, or two tailed otherwise.

Table 5: OFFICESIZE Coefficients from Regressions Partitioned on Industry Adjusted Research and Development Quintiles

Panel A: Earnings Response Coefficient Regressions

Coefficient on OFFICESIZE*UE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$-3.76*10^{-10}$	$1.07*10^{-9}$	$-8.23*10^{-3}$	$-8.86*10^{-3}$
	(-0.02)	(0.06)	(-0.60)	(-0.61)
	0.510	*0.475*	*0.725*	*0.729*
Q1	$-1.03*10^{-8}$	$-7.91*10^{-9}$	$-4.98*10^{-3}$	$-2.05*10^{-3}$
	(-1.77)	(-1.23)	(-1.08)	(-0.45)
	0.961	*0.890*	*0.859*	*0.672*
T test	$9.88*10^{-9}$	$8.98*10^{-9}$	$-3.25*10^{-3}$	$-6.80*10^{-3}$
$B_{Q5}-B_{Q1}>0$	(0.59)	(0.48)	(-0.22)	(-0.45)
	0.277	*0.314*	*0.587*	*0.674*

Panel B: Cost of Equity Regressions

Coefficient on OFFICESIZE
(t-stat)
p-values (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$1.00*10^{-11}$	$8.00*10^{-12}$	$9.20*10^{-6}$	$7.100*10^{-6}$
	(0.88)	(0.67)	(0.59)	(0.43)
	0.811	*0.750*	*0.721*	*0.667*
Q1	$1.10*10^{-11}$	$2.30*10^{-11}$	$-5.20*10^{-6}$	$7.00*10^{-7}$
	(0.81)	(1.48)	(-0.30)	(0.04)
	0.791	*0.930*	*0.384*	*0.516*
T test	$-1.00*10^{-12}$	$-1.50*10^{-12}$	$1.44*10^{-5}$	$6.40*10^{-6}$
$B_{Q5}-B_{Q1}<0$	(-0.06)	(-0.78)	(0.61)	(0.26)
	0.477	*0.217*	*0.730*	*0.602*

Table 5 provides the estimates of the coefficients of interest for subsample regressions, where the subsamples are partitioned based upon quintiles of industry adjusted RD%. The T test below tests the difference between the coefficient of interest for the top quintile of RD% and the coefficient of interest for the bottom quintile of RD% . The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Panel A presents the results of regressions of short window earnings announcement period abnormal returns on unexpected earnings, measures of the size of the auditor's office, control variables, and their interactions, partitioned by RD% quintile. Panel B presents the results of regressions of PEG method cost of equity estimates on measures of the size of the auditor's office and control variables, partitioned by RD% quintile. Variables are defined as described after equations (1) and (3).

Table 6: OFFICESIZE Coefficients from Regressions Partitioned on Industry Adjusted Analyst Following Quintiles

Panel A: Earnings Response Coefficient Regressions

Coefficient on OFFICESIZE*UE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$-1.10*10^{-8}$	$-1.22*10^{-8}$	$-6.01*10^{-3}$	$-6.25*10^{-3}$
	(-2.26)	(-2.27)	(-1.13)	(-1.03)
	0.988	*0.988*	*0.870*	*0.848*
Q1	$5.49*10^{-9}$	$3.01*10^{-9}$	$3.12*10^{-3}$	$8.06*10^{-4}$
	(1.24)	(0.61)	(0.77)	(0.19)
	0.107	*0.270*	*0.221*	*0.422*
B_{Q1}-B_{Q5}>0	$1.64*10^{-8}$	$1.52*10^{-8}$	$9.10*10^{-3}$	$7.06*10^{-3}$
	(2.50)	(2.09)	(1.36)	(0.96)
	0.006	*0.018*	*0.087*	*0.169*

Panel B: Cost of Equity Regressions

Coefficient on OFFICESIZE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$-6.00*10^{-12}$	$-1.40*10^{-11}$	$-1.06*10^{-5}$	$-1.90*10^{-5}$
	(-0.87)	(-1.66)	(-1.13)	(-1.75)
	0.193	*0.049*	*0.130*	*0.040*
Q1	$-2.60*10^{-11}$	$-2.20*10^{-11}$	$-4.50*10^{-5}$	$-4.32*10^{-5}$
	(-2.23)	(-1.88)	(-3.75)	(-3.49)
	0.013	*0.030*	*<0.001*	*<0.001*
B_{Q1}-B_{Q5} <0	$-2.00*10^{-11}$	$-8.00*10^{-12}$	$-3.44*10^{-5}$	$-2.42*10^{-5}$
	(-1.48)	(-0.56)	(-2.26)	(-1.47)
	0.070	*0.289*	*0.012*	*0.071*

Table 6 provides the estimates of the coefficients of interest for subsample regressions, where the subsamples are partitioned based upon quintiles of PREINFO, industry adjusted*. The t-tests at the bottom of each panel test the differences between the coefficient of interest for the top quintile of PREINFO and the coefficient of interest for the bottom quintile of PREINFO. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Panel A presents the results of regressions of short window earnings announcement period abnormal returns on unexpected earnings, measures of the size of the auditor's office, control variables, and their interactions, partitioned by PREINFO quintile. The coefficient of interest in Panel A is the coefficient on UE*OFFICESIZE in equation (1). Panel B presents the results of regressions of PEG method cost of equity estimates on measures of the size of the auditor's office and control variables, partitioned by PREINFO quintile. The coefficient of interest in Panel B is the coefficient on OFFICESIZE, in equation (3). Variables are defined as described after equations (1) and (3).*

