Auditor-Client Relationship, Audit Process and Audit Quality

by

Yangyang Fan

BS, Harbin Institute of Technology, 2007

MS, University of Southern California, 2011

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Katz Graduate School of Business

This dissertation was presented

by

Yangyang Fan

It was defended on

April 22, 2016

and approved by

John Harry Evans III, Katz Alumni Professor, Accounting, University of Pittsburgh
Mei Feng, Associate Professor of Business Administration , University of Pittsburgh
Joshua Gunn, Assistant Professor of Business Administration, University of Pittsburgh
Kannan Raghunandan, Professor of Accounting, Florida International University
Dissertation Advisor: Chan Li, Associate Professor of Business Administration, University of Pittsburgh

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This study examines how the auditor-client relationship affects the audit process and audit quality. Chapter 2 examines the likelihood of auditor dismissal following financial statement restatements at companies where at least one of the audit committee members works on the audit committee of another company that is audited by the same audit firm ("AC-auditor interlocking"). Empirical evidence shows that companies with AC-auditor interlocking relationships are less likely to dismiss their auditors after a restatement occurs. Further evidence suggests that interlocking companies that retain their auditors after a restatement have lower subsequent audit quality compared to interlocking companies that dismiss their auditors. These findings raise concerns about the audit committee's role in auditor termination when audit quality is relatively low and suggest that AC-auditor interlocking may impair audit quality. Chapter 3 explores the pricing and client acceptance strategies of audit offices following litigations related to clients' misconduct. Using a hand-collected sample of auditor litigation events, I find that audit offices involved in litigation increase their audit fees following the filing of the lawsuit. Further analyses indicate that the increase in audit fees charged by litigation offices is driven by clients' high switching cost and low bargaining power. I also find that both litigation and non-litigation offices of audit firms involved in litigation are less likely to have new engagements following the start of the litigation, and that new engagements of litigation offices after litigation are likely to be less risky than the new engagements before litigation.

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1 Introduction

My dissertation research is on the topic of ***auditor-client relationship, audit process and audit quality***. The main purpose of auditing is to provide independent assurance of the credibility of accounting information (DeFond and Zhang 2014). However, auditing sometimes fails to fulfil its role, mostly due to the growing complexity of business transactions and accounting standards. This dissertation consists of 2 chapters. Both chapters examine the consequences of audit failures. Specifically, Chapter 2 examines audit committee's reaction to audit failures; Chapter 3 examines auditor's reaction to audit failures. Chapter 2 examines how the interlocking relationship between audit committee members and the auditor affect the likelihood of auditor dismissal when there is a negative signal of audit quality, and how the dismissal decision affects subsequent audit quality. Chapter 3 is under review at The Accounting Review, coauthored with Chan Li and Nandu Nagarajan. I collected data with the help of the RAs, conducted all the data analyses, wrote the first draft and now am working with the coauthors on the subsequent packaging process. This paper examines how lawsuits against auditors due to client financial reporting problems affect the auditor's client acceptance strategies and audit pricing.

To minimize the dependence of external auditors on their client companies, Section 301 of the Sarbanes Oxley Act (SOX) requires the audit committee, which is composed of fully independent directors, to be responsible for auditor appointment, audit fee approval, monitoring of the auditor's performance and auditor termination. Although the benefits and drawbacks of connections between client managers and external auditors have been the focus of considerable research (e.g., Menon and Williams 2004; Lennox 2005; Geiger et al. 2008), there has been relatively little attention given to whether relationships between audit committee members and

external auditors could affect the auditing process. This is important given that the audit committee is now in charge of the company's relationship with the auditor.

The first part (Chapter 2) of this study examines whether the interlocking relationships between auditors and audit committee members (henceforth "AC-auditor interlocking") affect the likelihood of auditor dismissal when there is an audit failure, i.e. a financial statement restatement, and how an auditor dismissal affects subsequent audit quality for the companies with interlocking. Existing research (Lennox and Yu 2015, Davison et al. 1984) posits that the economic theory of "experience goods" is relevant to the auditor appointment decisions by showing that companies tend to select audit firms with whom directors and executives are better acquainted through their service at other companies. Further, Chen et al. (2014) and Lennox and Yu (2015) find that in the general setting, AC-auditor interlocking positively affects audit quality and investors' perceptions of audit quality at the interlocking companies. I extend this nascent stream of research by examining how interlocking audit committee members respond to a negative signal of audit quality, i.e. a financial statement restatement. I focus on companies with restatements because restatement provides a unique setting in which audit committee members receive a negative signal of audit quality and are expected to update their judgment on the auditor's performance. Following recent studies (e.g. Chen et al. 2014; Lennox and Yu 2015), AC-auditor interlocking occurs when an audit committee member of a company is also a member of an audit committee in other companies and those companies are audited by the same audit firm.

Chapter 2 next investigates whether the reduced likelihood of auditor dismissal after the restatements affects the subsequent audit quality of companies with AC-auditor interlocking. Even if the interlocking audit committee members underreact to the negative signal of audit

quality and do not dismiss the auditor after a restatement, it is not clear whether the reduced likelihood of auditor dismissal will affect subsequent audit quality. On the one hand, if companies switch auditors to search for a better quality auditor, dismissing the incumbent auditor may lead to an improvement in future audit quality (Ettredge et al. 2011). On the other hand, familiarity between audit committee members and auditors may facilitate effective communication between the two parties (Johansen and Pettersson 2013) which could increase effectiveness and efficiency in remediating the existing problems. In this sense, dismissing the incumbent auditor may not improve audit quality for companies with AC-auditor interlocking.

The empirical results of Chapter 2 show that companies are less likely to dismiss their auditors after a restatement announcement if at least one of their audit committee members works on the audit committee of another company that is audited by the same audit firm. Economically, the presence of AC-auditor interlocking reduces the likelihood of auditor dismissal by 41.5%. This evidence suggests that restatements have a significantly weaker effect on the auditor dismissal decisions of companies with AC-auditor interlocking. To provide further support for the argument that companies with AC-auditor interlocking are less likely to dismiss their auditors than companies without AC-auditor interlocking after the restatements are announced because the interlocking audit committee members obtain information about the auditor's quality from other non-restating companies where they serve as the AC members, so they have more knowledge about the incumbent auditor's quality than non-interlocking AC members, cross-sectional analyses show that for companies with AC-auditor interlocking, the likelihood of auditor dismissal after the restatement decreases (1) as the interlocking audit committee member's familiarity with the incumbent auditor's quality increases, and (2) when the audit quality of the non-restatement companies that share the audit committee member and the

auditor with the restatement company is high. These results further support my argument that companies with AC-auditor interlocking are less likely to dismiss their auditors after the restatements occur because the interlocking audit committee members obtain information about the auditor's quality from multiple companies and have a strong prior of the incumbent auditor's quality. Compared with interlocking companies that dismiss their auditors following a restatement, interlocking companies that retain their auditors within 12 months following a restatement announcement have lower subsequent audit quality. Specifically, after controlling for the endogeneity of auditor dismissal, auditor dismissal is associated with lower absolute abnormal accruals and a higher likelihood of going concern opinions in the three years subsequent to the restatement announcement. These findings suggest that not dismissing the auditor following accounting restatements adversely affects the subsequent audit quality of companies with AC-auditor interlocking.

Costly lawsuits have been viewed as an important disciplining mechanism in the United States by deterring firms from negligence and willful wrongdoing. For the auditor, litigation poses a significant business risk, costing audit firms approximately 15% of their revenue (CAQ 2008). Given the magnitude of the costs, and also the uncertainties inherent in the determination and resolution of legal liability, it is reasonable to presume that once auditors know the magnitude of litigation-related losses and rationally update their prior beliefs about their client types and their own audit quality, they will take actions ex-post to both compensate for the costs of litigation and to avoid future litigations. In the second part of this study (Chapter 3), we explore these issues by examining the pricing and client acceptance strategies of audit offices at the audit office level, following litigation related to client misconduct.

Once auditors better understand their client's type by updating their priors following litigation, it seems sequentially rational that they would selectively raise their audit fees for any continuing clients who were actually involved in litigation (henceforth, litigation clients), because they are revealed to be riskier and/or of lower financial reporting quality. However, litigation involving a specific client may not necessarily be informative about the likelihood of litigation for other clients. Therefore, whether auditors, following litigation associated with a client at a particular audit office, would change audit fees for *other* clients of the same audit office who are *not* involved in litigation, or for clients of other offices not involved in litigation is an empirical question. To answer this question, we examine how audit fees change for (1) non-litigation clients at the same office as the auditors' litigation clients, and (2) non-litigation clients at audit offices other than those of the auditors' litigation clients. Henceforth, we refer to audit firms involved in litigation as "litigation auditors" or "litigation firms", audit offices that conduct the audits that resulted in litigation against the audit firm as "litigation offices" and the litigation firms' other offices not involved in litigation as "litigation-firm, non-litigation (LF-NL) offices". We find that audit firms involved in prior litigation charge significantly higher audit fees for the *non-litigation* clients of litigation offices compared to audit firms that do not have prior litigation. On the other hand, we fail to find evidence suggesting that audit firms with prior litigation change fees for clients of their LF-NL offices relative to audit firms without prior litigation. The significant increase in fees for non-litigation clients at the litigation offices suggests that for these clients, the audit firms' increased audit effort and/or reassessed client litigation risk outweigh potential concerns with reputational damage.