Table 7: OFFICESIZE Coefficients from Regressions Partitioned on Corporate Governance Quintiles

Panel A: Earnings Response Coefficient Regressions

Coefficient on OFFICESIZE*UE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$-6.80*10^{-9}$	$8.15*10^{-10}$	$-7.98*10^{-3}$	$-3.16*10^{-3}$
	(-1.13)	(0.13)	(-1.95)	(-0.74)
	0.869	*0.447*	*0.974*	*0.771*
Q1	$-1.11*10^{-8}$	$3.21*10^{-9}$	$-1.22*10^{-2}$	$-2.58*10^{-3}$
	(-0.64)	(0.22)	(-0.90)	(-0.23)
	0.738	*0.413*	*0.814*	*0.591*
B_{Q1}-B_{Q5}>0	$-4.29*10^{-9}$	$2.40*10^{-9}$	$-4.26*10^{-3}$	$5.76*10^{-4}$
	(-0.23)	(0.15)	(-0.29)	(0.05)
	0.592	*0.440*	*0.617*	*0.481*

Panel B: Cost of Equity Regressions

Coefficient on OFFICESIZE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$5.00*10^{-12}$	$6.00*10^{-12}$	$-2.70*10^{-6}$	$-2.8*10^{-6}$
	(0.47)	(0.54)	(-0.24)	(-0.26)
	0.682	*0.701*	*0.404*	*0.399*
Q1	$-5.00*10^{-12}$	$-8.00*10^{-12}$	$-6.40*10^{-6}$	$-1.05*10^{-5}$
	(-0.51)	(-0.82)	(-0.49)	(-0.76)
	0.306	*0.205*	*0.311*	*0.224*
B_{Q1}-B_{Q5} <0	$-1.00*10^{-11}$	$-1.40*10^{-11}$	$-3.70*10^{-6}$	$-7.70*10^{-6}$
	(-0.69)	(-0.95)	(-0.22)	(-0.44)
	0.245	*0.171*	*0.414*	*0.332*

*Table 7 provides the estimates of the coefficients of interest for subsample regressions, where the subsamples are partitioned based upon quintiles of CORPGOV. The t-tests at the bottom of each panel test the differences between the coefficient of interest for the top quintile of CORPGOV and the coefficient of interest for the bottom quintile of CORPGOV. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Panel A presents the results of re-estimating equation (1) by quintile of CORPGOV, and therefore the coefficient of interest in Panel A is the coefficient on UE*OFFICESIZE. Panel B presents the results of re-estimating equation (3) by quintile of CORPGOV, and therefore the coefficient of interest in Panel B is the coefficient on OFFICESIZE. Variables are defined as described after equations (1) and (3).*

Table 8: OFFICESIZE Coefficients from Regressions Partitioned on Managerial Ownership Quintiles

Panel A: Earnings Response Coefficient Regressions

Coefficient on OFFICESIZE*UE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$1.00*10^{-11}$ (0.33) *0.371*	$-3.15*10^{-9}$ (-1.19) *0.883*	$-8.61*10^{-4}$ (-0.23) *0.589*	$-2.68*10^{-4}$ (-0.08) *0.532*
Q1	$1.60*10^{-11}$ (1.11) *0.134*	$6.95*10^{-10}$ (0.48) *0.327*	$-1.81*10^{-3}$ (-1.10) *0.863*	$-1.28*10^{-3}$ (-0.77) *0.778*
B_{Q1}-B_{Q5}>0	$6.00*10^{-12}$ (0.18) *0.427*	$3.85*10^{-9}$ (1.27) *0.102*	$-9.51*10^{-4}$ (-0.23) *0.590*	$-1.01*10^{-3}$ (-0.27) *0.606*

Panel B: Cost of Equity Regressions

Coefficient on OFFICESIZE
(t-stat)
p-value (one tailed)

	SUMFEES	SUMFEESw/FEERATIO	CLIENTS	CLIENTSw/FEERATIO
Q5	$5.00*10^{-12}$ (0.32) *0.626*	-0.00 (-0.01) *0.495*	$6.50*10^{-6}$ (0.43) *0.665*	$2.40*10^{-6}$ (0.15) *0.559*
Q1	$8.00*10^{-12}$ (1.00) *0.842*	$8.00*10^{-12}$ (0.93) *0.824*	$-4.80*10^{-6}$ (-0.53) *0.299*	$-6.60*10^{-6}$ (-0.69) *0.244*
B_{Q1}-B_{Q5} <0	$3.00*10^{-12}$ (0.16) *0.564*	$8.00*10^{-12}$ (0.397) *0.654*	$-1.10*10^{-5}$ (-0.63) *0.265*	$-9.00*10^{-6}$ (-0.48) *0.314*

*Table 8 provides the estimates of the coefficients of interest for subsample regressions, where the subsamples are partitioned based upon quintiles of managerial holdings, CEOOWN. The t-tests at the bottom of each panel test the differences between the coefficient of interest for the top quintile of CEOOWN and the coefficient of interest for the bottom quintile of CEOOWN. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Panel A presents the results of regressions of short window earnings announcement period abnormal returns on unexpected earnings, measures of the size of the auditor's office, control variables, and their interactions, partitioned by CEOOWN quintile. The coefficient of interest in Panel A is the coefficient on UE*OFFICESIZE in equation (1). Panel B presents the results of regressions of PEG method cost of equity estimates on measures of the size of the auditor's office and control variables, partitioned byCEOOWN quintile. The coefficient of interest in Panel B is the coefficient on OFFICESIZE, in equation (3). Variables are defined as described after equations (1) and (3).*