To further explore the post-litigation increase in audit fees charged by litigation offices, Chapter 3 also examines the impact of other factors, such as the client's switching costs and

bargaining power on the audit fee structure for non-litigation clients. Specifically, litigation offices may be more likely to increase audit fees for clients with higher switching costs. However, they may find it infeasible to increase audit fees for important clients with more relative bargaining power. Consistent with our expectations, we find that the post-litigation audit fees for the litigation offices' non-litigation clients increase with the clients' switching costs, for which we use the client's financial reporting risk as a proxy, and are mitigated by the clients' bargaining power, which we measure by client importance. Additional analyses suggest that our results for the fee effect are not driven by the relative scarcity of clients with Big 6 auditors in our control sample. We also find that the fees for the non-litigation clients of litigation offices are positively associated with legal liability related settlement amounts, suggesting that the increase in fees may also be associated with auditors' cost recovery objectives.

In addition, Chapter 3 investigates whether litigation has any impact on new client acceptance strategies at both the litigation and LF-NL offices, and explore the characteristics of these new clients. We find that, following litigation, both litigation and LF-NL offices are less likely to obtain new engagements. This result suggests that either potentially new clients shy away from auditors who have recently experienced litigation or that auditors involved in litigation become more selective in recruiting new clients. Compared to new engagements before litigation, the new engagements of litigation offices post-litigation are larger, have lower leverage, and are less likely to receive a going concern opinion. These results suggest that litigation offices may adopt more conservative new client acceptance strategies following litigation relative to the pre-litigation period.

2 Audit Committee-Auditor Interlocking, Auditor Turnover and Audit Quality

2.1 Introduction

To minimize the dependence of external auditors on their client companies, Section 301 of the Sarbanes Oxley Act (SOX) requires the audit committee, which is composed of fully independent directors, to be responsible for auditor appointment, audit fee approval, monitoring of the auditor's performance and auditor termination. Although the benefits and drawbacks of connections between client managers and external auditors have been the focus of considerable research (e.g., Menon and Williams 2004; Lennox 2005; Geiger et al. 2008), there has been relatively little attention given to whether relationships between audit committee members and external auditors could affect the auditing process. This is important given that the audit committee is now in charge of the company's relationship with the auditor.

This study examines whether the interlocking relationships between auditors and audit committee members (henceforth "AC-auditor interlocking") affect the likelihood of auditor dismissal when there is an audit failure, i.e. a financial statement restatement, and how an auditor dismissal affects subsequent audit quality for the companies with AC-auditor interlocking. Existing research (Lennox and Yu 2015, Davison et al. 1984) posits that the economic theory of "experience goods"[1] is relevant to the auditor appointment decisions by showing that companies tend to select audit firms with whom directors and executives are better acquainted through their service at other companies. Further, Chen et al. (2014) and Lennox and Yu (2015) find that in the general setting, AC-auditor interlocking positively affects audit quality and investors' perceptions of audit quality at the interlocking companies. I extend this nascent stream of research by examining how interlocking audit committee members respond to a negative signal

[1] "Experience goods" theory posits that customers face uncertainty when they switch suppliers and this uncertainty is lessened when customers know more about alternative suppliers (Shapiro 1983).

of audit quality, i.e. a financial statement restatement. I focus on companies with restatements because restatement provides a unique setting in which audit committee members receive a negative signal of audit quality and are expected to update their judgment on the auditor's performance.[2] Following recent studies (e.g. Chen et al. 2014; Lennox and Yu 2015), AC-auditor interlocking occurs when an audit committee member of a company is also a member of an audit committee in other companies and those companies are audited by the same audit firm.

Previous literature provides empirical evidence that companies are likely to dismiss auditors following financial restatements either because they are displeased by the auditors' failure in identifying the accounting problems or to signal the companies' intent to improve their financial reporting quality (Hennes et al. 2013, Wallace 2005, Thompson and McCoy 2008, Srinivasan 2005). However, AC-auditor interlocking could also affect the auditor dismissal decisions. Compared with audit committee members at companies without AC-auditor interlocking, those at AC-auditor interlocking companies could obtain knowledge of the incumbent auditor's quality from multiple companies. Both Chen et al. (2014) and Lennox and Yu (2015) provide evidence that audit quality is better for companies with AC-auditor interlocking. This evidence suggests that, compared with non-interlocking audit committee members, interlocking audit committee members may have a stronger prior that the incumbent auditor's quality is generally good. Thus, after a restatement occurs, the interlocking audit committee members may react less strongly to the restatement as a negative signal of audit quality. As a result, the probability of auditor dismissal after a restatement may be reduced for companies with AC-auditor interlocking.

Using a sample of financial statement restatement announcements in the post-SOX

[2] Restatements are generally viewed as an audit failure because the auditor's duty is to determine whether financial reports are accurately presented in accordance with GAAP (Hennes et al. 2013, DeFond and Zhang 2012).

period (from 2003 to 2010)[3], I investigate whether AC-auditor interlocking affects the likelihood of auditor dismissals subsequent to the restatements. I find that companies are less likely to dismiss their auditors after a restatement announcement if at least one of their audit committee members works on the audit committee of another company that is audited by the same audit firm. Economically, the presence of AC-auditor interlocking reduces the likelihood of auditor dismissal by 41.5%. This evidence suggests that restatements have a significantly weaker effect on the auditor dismissal decisions of companies with AC-auditor interlocking. I argue that because interlocking AC members obtain information about the auditor's quality from other non-restating companies where they serve as the AC members, they have more knowledge about the incumbent auditor's quality than non-interlocking AC members. Thus, companies with AC-auditor interlocking are less likely to dismiss their auditors than companies without AC-auditor interlocking after the restatement announcements, To provide further support to my arguments, I conduct several cross-sectional analyses that specifically examine the familiarity of interlocking AC members with the auditor, and the audit quality of non-restatement companies that interlocking AC members also serve as the AC. The results show that for companies with AC-auditor interlocking, the likelihood of auditor dismissal after the restatement decreases as the interlocking audit committee member's familiarity with the incumbent auditor's quality increases. The familiarity is proxied by the number of non-interlocking companies that are interlocked and whether the interlocking AC members work with the same audit office at all the companies. The dismissal likelihood also decreases when the audit quality, which is proxied by abnormal accruals of the non-restatement companies that the interlocking AC members also serve as the

[3] My sample of restatements starts from 2003 because the audit committee is responsible for the appointment and replacement of auditors after SOX. The sample stops in 2010 because the test of audit quality requires three years of observations subsequent to each restatement announcement.

AC is high[4]. These results further support my argument that companies with AC-auditor interlocking are less likely to dismiss their auditors after the restatements occur because the interlocking audit committee members obtain information about the auditor's quality from multiple companies and have a strong prior of the incumbent auditor's quality.

I next investigate whether the reduced likelihood of auditor dismissal after the restatements affects the subsequent audit quality of companies with AC-auditor interlocking. Even if the interlocking audit committee members underreact to the negative signal of audit quality and do not dismiss the auditor after a restatement, it is not clear whether the reduced likelihood of auditor dismissal will affect subsequent audit quality. On the one hand, if companies switch auditors to search for a better quality auditor, dismissing the incumbent auditor may lead to an improvement in future audit quality (Ettredge et al. 2011). On the other hand, familiarity between audit committee members and auditors may facilitate effective communication between the two parties (Johansen and Pettersson 2013) which could increase effectiveness and efficiency in remediating the existing problems. In this sense, dismissing the incumbent auditor may not improve audit quality for companies with AC-auditor interlocking.

Using a difference-in-difference research design and focusing on restatement companies with AC-auditor interlocking, I find that, compared with interlocking companies that dismiss their auditors following a restatement, interlocking companies that retain their auditors within 12 months following a restatement announcement have lower subsequent audit quality. Specifically, after controlling for the endogeneity of auditor dismissal, auditor dismissal is

[4] I measure the audit committee member's experience with the incumbent auditor by (1) the number of non-restatement companies that share the audit committee member and the auditor with the restatement company, and (2) whether the interlocking audit committee member works with the same audit office. The audit quality of the non-restatement companies that share the audit committee member and the auditor with the restatement company is measured by the average absolute abnormal accruals of these companies in the current fiscal year.

associated with lower absolute abnormal accruals and a higher likelihood of going concern opinions in the three years subsequent to the restatement announcement.[5] These findings suggest that not dismissing the auditor following accounting restatements adversely affects the subsequent audit quality of companies with AC-auditor interlocking.

This study contributes to the literature in several ways. First, this study adds to the research on the relationship between the audit committee and the external auditor. The relationship between audit committee members and auditors is important because the audit committee is responsible for the appointment, compensation, oversight and termination of the external auditor. Only two papers of which I am aware examine the effect of AC-auditor interlocking on audit quality. Chen et al. (2014) analyze how investors perceive reported earnings when companies have AC-auditor interlocking. They find that the presence of AC-auditor interlocking is positively associated with investor perceptions of earnings quality in terms of earnings response coefficients (ERCs). Lennox and Yu (2015) find that companies tend to select audit firms with whom directors and executives are better acquainted through their service at other companies, potentially leading to AC-auditor interlocking if the directors are also the audit committee members. They also find evidence that audit quality is better when companies select the acquainted auditors. While these two papers focus on the general effect of director-auditor interlocking and find a positive effect on companies' financial reporting quality[6], I examine whether the interlocking relationship between audit committee members and auditors plays a role in the auditor dismissal decision when a company experiences an audit failure, i.e. a

[5] While the analysis of abnormal accruals focuses on all the AC-auditor interlocking companies in my sample, the analysis of going concern is conducted using the subsample of financially distressed companies.

[6] I also examine the effect of AC-auditor interlocking on audit quality in the general setting with a sample of firm-year observations from 2000 to 2013. I find that AC-auditor interlocking is associated with a lower likelihood of misstatement, a lower absolute value of abnormal accrual and a marginally higher likelihood of going concern opinions. These results are consistent with the conclusions in Chen et al. (2014) and Lennox and Yu (2015) that AC-auditor interlocking positively affects audit quality in the general setting.

financial statements restatement. Previous literature shows that companies are likely to take actions to remediate problems when they experience a material negative event such as an internal control material weakness or a financial restatement. These actions include changing corporate governance mechanisms (Johnstone et al. 2011, Srinivasan 2005) and switching auditors (Ettredge et al. 2011, Hennes et al. 2013). This study shows that auditor dismissals following financial restatements are less likely to happen in the presence of AC-auditor interlocking. This evidence raises concerns about the audit committee's role in auditor termination when audit quality is relatively low.

Second, this study finds that companies with AC-auditor interlocking actually benefit from auditor dismissals after the restatements. Although AC-auditor interlocking may positively affect audit quality by facilitating effective communication between the audit committee and the auditor in a general setting (Chen et al. 2014), this paper shows that, when audit quality is at stake, such interlocking may eventually impair future audit quality when it leads to a failure to replace the incumbent auditors.

Third, the evidence from this study has indications for the SEC's new concept release on increasing the audit committee reporting requirements with specific focus on the audit committee's oversight of the independent auditor[7]. Current audit committee disclosure requirements (e.g., that the committee has discussed certain required communications with the auditor and has received written communications relating to the auditor's independence) provide some information about the audit committee's role in overseeing the external auditor without providing insight into how the audit committee executes its responsibilities. The results on auditor dismissal and subsequent audit quality lend support for the proposal of more disclosures on the audit committee's process for appointing and retaining the auditor.

[7] The release is available at *http://www.sec.gov/rules/concept/2015/33-9862.pdf*

Finally, regulators have concerns that the largest audit firms have strong connections with corporate insiders and that these connections make it harder for less well connected audit firms to compete for new engagements (Competition Commission 2013). This study shows that the well-connected auditors are less likely to be dismissed even when there is a negative signal of the auditor's quality. Thus, it gives credence to these concerns by showing evidence of fewer opportunities for less well connected audit firms to compete for new audit engagements.

2.2 Literature review and hypotheses

The hypotheses draw on two streams of literature, auditor turnover following financial restatements and the effect of AC-auditor interlocking on general audit quality, which are discussed below.

2.2.1 Financial restatements and auditor turnover

When a restatement occurs, the company is likely to dismiss the incumbent auditor for several reasons. If the client believes that the restatement is caused by the auditor's failure in timely identifying the accounting problem, the audit committee might consider dismissing the auditor over this performance failure as part of an effort to remediate the existing problems. Ettredge et al. (2011) find that companies receiving adverse internal control over financial reporting (ICFR) opinions are more likely to subsequently dismiss their auditors than are companies reporting effective internal controls. They further find that following dismissals, adverse opinion companies are more likely to hire better-quality auditors (i.e., Big 4 or industry specialist auditors), indicating that dismissals following adverse ICFR opinions are likely to be associated with attempts to remediate the existing problems and to improve their overall financial reporting quality. Similarly, after experiencing a financial restatement, companies have

incentives to improve audit quality and avoid future restatements by replacing the incumbent auditor.

Alternatively, companies might dismiss auditors simply to *signal* an attempt to improve the financial reporting quality (Hennes et al. 2013). Previous literature has shown that restatements have a material adverse effect on the credibility of the company's financial reporting quality. For example, Palmrose et al. (2004) report a negative market reaction to restatement announcements over a two-day window. Wu (2002) finds that ERCs decline following restatements. Hribar and Jenkins (2004) show that companies' cost of capital increases following a restatement announcement. In order to restore investors' confidence toward their financial reporting quality and to signal an improvement in their financial reporting credibility to the capital market, the audit committee is likely to dismiss the incumbent auditor after a restatement.

Consistent with the two arguments above, a number of empirical studies investigating the association between restatements and auditor turnover generally find higher auditor turnover rate following restatement announcements. For example, Wallace (2005) and Thompson and McCoy (2008) observe high auditor turnover around restatements (but do not report statistical tests); Srinivasan (2005) provides univariate evidence that the auditor turnover rate is significantly higher for restatement companies than for non-restatement companies. Focusing on the misstated SEC filings between 1997 and 2010, Hennes et al. (2013) examine the conditions under which financial restatements lead to auditor dismissals and find that auditors are more likely to be dismissed after more severe restatements.

2.2.2 AC-auditor interlocking and audit quality in the general setting

SOX significantly increases audit committees' responsibilities for selecting and monitoring external auditors. Under Section 301, each audit committee of a listed company is to be "directly responsible for the appointment, compensation, oversight and termination" of the external auditor, and the auditors are to report directly to the audit committee. Because audit committees oversee auditor's performance and mediate the disagreements between auditors and managers, they play an essential role in ensuring high quality audits. Extensive prior studies have documented that high quality audit committees, in terms of independence from management and financial expertise, are associated with high quality audits, measured by restatements, earnings management, auditor going concern opinions, etc. (e.g. Krishnan 2005, Carcello and Neal 2000, Abbott et al. 2000). Realizing the importance of the audit committee, the new Exchange Act Rule 10A-3 requires that audit committees of public companies are composed of fully independent directors.[8]

Although prior studies generally focus on the independence between audit committees and managers, audit committee members and auditors could also be connected through the interlocking relationship when an audit committee member of a company is also a member of an audit committee in other companies and those companies are audited by the same audit firm. The AC-auditor interlocking may adversely affect a company's audit quality by impairing the independence of the audit committee from the auditors. For example, the familiarity between the audit committee members and the external auditor could lead the audit committee to lose their objectivity and become less critical of the auditor's performance (Chen et al. 2014). Because the audited financial statements are also subject to the scrutiny and approval of the audit committee

[8]Under the new Exchange Act Rule 10A-3, in order to be considered to be independent, an audit committee member may not "(i) accept any consulting, advisory, or other compensatory fee from the issuer; or (ii) be an affiliated person of the issuer or any subsidiary thereof."

prior to their public release (Carcello and Neal 2000), this potential for weaker oversight might lead to greater opportunities for earnings management.

On the other hand, AC-auditor interlocking may have a positive impact on the audit quality. Familiarity arisen from interlocking may positively affect audit quality in two ways. First, prior literature suggests that the audit committee plays a mediating role in resolving disagreements between auditors and client management (DeZoort and Salterio 2001). Greater familiarity could breeds trust which may lead the audit committee to support the auditor when a dispute between the auditor and the management occurs (DeZoort et al. 2003). This would enhance external auditors' function of assuring the integrity of financial reports by reducing the scope for managers to engage in opportunistic earnings management and thereby increasing audit quality (Chen et al. 2014). Second, greater familiarity between audit committee members and auditors could facilitate more effective communication which increases audit committee members' understanding of the auditor's policies and procedures (Johansen and Pettersson 2013). This would help audit committee members focus on areas that are potentially not adequately examined by the auditors, thereby overseeing the financial reporting and audit process more effectively and more efficiently. Consistent with these arguments, Chen et al. (2014) analyze how investors perceive reported earnings when companies have AC-auditor interlocking and find that the extent of AC-auditor interlocking is significantly and positively associated with ERCs, indicating that investors perceive that AC-auditor interlocking improves audit quality. Lennox and Yu (2015) also find some weak evidence that audit quality is higher when companies select audit firms with whom directors and executives are better acquainted.

2.2.3 AC-auditor interlocking and auditor dismissal

As discussed earlier, the audit committee is responsible for hiring and terminating the external auditor and approving all audit engagement terms and fees. Given the important roles played by the audit committee in the process of hiring and dismissing auditors, the relationship between interlocking audit committee members and auditors could impact the likelihood of auditor dismissal after an audit failure.