Table 9: Primary Analyses Augmented to Include Auditor Industry Expertise Controls

Panel A: Earnings Response Coefficient Analyses

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

		Parameter Estimates (t-statistics) *p-value**			
		(1)	(2)	(3)	(4)
	E(Sign)	*SUMFEES*	*SUMFEES*	*CLIENTS*	*CLIENTS*
Intercept	*?*	0.001	-0.001	0.001	-0.001
		(0.31)	(-0.21)	(0.29)	(-0.23)
		0.378	*0.833*	*0.774*	*0.819*
UE	+	0.569	0.549	0.539	0.564
		(2.85)	(2.39)	(2.64)	(2.46)
		0.003	*0.009*	*0.004*	*0.007*
OFFICESIZE*UE	**+**	**1.22*10^{-9}**	**1.64*10^{-9}**	**0.001**	**0.002**
		(2.07)	**(2.70)**	**(1.93)**	**(2.24)**
		0.019	***0.004***	***0.026***	***0.013***
*NATEXPERT*UE*	+	0.269	-0.392	0.285	-0.369
		(1.69)	(-1.90)	(1.81)	(-1.80)
		0.046	*0.971*	*0.036*	*0.964*
*CITYEXPERT*UE*	+	0.041	0.122	0.054	0.087
		(0.26)	(0.79)	*(0.34)*	(0.56)
		0.394	*0.215*	*0.368*	*0.288*
*LOSS*UE*	-	-0.521	-0.540	-0.523	-0.549
		(-3.33)	(-3.43)	(-3.37)	(-3.48)
		<0.001	*<0.001*	*<0.001*	*<0.001*
*SIZE*UE*	-	-9.00*10^{-7}	-1.00*10^{-6}	-8.00*10^{-7}	-7.00*10^{-7}
		(-2.73)	(-2.84)	(-2.43)	(-2.31)
		0.003	*0.003*	*0.008*	*0.010*
*BETA*UE*	-	-0.021	0.008	-0.005	0.031
		(-0.20)	(0.08)	(-0.05)	(0.30)
		0.419	*0.532*	*0.480*	*0.617*
*LNM2B*UE*	+	0.003	-0.004	-0.003	-0.019
		(0.05)	(-0.05)	(-0.05)	(-0.25)
		0.481	*0.522*	*0.522*	*0.598*
*FEERATIO*UE*	+	0.394	0.377	0.392	0.368
		(0.84)	(0.81)	(0.84)	(0.78)
		0.199	*0.210*	*0.201*	*0.219*
PRERET	-	-0.041	-0.041	-0.041	-0.041
		(-2.94)	(-2.95)	(-2.95)	(-2.96)
		0.002	*0.002*	*0.002*	*0.002*
R^2		2.5%	2.5%	2.5%	2.5%
N		5869	5869	5869	5869

Table 9 (continued)

Panel B: Cost of Equity Capital Analyses

Dependent Variable: *Ex Ante Cost of Equity Capital**

		Parameter Estimates (t-statistics in parentheses) *p-value**			
		(1)	(2)	(3)	(4)
	E(Sign)	*SUMFEES*	*SUMFEES*	*CLIENTS*	*CLIENTS*
Intercept	*?*	0.119	0.118	0.120	0.119
		(44.84)	(45.23)	(43.86)	(44.13)
		<0.001	*<0.001*	*<0.001*	*<0.001*
OFFICESIZE	**-**	**$-1.00*10^{-11}$**	**$-1.00*10^{-11}$**	**$-1.00*10^{-5}$**	**$-9.90*10^{-6}$**
		(-1.73)	**(-1.66)**	**(-1.74)**	**(-1.66)**
		0.042	***0.049***	***0.041***	***0.049***
NATEXPERT	-	-0.002	-0.005	-0.002	-0.005
		(-1.51)	(-2.20)	(-1.56)	(-2.26)
		0.066	*0.014*	*0.006*	*0.012*
CITYEXPERT	-	-0.001	$4.20*10^{-4}$	-0.001	$4.88*10^{-4}$
		(-0.79)	(0.34)	(-0.81)	(0.40)
		0.216	*0.632*	*0.210*	*0.655*
BETA	+	0.013	0.013	0.013	0.013
		(12.62)	(12.57)	(12.61)	12.56
		<0.001	*<0.001*	*<0.001*	*<0.001*
LNLEV	+	0.004	0.004	0.004	0.004
		(3.91)	(3.91)	(3.90)	(3.89)
		<0.001	*<0.001*	*<0.001*	*<0.001*
LNB2M	+	0.011	0.011	0.011	0.011
		(10.48)	(10.45)	(10.49)	(10.46)
		<0.001	*<0.001*	*<0.001*	*<0.001*
SIZE	-	$-2.55*10^{-8}$	$-2.53*10^{-8}$	$-2.64*10^{-8}$	$-2.61*10^{-8}$
		(-3.97)	(-3.91)	(-4.09)	(-4.03)
		<0.001	*<0.001*	*<0.001*	*<0.001*
GROWTH	+	0.006	0.005	0.006	0.006
		(2.51)	(2.51)	(2.52)	(2.51)
		0.006	*0.006*	*0.006*	*0.006*
AGE	-	$-3.38*10^{-4}$	$-3.40*10^{-4}$	$-3.37*10^{-4}$	$-3.39*10^{-4}$
		(-9.56)	(-9.62)	(-9.55)	(-9.61)
		<0.001	*<0.001*	*<0.001*	*<0.001*
VAR	+	0.075	0.074	0.074	0.074
		(8.74)	(8.69)	(8.71)	(8.65)
		<0.001	*<0.001*	*<0.001*	*<0.001*
FEERATIO	-	-0.007	-0.007	-0.007	-0.007
		(2.00)	(-2.20)	(-1.99)	(-2.20)
		0.023	*0.014*	*0.023*	*0.014*
RECENTRET	-	-0.047	-0.047	-0.047	-0.047
		(-18.98)	(-18.91)	(-18.98)	(-18.92)
		<0.001	*<0.001*	*<0.001*	*<0.001*
R^2		32.1%	32.1%	32.1%	32.1%
N		8095	8095	8095	8095