Familiarity between audit committee members and auditors has been shown to affect decisions of auditor appointment. Davison et al. (1984) and Lennox and Yu (2015) study samples of companies in Australia and United States, respectively. Both papers find that companies tend to select audit firms with whom directors and executives are better acquainted through their service at other companies. These papers reveal a tendency for companies to be audited by the same auditor when they have mutual audit committee members. Interlocking audit committee members are likely to have more information on the incumbent auditor's quality because they have experience with the same auditor in multiple companies (Lennox and Yu 2015). Moreover, Chen et al. (2014) and Lennox and Yu (2015) show that AC-auditor interlocking is associated with better audit quality. In other words, interlocking audit committee members have, on average, have more knowledge about the quality of the auditor. Thus, a negative signal of audit quality may have a weaker effect on interlocking audit committee members than on other audit committee members when they are updating their views of the auditor's quality. As a result, the likelihood of auditor dismissal following a restatement is reduced for companies with AC-auditor interlocking.

In summary, companies are likely to dismiss incumbent auditors following financial restatements as part of an effort to improve or to signal an improvement of the company's

financial reporting quality. However, familiarity between audit committee members and auditors might reduce the effect of restatements on interlocking audit committee members' judgments about the auditor's quality, thereby reducing the likelihood of auditor dismissal for companies with AC-auditor interlocking after a restatement. My first hypothesis is stated in the alternative format as follows:

H1: *The likelihood of dismissing an incumbent auditor after a financial restatement announcement is reduced for companies with audit committee-auditor interlocking.*

2.2.4 Audit quality following auditor dismissals for companies with AC-auditor interlocking

Audit quality is likely to increase with auditor dismissals after financial restatements. First, dismissing a low-quality auditor reflects the company's effort to improve the audit quality. Johnson and Lys (1990) argue that an auditor dismissal conveys positive news about a company because it is a signal that the board is acting in the shareholders' best interest. Second, a replacement auditor brings a fresh perspective to the audit and is therefore more likely to detect financial reporting problems. This fresh eye benefit is likely to increase the audit quality. Consistent with these arguments, Ettredge et al. (2011) provide evidence that companies receiving adverse internal control opinions and subsequently hiring better-quality auditors are more likely to experience a remediation of the internal control material weakness, suggesting that auditor dismissals are helpful in remediating the existing problems in the financial reporting process. Hennes et al. (2013) document a positive market reaction to auditor dismissal following a financial restatement. They also find that market reaction to a dismissal is positively associated with the severity of the restatement. This positive market reaction provides evidence that replacing the auditor is effective in restoring financial reporting credibility, indicating that auditor dismissals following restatements help improve firms' overall financial reporting quality from the investors' point of view.

As discussed earlier, one of the advantages of AC-auditor interlocking is the trust and familiarity between the audit committee members and the auditor. This familiarity could facilitate effective communication between the two parties (Johansen and Pettersson 2013). For restatement companies, remediating the weaknesses and improving the audit quality is an especially complicated process that may need more collaboration between the audit committee and the auditor. Effective communication could facilitate better collaboration. For example, it could help audit committee members and the audit team to quickly identify the problems and reach an agreement on the solutions. By focusing on the risky areas rather than spreading the resources broadly, the audit committee and the auditor would be more efficient and more effective at improving the financial reporting quality. In this sense, dismissing the incumbent auditor may not help improve audit quality for companies with AC-auditor interlocking.

To sum up, following a financial restatement, compared with companies that retain the incumbent auditors, companies that dismiss auditors are more likely to improve their financial reporting quality in the general setting. When there is an AC-auditor interlocking, however, dismissing the incumbent auditor may not result in an improvement in the audit quality due to elimination of the potential benefits associated with interlocking. As such, it is unclear how auditor dismissals following restatements affect subsequent audit quality for companies with AC-auditor interlocking. My second hypothesis is stated in an alternative form as follows:

H2: *For companies with audit committee-auditor interlocking, those retaining the incumbent auditors after restatement announcements are likely to have lower subsequent audit quality than those dismissing the incumbent auditors.*

2.3 Sample, Models, and Variable Definitions

2.3.1 Sample and Data

I obtain data from Audit Analytics, Compustat and BoardEx. The sample begins with 9,005 restatements that were announced between January 2003 and December 2010. I drop 4,617 observations with insufficient Compustat data. I further exclud 547 restatements that are a result of a change in GAAP.[9] Following Hennes et al. (2013), to avoid firm-level effects across observations, I delete the multiple restatements of the same company in the sample period. This process results in the elimination of 796 restatement announcements.[10] The audit committee member information is collected from BoardEx. After merging the remaining restatements with BoardEx and excluding companies that are not covered by BoardEx, my final restatement sample consists of 1,593 observations.

My auditor dismissal window for each company begins with the announcement of the restatement and continues until 12 months after the restatement announcement date. To identify auditor changes for the restatement sample, I begin with all auditor turnovers listed for the sample companies in the Audit Analytics audit change dataset. I delete auditor turnovers that are caused by auditor resignations. I use the "Depart Date" to identify companies that dismiss auditors during my dismissal window and obtain 232 auditor dismissals in the restatement sample.

To analyze the effect of auditor turnover on the subsequent audit quality of the restated companies with AC-auditor interlocking, I start with 446 companies with AC-auditor interlocking in my restatement sample. To mitigate the effect of any unobservable factors, I

[9] I delete restatements due to change in standards regarding materiality (SAB No.108), leases (the SEC's 2005 letter to the AICPA) and the reclassification of some tax accounts (FIN 48).
[10] The results remain qualitatively the same if I retain the multiple restatements.

employ a difference-in-difference design. Specifically, I obtain the audit quality and the financial data of these companies for the three years before the restatement announcement and three years after the restatement announcement from Audit Analytics and Compustat. After eliminating the observations missing the necessary variables to construct the model, there are 2,370 firm-year observations in the sample for the abnormal accrual analysis. To examine the likelihood of receiving a going concern opinion for companies with AC-auditor interlocking, I further restrict the sample to observations with negative net incomes and/or negative net operating cash flows (DeFond et al. 2002), and obtain a subsample of 1,183 firm-year observations. Table 1 summarizes the sample selection process.

---------- Table 1 ----------

2.3.2 The model for auditor dismissal

The model to test the association between auditor dismissal and AC-auditor interlocking draws on Ettredge et al. (2011) and Hennes et al. (2013) to identify variables that influence auditor dismissal. I specify my logistic auditor dismissal model as follows:

$$DISMISS = \alpha_0 + \alpha_1 INTERLOCK + \beta_1 LOSS + \beta_2 GC + \beta_3 LEVERAGE + \beta_4 SIZE + \beta_5 MB + \beta_6 EMPLOYMENT + \beta_7 BOARDSIZE + \beta_8 ACSIZE + \beta_9 MGRCHG + \beta_{10} BIG4 + \beta_{11} AUDTENURE + \beta_{12} AUDFEE + \varepsilon \quad (1)$$

For H1, *DISMISS* equals one if a company dismisses its auditor within 12 months after the restatement is announced, and zero otherwise. The variable of interest, *INTERLOCK*, equals one if a company has AC-auditor interlocking when the restatement is announced, and zero otherwise.

There are three sets of control variables in the model. Based on prior literature, there is an increased likelihood of auditor turnover for companies in financial distress (e.g. Schwartz and Menon 1985, Hennes et al. 2013), so I construct controls for companies' financial conditions

including if the company has a negative net income (*LOSS*), debt to total assets (*LEVERAGE*), and if the company receives a going concern opinion (*GC*). I also control for companies' size proxied by the natural logarithm of total assets (*SIZE*) and growth opportunities in terms of market to book ratio (*MB*).

Prior literature (e.g. Carcello and Neal 2003) also shows that the characteristics of a company's governance affect the likelihood of auditor turnover. Thus, I also include corporate governance variables in the model. *EMPLOYMENT* is an indicator variable if at least one of the audit committee members is a former employee of the auditor firm. *BOARDSIZE* is the number of directors on the board of directors and *ACSIZE* is the number of audit committee members. Apart from dismissing the incumbent auditor, a material negative event such as a restatement also provides an impetus for a company to change its executives responsible for financial reporting (Johnstone et al. 2011). Hennes et al. (2013) find some evidence that CEO/CFO turnover is significantly associated with auditor dismissals because the board may terminate both auditor and CEO if they are weighing both termination decisions together. Thus, I include *MGRCHG* which is equal to 1 if the CEO and (or) CFO turned over in the two-year window around the restatement announcement, and 0 otherwise.

The third set of control variables reflect the auditor and engagement characteristics including number of years for which the auditor has been engaged with the company (*AUDTENURE*) and the audit fees charged by the auditor (*AUDFEE*). Companies audited by Big 4 auditors are less likely to switch auditors because of their demand for high-quality auditing services (Palmrose 1986, Healy and Lys 1986) and the limited availability of an equivalent replacement auditor (Hennes et al. 2013). Thus, I include *BIG4* which is equal to 1 if a company

has a Big 4 auditor, and 0 otherwise. Following Hennes et al (2013), I include year fixed effects to control for the potential impact of time on the consequence of restatements.

2.3.3 The models for audit quality subsequent to restatement announcement

I use two measures to proxy for subsequent audit quality: (1) absolute abnormal accruals and (2) issuance of going concern opinions[11]. I employ a difference-in-difference research design and estimate the following OLS regression model to test the hypothesis that there is a greater reduction in abnormal accruals for interlocking companies that dismiss auditors compared to companies that retain auditors subsequent to the restatement announcements:

$$\begin{aligned} ABACCRUAL = {} & \alpha_0 + \alpha_1 DISMISS + \alpha_2 POSTRES + \alpha_3 DISMISS * POSTRES \\ & + \beta_1 SIZE + \beta_2 LOSS + \beta_3 CFO + \beta_4 LEVERAGE + \beta_5 MB + \beta_6 RESTRUCT \\ & + \beta_7 MA + \beta_8 SI + \beta_9 SEGNUM + \beta_{10} BIG4 + \beta_{11} FINANCING + \varepsilon \end{aligned} \quad (2)$$

where the dependent variable, *ABACCRUAL*, is the absolute abnormal accruals calculated based on the Modified Jones model (Dechow et al. 1995). Specifically, I define total discretionary accruals (ACC) to be the residuals of the following regression:

$$\frac{ACC_{i,t}}{AvgAT_{i,t,t-1}} = \beta_0 \left(\frac{1}{AvgAT_{i,t,t-1}} \right) + \beta_1 \left(\frac{\Delta REV_{i,t,t-1} - \Delta REC_{i,t,t-1}}{AvgAT_{i,t,t-1}} \right) + \beta_2 \left(\frac{PPE_{i,t}}{AvgAT_{i,t,t-1}} \right) + \beta_3 \left(\frac{ROA_{i,t}}{AvgAT_{i,t,t-1}} \right) + e_{i,t}$$

where $AvgAT$, ΔREV, ΔREC, PPE, and ROA represent average total assets, change in revenue, change in receivables, property, plant and equipment, and return on assets, respectively. The absolute value of abnormal accruals (*ABACCRUAL*) is obtained by taking the absolute value of the fitted residuals.

[11] DeFond and Zhang (2014) classify the output-based audit quality measures into four categories – material misstatements, auditor communication, financial reporting quality, and perceptions. They also suggests the use of measures from different categories. I do not use restatements as a measure of subsequent audit quality because a company is unlikely to have multiple restatements in a three year window. Only 38 companies (2.39%) in my sample have restatements within three years after the first restatement occurs.

DISMISS is an indicator variable that equals 1 if a company dismisses the incumbent auditor within 12 months after the restatement is announced, and 0 otherwise. *POSTRES* is an indicator variable that is equal to 1 if the firm-year observation belongs to the post-restatement period which is the first three years after the restatement announcement, and 0 otherwise. My test variable is the interaction between *DISMISS* and *POSTRES*. If the coefficient on *DISMISS*POSTRES* is significantly negative, it suggests that the reduction in abnormal accruals is significantly greater for companies that dismissed their auditors than for companies that retained their auditors from the pre-restatement period to the post-restatement period.

Following existing literature, I include the natural logarithm of total assets (*SIZE*) as a control variable. Because larger firms have economies of scale and have superior resources to dedicate to financial reporting, they are less likely to have low audit quality (Ashbaugh-Skaife et al. 2007; Dechow et al. 2011). Prior research generally finds that financial reporting errors are negatively associated with financial performance and positively associated with growth (DeFond and Jiambalvo 1991). I proxy for a firm's financial health using *LOSS* (whether a company has negative net income in the fiscal year), *CFO* (the net operating cash flows scaled by total assets) and *LEVERAGE* (long-term debt scaled by total assets). I use *MB* (market to book ratio) to proxy for growth.

I expect firms undergoing restructuring to have more abnormal accruals because restructuring involves many difficult accrual estimations and adjustments such as impairment and goodwill (Dechow and Ge 2006). I use indicator variables for restructuring charges (*RESTRUCT*) and mergers and acquisitions (*MA*).

I expect abnormal accruals to be positively associated with the complexity of a company since reporting errors are more likely to occur when the company engages in complex

transactions and has diverse operations. As in prior research (Ashbaugh-Skaife et al. 2007; Doyle et al. 2007), I use two variables to proxy for complexity: presence of special items (*SI*) and the natural logarithm of the number of segments (*SEGNUM*). Prior research shows that companies with a large auditor have higher quality financial reporting (Ashbaugh-Skaife et al. 2007; Doyle et al. 2007). I use Big 4 auditors (*BIG4*) to proxy for the audit firm size. Finally, I include *FINANCING* as an indicator variable to control for whether the company issues new equity or debt of at least $5 million in the following year because new financing activities are likely to create incentives for earnings management.

Following prior literature (e.g. DeFond et al. 2002), I estimate the following logistic regression model to test the hypothesis that there is a greater increase in the likelihood of receiving going concern opinions for interlocking companies that dismiss auditors compared to those that retain auditors subsequent to the restatement announcements:

$$\begin{aligned} GC \;=\; & \alpha_0 + \alpha_1 DISMISS + \alpha_2 POSTRES + \alpha_3 DISMISS * POSTRES \\ & + \beta_1 SIZE + \beta_2 AGE + \beta_3 ROA + \beta_4 CFO + \beta_5 MB + \beta_6 SALEGROWTH \\ & + \beta_7 FINANCING + \beta_8 LEVERAGE + \beta_9 REPLAG + \beta_{10} BIG4 + \varepsilon \end{aligned} \tag{3}$$

where the dependent variable, *GC*, is an indicator variable that is equal to 1 if a company receives a going concern opinion in the fiscal year, and 0 otherwise. The variable of interest is the interaction between *DISMISS* and *POSTRES*. If the coefficient on *DISMISS*POSTRES* is significantly positive, it suggests that the increase in the likelihood of receiving a going concern opinion is significantly greater for companies that dismissed their auditors than for companies that retained their auditors from the pre-restatement period to the post-restatement period.

Prior literature finds that larger and older companies have more negotiating power in the event of financial difficulties and hence are more likely to avoid bankruptcy (Reynolds and Francis 2000, Dopuch et al. 1987), so I include *SIZE* (natural logarithm of total assets) and *AGE*

(the natural logarithm of years a company has been publicly traded) in the model and expect them to be negatively associated with *GC*. Companies with high profitability (*ROA*), high operating cash flows (*CFO*), more growth opportunities (*MB* and *SALEGROWTH*) and new financing (*FINANCING*) are less likely to declare bankruptcy and thus are less likely to receive a going concern opinion. Companies with high leverage (*LEVERAGE*) may be close to debt covenant violations (Beneish and Press 1993) which have been found to be positively associated with the probability of issuing a going concern opinion (DeFond et al. 2002). In addition, I include *REPLAG* (number of days between the fiscal year-end and the audit report date) because prior research finds that going concern opinions are associated with longer reporting delays (Raghunandan and Rama 1995, Carcello et al.1995). *BIG4* is included because prior research argues that big auditors are more likely to issue going concern audit opinions (DeFond et al. 2002). Table 2 provides the summary of variable definitions.

---------- Table 2 ----------

2.4 Empirical Results

2.4.1 The effect of AC-auditor interlocking on auditor dismissals

Table 3 provides univariate statistics of the comparison of mean and median values of the variables used in model (1) for companies with AC-Auditor interlocking and companies without AC-auditor interlocking. The results show that, for companies with AC-Auditor interlocking, the auditor dismissal rate is 10.8%, which is significantly lower than the dismissal rate for companies without AC-Auditor interlocking (16%) in the 12 months following the restatement announcement ($t=2.67$, p value <0.01). This univariate evidence is consistent with my first hypothesis. Comparing with companies without AC-auditor interlocking, companies

with AC-auditor interlocking are larger, more profitable, and are less likely to receive going concern opinions. They also have larger boards of directors and larger audit committees. With regard to the auditor-client relationships, companies with AC-auditor interlocking are more likely to have a Big 4 auditor, and their auditors have longer tenure. These univariate analyses indicate that companies with AC-Auditor interlocking are systematically different from their counterparts, which is similar to the results in Chen et al. (2014), and it is important to control for these variables in the regression model.

---------- Table 3 ----------

Table 4 presents the regression result for the auditor dismissal model. Consistent with the univariate result, *INTERLOCK* is negative and significant (Coefficient=-0.344, p value== 0.032), indicating that companies with AC-auditor interlocking are less likely to dismiss their auditors than companies without AC-auditor interlocking after the restatements occur. This result provides support for the first hypothesis. Economically, after controlling for the other determinants of auditor dismissal, the likelihood of auditor dismissal is reduced by 41.5% if the company has AC-auditor interlocking.

The results for the control variables are consistent with prior studies (Ettredge et al. 2011, Hennes et al. 2013). As expected, I find that companies that receive going concern (*GC*) opinions are more likely to dismiss auditors. *MGRCHG* is positive and significant, indicating that CEO/CFO turnover is significantly associated with auditor dismissals. This is consistent with Hennes et al. (2013) which suggests that boards view executive termination and auditor dismissals as complementary (rather than substitute) responses to restatements. I also find that Big 4 audit firms (*BIG4*) and auditors with longer tenures (*TENURE*) are less likely to be

dismissed. Moreover, companies that pay higher audit fees (*AUDFEE*) are more likely to dismiss their auditors.