Table 9 (continued)

Table 9 presents the results of estimates of regression equations (1) and (3), augmented to include additional control variables for either national level or local level auditor industry expertise. Panel A presents the results of estimating equation (1), the ERC equation. Panel B presents the results of estimating equation (3), the Cost of Equity Capital equation. These regressions differ from those in tables 3 and 4 only because of the inclusion of dummy variables indicating city and national level auditor industry expertise and the interaction of these dummy variables with UE (panel A only). The first and third (second and fourth) columns define industry audit expertise as an auditor with greater than 30% of the fees (clients) in a particular industry. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3) and in the additional analysis section.
*p-values are one tailed wherever a coefficient prediction was made, two tailed otherwise.

Table 10: Primary Analyses Augmented with Audit Firm Controls

Panel A: Earnings Response Coefficient Regressions

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	(1) *SUMFEES*	(2) *CLIENTS*
Intercept	?	$1.59*10^{-3}$	$1.86*10^{-3}$
		(0.52)	(0.60)
		0.600	*0.551*
UE	+	0.650	0.674
		(2.83)	(2.84)
		0.002	*0.002*
OFFICESIZE*UE	**+**	**$1.52*10^{-9}$**	**$1.54*10^{-3}$**
		(2.35)	**(1.87)**
		0.010	***0.031***
*LOSS*UE*	-	-0.616	-0.623
		(-3.74)	(-3.80)
		<0.001	*<0.001*
*SIZE*UE*	-	$-1.10*10^{-6}$	$-9.00*10^{-7}$
		(-3.16)	(-2.76)
		0.001	*0.003*
*BETA*UE*	-	0.063	0.082
		(0.57)	(0.75)
		0.716	*0.777*
*LNM2B*UE*	+	0.018	0.007
		(0.24)	(0.10)
		0.405	*0.461*
*FEERATIO*UE*	+	0.356	0.337
		(0.76)	(0.72)
		0.225	*0.236*
PRERET	-	-0.040	-0.040
		(-3.02)	(-3.02)
		0.001	*0.001*
R^2		2.4%	2.4%
N		6128	6128

Table 10 (continued)

Panel B: Cost of Equity Capital Regressions

Dependent Variable: *PEG Method Cost of Equity Estimates*

		Parameter Estimates (t-statistics in parentheses) *p-value**	
	E(Sign)	(1) *SUMFEES*	(2) *CLIENTS*
Intercept	*?*	0.118	0.118
		(41.66)	(41.45)
		<0.001	*<0.001*
OFFICESIZE	**-**	**$-9.00*10^{-12}$**	**$-1.08*10^{-5}$**
		(-1.48)	**(-1.88)**
		0.069	***0.030***
BETA	+	0.013	0.013
		(12.42)	(12.41)
		<0.001	*<0.001*
LNLEV	+	0.005	0.005
		(4.07)	(4.06)
		<0.001	*<0.001*
LNB2M	+	0.011	0.011
		(11.05)	(11.04)
		<0.001	*<0.001*
SIZE	-	-0.000	-0.000
		(-4.46)	(-4.54)
		<0.001	*<0.001*
GROWTH	+	0.007	0.007
		(2.52)	(2.52)
		0.006	*0.006*
AGE	-	$-3.57*10^{-4}$	$-3.55*10^{-4}$
		(-9.86)	(-9.83)
		<0.001	*<0.001*
VAR	+	0.080	0.080
		(*7.54*)	(7.53)
		<0.001	*<0.001*
FEERATIO	-	-0.007	-0.007
		(-1.93)	(-2.01)
		0.026	*0.022*
RECENTRET	-	-0.049	-0.049
		(-19.14)	(-19.14)
		<0.001	*<0.001*
R^2		32.1%	32.2%
N		8095	8095

Table 10 presents the results of estimates of regressions of either equation (1) or (3) augmented to include audit firm specific controls. Panel A summarizes the results for equation (1), the ERC regression. Panel B summarizes the results for equation (3), the Cost of Equity Capital equation. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3). Coefficient estimates for the audit firm specific controls are not shown, for brevity.