---------- Table 4 ----------

2.4.2 Cross-sectional analyses

My primary analysis suggests that companies with AC-auditor interlocking are less likely to dismiss their auditors than companies without AC-auditor interlocking after the restatements are announced because the interlocking audit committee members obtain information about the auditor's quality from other non-restating companies where they serve as the AC members, so they have more knowledge about the incumbent auditor's quality than non-interlocking AC members. To provide further support for this argument, I examine (1) whether the extent to which the interlocking audit committee member is familiar with the incumbent auditor's quality affects the likelihood of auditor dismissal, and (2) whether the audit quality of the non-restatement companies that share the audit committee member and the auditor with the restatement company affects the likelihood of auditor dismissal for companies with AC-auditor interlocking.

I use two measures to capture the interlocking audit committee's familiarity with the incumbent auditor. First, for each company with AC-auditor interlocking, I identify the number of non-restatement companies that share the AC member(s) and the incumbent auditor with the restatement company (*NUM_INTERLOCK*). The more companies in which an audit committee member works with the same auditor, the more sources through which the audit committee member can obtain the information regarding the incumbent auditor's quality. Thus, the interlocking audit committee member's familiarity with the incumbent auditor's quality increases as *NUM_INTERLOCK* increases. Second, the interlocking audit committee member's familiarity

with the incumbent auditor's quality is also increased if the audit committee member is working with the same audit office in multiple companies. Previous literature documents that auditor's expertise and audit quality could also vary by audit office (Ferguson et al. 2003; Francis and Michas 2013). Comparing with the interlocking audit committee members who work with different offices of the audit firm, those who work with the same audit offices in multiple companies could have more knowledge of the specific audit office. Moreover, besides obtaining information about the quality of the audit office, the interlocking audit committee members could also form personal relationship with the individual auditors in the office. Personal relationship "disposes one to interpret favorably another's intentions and actions" (Uzzi 1996). Thus, the likelihood of dismissing an incumbent auditor will be further reduced for companies with AC-auditor interlocking formed at the audit office level.

Focusing on the subsample of companies with AC-auditor interlocking and replacing the indicator variable, *INTERLOCK*, with *NUM_INTERLOCK*, I run the regression with Model (1). Table 5 Panel A presents the results. *NUM_INTERLOCK* is negative and significant (coefficient=-0.481, p value=0.042), indicating that the likelihood of dismissing the incumbent auditor is negatively associated with the number of non-restatement companies that share the same audit committee member and the same incumbent auditor with the restatement company. *OFFICE* is negative and significant (coefficient=-0.119, p value=0.092), indicating that the likelihood of dismissing the incumbent auditor is negatively associated with the existence of the interlocking at the audit-office level. These results are consistent with my expectation that for companies with AC-auditor interlocking, the likelihood of auditor dismissal decreases as the interlocking audit committee member's familiarity with the incumbent auditor's quality increases.

If the interlocking audit committee members obtain information about the auditor's quality from multiple companies and have a strong prior of the incumbent auditor's quality, the likelihood of auditor dismissal for the AC-auditor interlocking company will decrease as the audit quality of the non-restatement companies that share the audit committee member and the auditor with the restatement company increases. As shown in Table 5 Panel B, *AVG_ABACCRUAL*, the average absolute abnormal accrual of these non-restatement companies in the current year, is positive and significant (coefficient=0.700, p value=0.071), indicating that the likelihood of dismissing the incumbent auditor is negatively associated with the auditor's performance in other companies.

---------- Table 5 ----------

2.4.3 Subsequent audit quality --- abnormal accruals

For the test of H2, Table 6 Panel A presents the regression results for abnormal accruals. The interaction term, *DISMISS*POSTRES* is negative and significant (coefficient=-0.017, p value=0.036), indicating that for AC-auditor interlocking companies, those that dismiss auditors have a larger reduction in abnormal accruals from pre-restatement period to post-restatement period compared to those that retain auditors. For the control variables, consistent with prior research (e.g. Dechow et al. 2011, Butler et al. 2004), larger companies and companies with Big 4 auditors have lower abnormal accruals. I also find that abnormal accruals are higher for companies with higher leverage (*LEVERAGE*), companies with future financing activities (*FINANCING*) and companies with more special items (*SI*).

2.4.4 Subsequent audit quality --- going concern opinions

Table 6 Panel B presents the logistic regression results of the likelihood of issuing going concern opinions for AC-auditor interlocking companies that have restatement

announcements. The interaction term, *DISMISS*POSTRES* is positive and significant (coefficient=0.547, p value =0.075), indicating that compared to companies that retain auditors, companies that dismiss auditors have a bigger increase in the likelihood of receiving going concern opinions in the post-restatement period. This result suggests for AC-auditor interlocking companies, the new auditors are more likely to issue going concern opinions than the prior auditors after the restatement. Following Ai and Norton (2003) and Evans et al. (2010), I plot z-statistics of the interaction effect, i.e., *DISMISS*POSTRES*, in the model. The distributions show that the z-statistics are reliably negative across all sample observations, mitigating the concerns regarding the marginal interaction effect of nonlinear regression models (Ai and Norton 2003).

The results for the control variables are consistent with prior studies (e.g. Reynolds and Francis 2000, DeFond et al. 2002). Larger (*SIZE*) companies, more profitable (*ROA*) companies and companies with higher operating cash flows (*CFO*) are less likely to receive a going concern opinion, while companies with higher leverage (*LEVERAGE*) and companies with longer financial reporting lags (*REPLAG*) are more likely to receive a going concern opinion.

---------- Table 6 ----------

In summary, the analyses of subsequent audit quality provide evidence that for companies with AC-auditor interlocking, those retaining auditors after restatements have lower subsequent auditor quality than those dismissing auditors. This indicates that not dismissing the auditor following accounting restatements adversely affect the subsequent audit quality of companies with AC-auditor interlocking.

2.5 Additional Analyses

2.5.1 Endogeneity of auditor dismissals

My second hypothesis is that for companies with AC-Auditor interlocking, companies that dismiss the incumbent auditors are likely to have a larger improvement in subsequent audit quality than companies that retain the incumbent auditors. An endogeneity issue could arise because the auditor dismissal is not randomly determined. Thus, I use a Heckman (1979) two-stage model to control for the endogeneity of auditor dismissal. In the first stage, I estimate the following probit regression of the choice to dismiss the incumbent auditor:

$$DISMISS = \alpha_0 + \beta_1 LOSS + \beta_2 LEVERAGE + \beta_3 GC + \beta_4 SIZE + \beta_5 MB + \beta_6 EMPLOYMENT + \beta_7 BOARDSIZE + \beta_8 ACSIZE + \beta_9 MGRCHG + \beta_{10} BIG4 + \beta_{11} AUDTENURE + \beta_{12} AUDFEE + \beta_{13} LOCAL\_SUPPLY + \varepsilon \quad (4)$$

In the second stage, I estimate Model 2 including as an additional control variable the inverse Mills ratio computed from the parameters of the first stage.

Prior literature (e.g. Larcker and Rusticus 2008, Lennox et al. 2012) emphasizes that to successfully control for endogeneity, at least one independent variable needs to be identified that is correlated with the dependent variable in the first-stage model but is not associated with the dependent variable in the second-stage model. In Model 4, this variable is auditor supply in the local audit market, which is measured by the natural logarithm of the number of auditor offices in the local area (*LOCAL_SUPPLY*). Previous studies have documented that the extent to which clients respond to auditor reputation impairments depends on the supply of the local audit market (e.g. Swanquist and White 2015). As the number of auditors increases, the likelihood that clients can find an acceptable alternative will increase accordingly, and therefore the likelihood of

auditor dismissals will increase. [12] The untabulate resulst shows that as expected, *LOCAL_SUPPLY* is positive and significant (coefficient=0.241, p value<0.01) in the first stage model (auditor dismissal model), but not significant in the second stage models (audit quality models), suggesting that *LOCAL_SUPPLY* is a reasonable exogenous variable (Larcker and Rusticus 2008).

As shown in Table 7 Panel A and Panel B, the inverse Mills ratios of both regressions are significant. The interaction term, *DISMISS*POSTRES*, is continuing to be negative and significant in Panel A (coefficient= -0.021, p value =0.010), indicating that companies that dismiss auditors have a bigger reduction in abnormal accruals from pre-restatement period to post-restatement period compared to companies that retain auditors. In Panel B, the interaction term is positive and significant (coefficient =0.667, p=0.047)[13], indicating that companies that dismiss auditors have a bigger increase in the likelihood of receiving a going concern opinion in the post-restatement period compared to companies that retain auditors. Thus, the inferences drawn from Table 7 are consistent with those drawn from Table 6, suggesting that my main findings are unlikely to be driven by endogeneity.

---------- Table 7 ----------

2.5.2 The effect of Big 4 auditors

Healy and Lys (1986) find that companies that select Big 4 auditors are more likely to have more complex operations which require more audit services. As a result of the operating

[12] The U.S. Chamber of Commerce and GAO have expressed concern that the consolidated audit market has a negative impact on audit quality (U.S. Chamber of Commerce 2006) but did not find significant evidence. The GAO (2008) report argues that the limited number of available auditors may not necessarily result in adverse effects. I include LOCAL_SUPPLY in the analyses in model (2) and model (3) and find it insignificant in both regressions.