*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 11: Primary Analyses Augmented to Include Lagged Audit Quality

Panel A: Earnings Response Coefficient Analyses

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	(1) *SUMFEES*	(2) *CLIENTS*
Intercept	?	$5.43*10^{-4}$	0.001
		(0.14)	(0.31)
		0.443	*0.379*
UE	+	0.864	0.772
		(2.57)	(2.40)
		0.005	*0.008*
OFFICESIZE*UE	**+**	**$8.87*10^{-10}$**	**$1.94*10^{-3}$**
		(1.26)	**(1.95)**
		0.104	***0.026***
*LOSS*UE*	-	-0.545	-0.539
		(-2.31)	(-2.39)
		0.011	*0.009*
*SIZE*UE*	-	$-6.30*10^{-6}$	$-6.60*10^{-6}$
		(-1.83)	(-1.91)
		0.034	*0.028*
*BETA*UE*	-	-0.020	-0.011
		(-0.16)	(-0.09)
		0.436	*0.465*
*LNM2B*UE*	+	-0.114	-0.117
		(-1.60)	(-1.63)
		0.945	*0.949*
*FEERATIO*UE*	+	0.239	0.367
		(0.44)	(0.68)
		0.332	*0.250*
PRERET	-	-0.041	-0.041
		(-2.63)	(-2.60)
		0.004	*0.005*
*LAGAQ*UE*	-	0.003	0.005
		(0.37)	(0.68)
		0.645	*0.751*
R^2		2.3%	2.3%
N		4450	4450

Table 11 (continued)

Panel B: Cost of Equity Capital Regressions

Dependent Variable: *PEG Method Cost of Equity Estimates*

		Parameter Estimates (t-statistics in parentheses) *p-value**	
	E(Sign)	(1) *SUMFEES*	(2) *CLIENTS*
Intercept	*?*	0.129	0.129
		(37.06)	(36.36)
		<0.001	*<0.001*
OFFICESIZE	**-**	**$-4.00*10^{-12}$**	**$-5.00*10^{-7}$**
		(-0.56)	**(-0.08)**
		0.288	***0.468***
BETA	+	0.012	0.012
		(11.37)	(11.36)
		<0.001	*<0.001*
LNLEV	+	$9.51*10^{-3}$	$9.48*10^{-3}$
		(6.82)	(6.79)
		<0.001	*<0.001*
LNB2M	+	0.012	0.013
		(11.12)	(11.18)
		<0.001	*<0.001*
SIZE	-	$-2.73*10^{-7}$	$-2.76*10^{-7}$
		(-6.92)	(-7.04)
		<0.001	*<0.001*
GROWTH	+	0.006	0.006
		(2.50)	(2.50)
		0.006	*0.006*
AGE	-	$-3.68*10^{-4}$	$-3.69*10^{-4}$
		(-8.90)	(-8.97)
		<0.001	*<0.001*
VAR	+	0.092	0.092
		(8.89)	(8.89)
		<0.001	*<0.001*
FEERATIO	-	-0.005	-0.005
		(-1.26)	(-1.17)
		0.105	*0.122*
RECENTRET	-	-0.046	-0.046
		(-17.67)	(-17.63)
		<0.001	*<0.001*
LAGAQ	-	$-8.53*10^{-4}$	$-8.50*10^{-4}$
		(-0.80)	(-0.79)
		0.213	*0.214*
R^2		34.6%	34.6%
N		6504	6504

Table 11 presents the results of estimates of regressions of either equation (1) or (3) augmented to include controls for both lagged audit quality and auditor industry expertise. Panel A summarizes the results for equation (1), the ERC regression. Panel B summarizes the results for equation (3), the Cost of Equity Capital equation. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after

equations (1) and (3) and in the additional analysis section. Coefficient estimates for the audit firm specific controls are not shown, for brevity.
*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 12: Earnings Response Coefficient Analyses Using Consensus Forecasts in Unexpected Earnings

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	(1) SUMFEES	(2) CLIENTS
Intercept	?	$2.25*10^{-3}$	0.002
		(0.96)	(0.89)
		0.337	*0.375*
UE	+	1.111	1.094
		(4.00)	(3.97)
		<0.001	*<0.001*
OFFICESIZE*UE	+	**$1.65*10^{-10}$**	**$2.13*10^{-4}$**
		(1.45)	**(1.50)**
		0.074	***0.067***
*LOSS*UE*	-	-0.694	-0.695
		(-2.79)	(-2.79)
		0.004	*0.003*
*SIZE*UE*	-	$-1.30*10^{-6}$	$-1.30*10^{-6}$
		(-3.06)	(-3.02)
		0.001	*0.001*
*BETA*UE*	-	0.200	*0.208*
		(0.99)	(1.03)
		0.837	*0.848*
*LNM2B*UE*	+	-0.072	-0.072
		(-0.70)	(-0.71)
		0.759	*0.762*
*FEERATIO*UE*	+	-0.214	-0.194
		(-0.36)	(-0.32)
		0.640	*0.627*
PRERET	-	-0.034	-0.034
		(-2.83)	(-2.83)
		0.002	*0.002*
R^2		2.7%	2.7%
N		7758	7758

Table 12 presents the results of estimates of regressions of equation (1). The analyses performed in Table 12 differ from those in Table 3 in that the Table 12 measure of Unexpected Earnings is calculated using a mean consensus forecast instead of an individual forecast to estimate the market's expectation of earnings. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and in the additional analysis section.
*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 13: Supplemental Tests of Hypothesis Two