[13] Again, following Ai and Norton (2003) and Evans et al. (2010), I plot z-statistics of the interaction effect, i.e., *DISMISS*POSTRES*, in the model. The distributions show that the z-statistics are reliably negative across all sample observations, mitigating concerns regarding the marginal interaction effect of nonlinear regression models (Ai and Norton 2003).

complexity and the demand for more audit services, Big 4 clients are likely to have higher switching costs than non-Big 4 clients, and thus are less likely to switch auditors. Moreover, the availability of a comparable replacement auditor is limited for Big 4 clients because they only have a few audit firms to choose from (Hennes et al. 2013). This limitation further constrains the auditor dismissal decisions for Big 4 clients.

As Table 3 shows that the majority of the companies with AC-auditor interlocking are audited by Big 4 auditors, there is a concern that the effect of AC-auditor interlocking on auditor dismissals is driven by the difference between Big 4 clients and non-Big 4 clients. To mitigate this concern, I delete all the companies with non-Big 4 auditors from the restatement sample and result in a sample of 1,161 observations. I run Model (1) with this sample. The untabulated results are qualitatively consistent with those in Table 4 (coefficient on *INTERLOCK*= -0.280, p value =0.052), suggesting that the main results of auditor dismissal are not driven by the difference between Big 4 clients and non-Big 4 clients.

2.5.3 The relationship between the auditor and the other board members

In addition to examine the how AC-auditor interlocking affects the auditor dismissal decision, I also extend the analyses to the interlocking relationship between the auditor and the board members on the other committees. Specifically, I identify: (1) whether the audit committee member of restating company is on the board (other than audit committee) of the non-restating company which shares the same audit firm, and (2) whether a board member (other than audit committee member) of the restating company is on the board (other than audit committee) of the non-restating company that shares the same audit firm. I replicate the main analyses by replacing the AC-auditor interlocking (*INTERLOCK*) with these two variables. Neither of two variables are significant. The results show that the audit committee-auditor interlocking provides the

strongest setting because audit committee members are mainly responsible for overseeing the audit process, interact with the auditors and directly involved in the auditor dismissal decisions.

2.6 Conclusions

This study examines an important but relatively neglected aspect of the auditor-client relationship, audit committee members and auditor interlocking. It examines whether interlocks between auditors and audit committee members affect the likelihood of auditor dismissal when there is a financial restatement and how an auditor dismissal affects the subsequent audit quality for interlocking companies. Empirical evidence shows that companies are less likely to dismiss their auditors after the restatements occur if at least one of their audit committee members works on the audit committee of another company that is audited by the same audit firm. Further evidence suggests that auditor dismissals following accounting restatements positively affect audit quality of the companies with AC-auditor interlocking, indicating that not dismissing auditors following restatement potentially damages companies' audit quality. These findings raise concerns about the audit committee's role in auditor termination when audit quality is relatively low and suggest that such interlocking may eventually impair future audit quality by failing to replace the incumbent auditors.

3 Auditor Litigation, Audit Office Pricing and Client Acceptance

3.1 Introduction

Liability costs for auditing firms appear to have increased over the last two decades in the US, potentially because of the substantial increases both in the number of third parties claimants and the size of damage awards associated with lawsuits against public accountants. For example,

Eigelbach (2011) reports that claims against US auditors increased by about 35% to 40% between 2005 and 2011.[14] Potentially because of this rising trend in litigation, insurers, in turn, have increased auditor liability insurance premiums, which have also resulted in substantial costs for audit firms. For instance, Linville and Thornton (2001) report that some small audit firms are left without profits after paying for legal liability and associated insurance premiums. Apart from these direct costs, the increase in the likelihood of litigation has also resulted in significant indirect costs for auditors. These indirect costs include investments to enhance quality control, as well as potential opportunity costs arising from reputational damage linked to litigation (Palmrose 1988; Francis 2011). Given the expected magnitude of these direct and indirect costs, it is reasonable to presume that if sued, auditors will rationally update their prior beliefs about their client types and their own audit quality, and act ex-post to both compensate for the expected costs of litigation and to avoid future litigation[15]. In this paper we explore these issues by examining the pricing and client acceptance strategies of auditors at the audit office level, following litigation related to client misconducts.

Once auditors better understand their client's type by updating their priors following litigation, it seems sequentially rational that they would selectively raise their audit fees for any continuing clients who were actually involved in litigation (henceforth, litigation clients), because they are revealed to be riskier and/or of lower financial reporting quality[16]. However, litigation involving a specific client may not necessarily be informative about the likelihood of

[14] For example, in 2005, Deloitte agreed to pay $50 million to settle U.S. securities regulators' claims over the company's role as the auditor of bankrupt cable company Adelphia Communications Corp; KPMG agreed to pay $22 million to settle the U.S. Securities and Exchange Commission's charges that the accounting firm allowed Xerox to manipulate its accounting reports from 1997 through 2000; In 2007, PricewaterhousCoopers LLP agreed to pay $225 million to settle an investors' class-action suit over an accounting scandal at Tyco International Ltd. (Eigelbach 2011).

[15] Lennox and Li (2014) make a similar argument in the context of auditor litigation and future accounting misstatements.

[16] We confirm in untabulated results that auditors increase fees for litigation clients.

litigation for other clients. Therefore, whether auditors, following litigation associated with a client at a particular audit office, would change audit fees for *other* clients of the same audit office who are *not* involved in litigation, or for clients of other offices not involved in litigation is an empirical question[17]. To answer this question, we examine how audit fees change for (1) non-litigation clients at the same office as the auditors' litigation clients, and (2) non-litigation clients at audit offices other than those of the auditors' litigation clients. Henceforth, we refer to audit firms involved in litigation as "litigation auditors" or "litigation firms", audit offices that conduct the audits that resulted in litigation against the audit firm as "litigation offices" and the litigation firms' other offices not involved in litigation as "litigation-firm, non-litigation (LF-NL) offices".

In addition, we investigate whether litigation has any impact on new client acceptance strategies at both the litigation and LF-NL offices, and explore the characteristics of these new clients. The issues that we investigate in this paper are interesting for the following reasons. First, the existing literature on auditor litigation largely focuses on the determinants of lawsuits against auditors and how *ex-ante* auditor litigation risk affects auditor behavior (e.g. Stice 1991; Carcello and Palmrose 1994; Lys and Watts 1994; Palmrose and Scholz 2004). Lennox and Li (2014), the first study which examines the consequences of auditors being sued, focuses on whether litigation affects the subsequent financial reporting quality of the auditors' clients. We extend Lennox and Li (2014) by investigating how the audit firm's involvement in litigation subsequently impacts audit pricing and new client acceptance strategies at both its litigation and non-litigation offices.

Second, although auditors are likely to charge higher audit fees for continuing clients who were involved in litigation, due to the increased risk reassessment, there does not appear to be any research evidence documenting an accompanying "spillover" increase in audit fees for the

[17] We collectively refer to these clients as non-litigation clients.

auditors' non-litigation clients. Lennox and Li (2014) find that, following a lawsuit, both litigation and LF-NL offices improve their audit quality. This increase in post-litigation audit quality may indicate an increase in audit effort and, in turn, audit fees. Litigation and LF-NL offices may also increase their fees following a lawsuit to account for any perceived increase in the litigation risk associated with non-litigation clients. However, there is also evidence that reputational damage can have a negative impact on audit fees. For instance, Davis and Simon (1992) find that new clients of auditors sanctioned by the SEC receive a fee discount. Specifically, litigation may result in both existing and new clients lowering their assessment of the auditor's quality. In turn, this reputational damage may result in auditors having to reduce their audit fees or, at least, not increase them, despite an increase in audit effort. These competing considerations leave open how auditors adjust their fee strategies for their non-litigation clients as an empirical question.

Finally, the prior literature has focused on how *ex ante* litigation risk affects client acceptance decisions and found mixed results. For instance, Johnstone and Bedard (2003) find that new clients have a lower *ex ante* litigation risk than continuing clients. However, Stice (1991) finds that auditors face a higher likelihood of litigation from new clients. Given that the resolution of uncertainties about the likelihood and magnitude of costs accompanying litigation can affect both an auditor's fee strategy and client acceptance decisions, we extend the prior literature by examining the effect of litigation on *ex-post* client acceptance decisions. On the one hand, because of the reputational damage following auditor litigation, both litigation and LF-NL offices may have fewer new engagements. On the other hand, due to the increased likelihood of dismissal by clients after a significant audit failure (Skinner and Srinivasan 2012, Swanquist and Whited 2015), litigation offices may be willing to take on more clients, even if they are riskier, to

recover their revenue losses. Thus, it is unclear what client acceptance strategies audit firms will follow after the onset of litigation.