Panel A: Earnings Response Coefficient Regressions

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	SUMFEES	CLIENTS
Intercept	?	$5.57*10^{-4}$	0.002
		(0.05)	(0.17)
		0.960	*0.866*
UE	+	5.96	7.09
		(3.02)	(2.88)
		0.001	*0.002*
*OFFICESIZE*UE*	+	$-1.15*10^{-8}$	-0.011
		(-2.72)	(-2.42)
		0.997	*0.992*
HIDUMMY OFFICESIZE* UE*	+	$1.92*10^{-8}$	0.006
		(1.09)	(0.40)
		0.138	*0.343*
*LOSS*UE*	-	-2.93	-1.90
		(-2.00)	(-1.38)
		0.023	*0.084*
*SIZE*UE*	-	$-7.34*10^{-5}$	$-6.25*10^{-5}$
		(-1.49)	(-1.28)
		0.068	*0.101*
*BETA*UE*	-	0.556	-0.553
		(0.51)	(-0.51)
		0.694	*0.306*
*LNM2B*UE*	+	*-0.138*	-0.558
		(-0.11)	(-0.50)
		0.544	*0.692*
*FEERATIO*UE*	+	6.57	3.79
		(1.19)	(0.62)
		0.117	*0.266*
PRERET	-	-0.035	-0.040
		(-0.88)	(-0.96)
		0.190	*0.169*
R^2		7.4%	7.1%
N		650	650

Table 13 (continued)

Panel B: Cost of Equity Regression Results

Dependent Variable: *Ex Ante Cost of Equity Capital**

Parameter Estimates
(t-statistics in parentheses)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	*?*	0.118	0.119
		(14.13)	(13.61)
		<0.001	*<0.001*
OFFICESIZE	-	$1.0*10^{-11}$	$-3.9*10^{-6}$
		(0.88)	(-0.21)
		0.811	*0.417*
OFFICESIZE* HIDUMMY	**-**	$\mathbf{2.0*10^{-11}}$	$\mathbf{1.6*10^{-5}}$
		(0.10)	**(0.63)**
		0.539	***0.737***
BETA	+	0.008	$8.20*10^{-3}$
		(4.21)	(4.15)
		<0.001	*<0.001*
LNLEV	+	0.011	0.011
		(3.70)	(3.76)
		<0.001	*<0.001*
LNB2M	+	0.008	0.008
		(3.80)	(3.76)
		<0.001	*<0.001*
SIZE	-	$-8.39*10^{-8}$	$-7.6*10^{-8}$
		(-2.29)	(-2.10)
		0.011	*0.018*
GROWTH	+	0.012	0.012
		(2.17)	(2.16)
		0.015	*0.016*
AGE	-	$-3.16*10^{-4}$	$-3.09*10^{-4}$
		(-3.31)	(-3.24)
		<0.001	*<0.001*
VAR	+	0.089	0.089
		(4.41)	(4.38)
		<0.001	*<0.001*
FEERATIO	-	0.002	0.001
		(0.25)	(0.13)
		0.597	*0.551*
RECENTRET	-	-0.044	-0.045
		(-10.47)	(-10.43)
		<0.001	*<0.001*
R^2		38.7%	38.7%
N		1053	1053

Table 13 presents the results of estimates of regressions that test Hypothesis Two using only observations from the fifth and the first quintile of RD%. Panel A presents the results of re-estimating equation (1) after augmenting it to include a dummy variable indicating the observation came from the 5th quintile of RD%, this dummy variable's interaction with UE, this dummy variable's interaction with OFFICESIZE, and the three-way interaction between OFFICESIZE, UE, and the dummy variable. Panel B presents the results of re-estimating equation (3) after augmenting it to include the dummy variable described previously and its interaction with OFFICESIZE. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and

Table 13 (continued)

including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3).

*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 14: Supplemental Tests of Hypothesis Three

Panel A: Earnings Response Coefficient Regressions

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	*?*	0.009	0.006
		(1.26)	(0.86)
		0.209	*0.392*
UE	+	1.87	1.97
		(2.45)	(2.60)
		0.007	*0.005*
*OFFICESIZE*UE*	+	*$7.97*10^{-9}$*	0.004
		(1.69)	(0.94)
		0.046	*0.174*
HIDUMMY* OFFICESIZE* UE	**-**	**$-1.05*10^{-8}$**	**-0.005**
		(-1.71)	**(0.95)**
		0.044	***0.171***
*LOSS*UE*	-	-0.290	-0.365
		(-0.58)	(-0.74)
		0.282	*0.231*
*SIZE*UE*	-	$5.0*10^{-7}$	$-3.0*10^{-7}$
		(0.28)	(-0.35)
		0.612	*0.636*
*BETA*UE*	-	-1.07	-0.918
		(-2.55)	(-2.52)
		0.005	*0.006*
*LNM2B*UE*	+	-0.769	-0.639
		(-1.73)	(-1.61)
		0.958	*0.946*
*FEERATIO*UE*	+	0.054	-0.463
		(0.03)	(-0.25)
		0.489	*0.599*
PRERET	-	-0.037	-0.038
		(-0.92)	(-0.91)
		0.180	*0.181*
R^2		3.2%	3.0%
N		1219	1219

Table 14 (continued)

Panel B: Cost of Equity Regression Results

Dependent Variable: *Ex Ante Cost of Equity Capital**

Parameter Estimates
(t-statistics in parentheses)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	?	0.118	0.120
		(22.76)	(22.71)
		<0.001	*<0.001*
OFFICESIZE	-	$-3.00*10^{-11}$	$-4.33*10^{-5}$
		(-2.55)	(-3.59)
		0.005	*<0.001*
OFFICESIZE*	**+**	$\mathbf{2.4*10^{-11}}$	$\mathbf{2.48*10^{-5}}$
HIDUMMY		**(1.65)**	**(1.61)**
		0.050	***0.054***
BETA	+	0.014	0.014
		(7.35)	(7.30)
		<0.001	*<0.001*
LNLEV	+	0.007	0.007
		(3.41)	(3.42)
		<0.001	*<0.001*
LNB2M	+	0.008	0.008
		(4.71)	(4.78)
		<0.001	*<0.001*
SIZE	-	$-7.63*10^{-9}$	$-6.23*10^{-9}$
		(-1.26)	(-1.06)
		0.104	*0.144*
GROWTH	+	0.011	0.010
		(2.33)	(2.33)
		0.009	*0.010*
AGE	-	$-2.07*10^{-4}$	$-2.08*10^{-4}$
		(-3.21)	(-3.26)
		<0.001	*<0.001*
VAR	+	0.062	0.062
		(3.44)	(3.48)
		<0.001	*<0.001*
FEERATIO	-	-0.003	-0.005
		(-0.57)	(-0.96)
		0.286	*0.169*
RECENTRET	-	-0.044	-0.044
		(-11.92)	(-11.91)
		<0.001	*<0.001*
R^2		34.8%	35.1%
N		2169	2169

Table 14 presents the results of estimates of regressions that test Hypothesis Three using only observations from the fifth and the first quintile of NANALYST. Panel A presents the results of re-estimating equation (1) after augmenting it to include a dummy variable indicating the observation came from the 5th quintile of NANALYST, this dummy variable's interaction with UE, this dummy variable's interaction with OFFICESIZE, and the three-way interaction between OFFICESIZE, UE, and the dummy variable. Panel B presents the results of re-estimating equation (3) after augmenting it to include the dummy variable described previously and its interaction with OFFICESIZE. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm

Table 14 (continued)

and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3).

*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 15: Supplemental Tests of Hypothesis Four

Panel A: Earnings Response Coefficient Regressions

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	?	0.009	0.010
		(1.26)	(1.37)
		0.104	*0.086*
UE	+	-0.857	-0.620
		(-0.75)	(-0.60)
		0.226	*0.275*
*OFFICESIZE*UE*	+	$5.09*10^{-9}$	0.004
		(0.51)	(0.35)
		0.306	*0.363*
HIDUMMY*OFFICESIZE*UE	**-**	**$-6.20*10^{-9}$**	**-0.004**
		(-0.55)	**(-0.38)**
		0.289	***0.353***
*LOSS*UE*	-	0.195	0.138
		(0.28)	(0.21)
		0.611	*0.972*
*SIZE*UE*	-	$-7.0*10^{-7}$	$-1.4*10^{-6}$
		(-0.23)	(-0.55)
		0.409	*0.289*
*BETA*UE*	-	0.213	0.160
		(0.29)	(0.20)
		0.613	*0.581*
*LNM2B*UE*	+	0.072	-0.032
		(0.11)	(-0.06)
		0.457	*0.522*
*FEERATIO*UE*	+	19.66	19.72
		(4.98)	(5.19)
		<0.001	*<0.001*
PRERET	-	-0.029	-0.028
		(-0.85)	(-0.84)
		0.189	*0.200*
R^2		3.6%	3.6%
N		1047	1047

Table 15 (continued)

Panel B: Cost of Equity Regression Results

Dependent Variable: *Ex Ante Cost of Equity Capital**

Parameter Estimates
(t-statistics in parentheses)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	?	0.105	0.105
		(24.73)	(24.11)
		<0.001	*<0.001*
OFFICESIZE	-	$-6.00*10^{-12}$	$-1.2*10^{-5}$
		(-0.70)	(-0.93)
		0.242	*0.176*
***OFFICESIZE**	**+**	$\mathbf{1.0*10^{-11}}$	$\mathbf{6.7*10^{-6}}$
HIDUMMY		**(0.70)**	**(0.41)**
		0.242	***0.342***
BETA	+	0.013	0.013
		(8.55)	(8.52)
		<0.001	*<0.001*
LNLEV	+	0.007	0.007
		(3.48)	(3.50)
		<0.001	*<0.001*
LNB2M	+	0.008	0.008
		(5.45)	(5.47)
		<0.001	*<0.001*
SIZE	-	$-4.2*10^{-8}$	$-3.9*10^{-8}$
		(-3.24)	(-3.09)
		<0.001	*0.001*
GROWTH	+	0.010	0.010
		(3.07)	(3.08)
		0.001	*0.001*
AGE	-	$-2.9*10^{-4}$	$-2.9*10^{-4}$
		(-4.09)	(-4.09)
		<0.001	*<0.001*
VAR	+	0.064	0.064
		(4.29)	(4.28)
		<0.001	*<0.001*
FEERATIO	-	$1.3*10^{-4}$	-0.001
		(0.02)	(-0.22)
		0.509	*0.411*
RECENTRET	-	-0.045	-0.046
		(-12.67)	(-12.66)
		<0.001	*<0.001*
R^2		37.7%	37.7%
N		1718	1718

Table 15 presents the results of estimates of regressions that test Hypothesis Four using only observations from the fifth and the first quintile of CORPGOV. Panel A presents the results of re-estimating equation (1) after augmenting it to include a dummy variable indicating the observation came from the 5th quintile of CORPGOV, this dummy variable's interaction with UE, this dummy variable's interaction with OFFICESIZE, and the three-way interaction between OFFICESIZE, UE, and the dummy variable. Panel B presents the results of re-estimating equation (3) after augmenting it to include the dummy variable described previously and its interaction with OFFICESIZE. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm

Table 15 (continued)

and including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3).

*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

Table 16: Supplemental Tests of Hypothesis Five

Panel A: Earnings Response Coefficient Regressions

Dependent Variable: *Announcement Period Abnormal Returns from t-1 to t+1**

Parameter Estimates
(t-statistics)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	?	-0.001	-0.003
		(-0.19)	(-0.48)
		0.425	*0.635*
UE	+	0.81	1.30
		(0.95)	(1.23)
		0.172	*0.109*
*OFFICESIZE*UE*	+	$5.09*10^{-10}$	$-9.84*10^{-4}$
		(0.28)	(-0.48)
		0.388	*0.683*
HIDUMMY*	**-**	$\mathbf{-1.30*10^{-9}}$	$\mathbf{1.90*10^{-3}}$
OFFICESIZE*		**(-0.51)**	**(0.54)**
UE		***0.305***	***0.706***
*LOSS*UE*	-	-1.20	-1.16
		(-1.84)	(-1.92)
		0.033	*0.028*
*SIZE*UE*	-	$-8.0*10^{-7}$	$-6.0*10^{-7}$
		(-1.00)	(-1.02)
		0.159	*0.155*
*BETA*UE*	-	0.164	-0.085
		(0.33)	(-0.17)
		0.629	*0.434*
*LNM2B*UE*	+	-0.374	-0.366
		(-0.78)	(-0.82)
		0.781	*0.793*
*FEERATIO*UE*	+	2.45	2.18
		(0.84)	(0.69)
		0.200	*0.246*
PRERET	-	-0.068	-0.068
		(-1.51)	(-1.52)
		0.066	*0.064*
R^2		3.1%	3.2%
N		1277	1277

Table 16 (continued)

Panel B: Cost of Equity Regression Results

Dependent Variable: *Ex Ante Cost of Equity Capital**

Parameter Estimates
(t-statistics in parentheses)
*p-value**

	E(Sign)	*SUMFEES*	*CLIENTS*
Intercept	?	0.095 (22.88) *<0.001*	0.097 (21.76) *<0.001*
OFFICESIZE	-	$8.00*10^{-12}$ (1.01) *0.843*	$-7.70*10^{-6}$ (-0.82) *0.207*
OFFICESIZE* HIDUMMY	**+**	$\mathbf{-1.1*10^{-11}}$ **(-0.60)** ***0.724***	$\mathbf{9.0*10^{-6}}$ **(0.51)** ***0.304***
BETA	+	0.010 (6.92) *<0.001*	0.010 (6.94) *<0.001*
LNLEV	+	0.005 (2.69) *0.004*	0.005 (2.76) *0.003*
LNB2M	+	0.006 (4.21) *<0.001*	0.005 (4.04) *<0.001*
SIZE	-	$-4.9*10^{-9}$ (-1.15) *0.126*	$-2.1*10^{-9}$ (-0.58) *0.282*
GROWTH	+	0.018 (3.01) *0.001*	0.018 (3.01) *0.001*
AGE	-	$-1.2*10^{-4}$ (-2.28) *0.012*	$-1.1*10^{-4}$ (-2.14) *0.016*
VAR	+	0.060 (4.59) *<0.001*	0.060 (4.58) *<0.001*
FEERATIO	-	-0.004 (-0.76) *0.225*	$-6.6*10^{-3}$ (-1.29) *0.099*
RECENTRET	-	-0.040 (-11.16) *<0.001*	-0.041 (-11.18) *<0.001*
R^2		34.3%	34.3%
N		2088	2088

Table 16 presents the results of estimates of regressions that test Hypothesis Five using only observations from the fifth and the first quintile of CEOOWN. Panel A presents the results of re-estimating equation (1) after augmenting it to include a dummy variable indicating the observation came from the 5th quintile of CEOOWN, this dummy variable's interaction with UE, this dummy variable's interaction with OFFICESIZE, and the three-way interaction between OFFICESIZE, UE, and the dummy variable. Panel B presents the results of re-estimating equation (3) after augmenting it to include the dummy variable described previously and its interaction with OFFICESIZE. The standard errors have been adjusted for both cross sectional correlation and time series correlation in the residuals by both clustering the standard errors by firm and

Table 16 (continued)

including firm year dummy variables (not shown), as described in Petersen (2009). Variables are defined as described after equations (1) and (3).

*p-values are one tailed wherever a coefficient prediction was made, 2 tailed otherwise.

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BIOGRAPHICAL SKETCH

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Matthew Notbohm was born in St. Louis, Missouri in June of 1976 where he spent his childhood. Mr. Notbohm graduated in 1995 from Francis Howell High School in St. Charles, Missouri. He later pursued a Bachelor's of Science in Business Administration degree at Southeast Missouri State University. He graduated as an Accounting major in 2000. He immediately enrolled in a Masters of Accounting Science program at the University of Illinois at Urbana-Champaign, where he graduated in 2001. He took and passed the CPA exam in the State of Illinois. Mr. Notbohm is currently a CPA there. He worked as an auditor at Ernst and Young and then as an Instructor of Accounting at Southeast Missouri State University. In 2005 Mr. Notbohm began his education as an accounting researcher at Florida State University. There he studied archival methodologies and audit quality research. Mr. Notbohm will graduate with his PhD. degree in Accounting in the Summer of 2010. Mr. Notbohm will begin his academic career at the University of North Dakota.