We focus on a sample of 385 auditor litigation cases between 2000 and 2011 obtained from *Audit Analytics*. Following the audit quality analysis of Lennox and Li (2014), we investigate the pricing strategies of auditors involved in litigation cases that were initiated during the prior three years. Using a matched sample and a difference-in-difference design, we find that audit firms involved in prior litigation charge significantly higher audit fees for the *non-litigation* clients of litigation offices compared to audit firms that do not have prior litigation. On the other hand, we fail to find evidence suggesting that audit firms with prior litigation change fees for clients of their LF-NL offices relative to audit firms without prior litigation. The significant increase in fees for non-litigation clients at the litigation offices suggests that for these clients, the audit firms' increased audit effort and/or reassessed client litigation risk outweigh potential concerns with reputational damage.

To further explore the post-litigation increase in audit fees charged by litigation offices, we also examine the impact of other factors, such as the client's switching costs and bargaining power on the audit fee structure for non-litigation clients. Specifically, litigation offices may be more likely to increase audit fees for clients with higher switching costs. However, they may find it infeasible to increase audit fees for important clients with more relative bargaining power. Consistent with our expectations, we find that the post-litigation audit fees for the litigation offices' non-litigation clients increase with the clients' switching costs, for which we use the client's financial reporting risk as a proxy,[18] and are mitigated by the clients' bargaining power,

[18] We argue that riskier clients have higher switching costs. Boone et al. (2011) find a positive association between abnormal accruals and the likelihood of litigation, suggesting that auditors are likely to view clients who engage in earnings management through accruals manipulation as having a higher litigation risk.

which we measure by client importance. [19] Additional analyses suggest that our results for the fee effect are not driven by the relative scarcity of clients with Big 6 auditors in our control sample. We also find that the fees for the non-litigation clients of litigation offices are positively associated with legal liability related settlement amounts, suggesting that the increase in fees may also be associated with auditors' cost recovery objectives.

Concerning client acceptances, we find that, following litigation, both litigation and LF-NL offices are less likely to obtain new engagements. This result suggests that either potentially new clients shy away from auditors who have recently experienced litigation or that auditors involved in litigation become more selective in recruiting new clients.[20] Compared to new engagements before litigation, the new engagements of litigation offices post-litigation are larger, have lower leverage, and are less likely to receive a going concern opinion. These results suggest that litigation offices may adopt more conservative new client acceptance strategies following litigation relative to the pre-litigation period. We do not find any significant changes in the corresponding new client acceptance strategies for LF-NL offices.

Our study contributes to the auditor litigation literature in the following ways. First, changes in an auditor's litigation environment are likely to affect how the auditor operates. For example, the Big 4 accounting firms' response letters to the PCAOB Inspection Reports indicate that they made organizational and structural changes after SOX. Empirical studies also find that auditors are more likely to issue going-concern opinions after SOX, either in general, or, particularly, for important clients. However, there is limited evidence on whether a major audit

[19] None of the cross-sectional analyses holds for LF-NL offices.

[20] The results for audit fees and new engagements may appear to be mutually inconsistent for litigation offices, as reputational damage appears to affect the likelihood of new engagements following litigation but not the audit fees charged to existing clients. However, this apparent inconsistency may be explained by the finding that the audit firm raises audit fees selectively depending on the costs to clients of switching audit firms. These switching costs are not likely to affect a new client's decision to engage the litigation audit firm, but would factor into an existing client's decision to either accept the increased audit fees or change auditors.

failure event, such as auditor litigation, impacts auditor operating strategies. As mentioned earlier, prior studies, with the exception of Lennox and Li (2014), consider the effects of *ex ante* litigation risk on auditor decisions. Lennox and Li (2014) find a post-litigation increase in audit quality for both litigation and LF-NL offices. While an increase in audit quality could be consistent with a corresponding increase in audit fees, the reputational damage that auditors suffer as a consequence of client misreporting and litigation can have a potentially adverse effect on their ability to maintain their fee levels. Thus, the issue of how audit fee levels change for audit firms post-litigation is an empirical question. We extend prior research by examining the effects of auditor litigation on subsequent audit fees and client acceptance decisions.

Second, our results show that there is an increase in audit fees for the non-litigation clients of litigation offices. This finding is interesting because, arguably, the reputational damage should be greatest for litigation offices. But instead of a fee discount, litigation offices are able to charge even higher fees than non-litigation audit firms. We argue that this could be either because litigation offices increase their audit effort after litigation to a greater extent than the LF-NL offices, or because their clients' litigation risk is reassessed at a higher level relative to the corresponding risk for the control group of non-litigation offices.[21] We also provide evidence that client risk and bargaining power have an impact on how litigation offices charge audit fees.[22]

3.2 Literature Review and Hypotheses

3.2.1 The impact of ex-ante auditor litigation risk on auditor behavior

[21] For example, Francis and Michas (2013) find that one client's restatement is associated with a higher likelihood of other clients' restatements for the same audit office.

[22] The strategy of selectively increasing audit fees is also consistent with a cost recovery argument. That is, audit firms, following litigation, would be interested in recovering their litigation –related costs, if possible. However, given the countervailing reputation concerns, they may be able to do it only from clients with higher switching costs and lower bargaining power.

Ex-ante litigation risk has been shown to be an important determinant of auditor-client engagements and audit pricing. Prior studies find that audit firms collect and assess information about client risk (Huss and Jacobs 1991, Gendron 2001), and that they are sensitive to client risk in deciding about audit engagements. For instance, auditors are less likely to accept clients with higher risks from the pool of prospective clients (Asare and Knechel 1995; Cohen and Hanno 2000; Johnstone 2000; Asare et al. 2001; Johnstone and Bedard 2003). Shu (2000) and Krishnan and Krishnan (1997) find that incumbent auditors are more likely to resign from clients who expose the auditors to increased litigation risk, and Johnstone and Bedard (2003) find that auditors are more likely to decline an engagement if the litigation risk is too high.

The *ex-ante* litigation risk that auditors face has also been documented to influence audit fees. Using US data, Simunic and Stein (1996) find that audit fees are adjusted to reflect the auditors' potential exposure to lawsuits. Seetharaman et al. (2002) find that UK audit firms charge higher fees when their clients access the US capital market, potentially because of the increased client litigation risk.

Some other studies examine how changes in the overall litigation environment affect auditor behavior. Using a sample of Big 4 observations, Krishnan et al., (2007) find an increase in earnings conservatism for both former Andersen clients and non-Andersen clients in the post-Enron environment, suggesting that auditors attempt to mitigate their litigation risk by requiring clients to recognize bad news in a timely fashion. Geiger et al. (2006) find that auditors are more likely to issue going-concern opinions in the post-SOX period, implying more conservative reporting behavior. Together, the evidence suggests that auditors become more conservative in response to any increases in *ex-ante* litigation risk arising from a change in the regulatory environment.

3.2.2 Costs associated with auditor litigation

Case settlements following litigation impose significant direct monetary costs on auditors. Eigelbach (2011) finds that nation-wide claims against auditors increased by about 35 to 40 percent between 2006 and 2011. For example, Ernst & Young LLP agreed to pay $99 million to settle a class-action lawsuit brought by investors against the former officials and auditors of Lehman Brothers Holdings Inc. Another direct cost of litigation to auditors involves increases in business liability insurance premiums following litigation (Linville and Thornton, 2001).

In addition, practitioners and researchers argue that there are significant indirect monetary costs for auditors associated with litigation. One source of indirect costs is auditor investments to enhance quality control. For example, a lawsuit can cause an audit firm to downgrade its assessment of the competence and integrity of its personnel or the reliability of its quality control procedures. The audit firm may then respond by giving its personnel more training or by introducing superior quality control procedures.

Another indirect cost is damage to the auditor's reputation. Swanquist and Whited (2015) find that auditors' market shares and ability to attract and retain clients is adversely affected by restatements. Reputational damage also arises from litigation because it potentially signals audit quality deficiencies (Palmrose 1988). For example, Franz et al. (1998) document that clients, who are not directly involved in litigation, experience significantly negative returns when litigation against their audit firms is announced, suggesting that the market interprets auditor litigation as a signal of inferior audit quality. Chaney and Philipich (2002) find that Arthur Andersen's clients experienced a statistically significant negative market reaction when the auditors admitted that they shredded a significant number of Enron documents, suggesting that investors downgraded the quality of the audits performed by Andersen. In addition, companies

that were audited by Andersen's Houston office suffered a more severe decline in abnormal returns (Chaney and Philipich 2002).

3.2.3 Spillover effects of accounting malpractice

There is evidence showing that the effects of financial restatements go beyond the restating company itself. Kedia et al. (2015) find that companies are more likely to manipulate earnings following the public announcement of a restatement by another company in the same industry, or one located in the same city, suggesting that companies may mimic their peers' earnings manipulation strategies. However, such imitative behavior is absent if the restatement is associated with an SEC enforcement action or a class action lawsuit. Gleason et al. (2008) find that non-restating companies in the same industry as a restating company also experience negative market reactions following the announcement of the restatement, indicating that investors extend their concern regarding accounting quality to other companies in the same industry. In addition, Francis and Michas (2013) show that one client's restatement is associated with a higher likelihood of restatements by other clients who belong to the same audit office, suggesting that there may potentially be an adverse spillover or contagion effect in the quality of other concurrent audits. Similarly, as discussed earlier, clients not involved in litigation also experience significant negative returns when litigation against their audit firm is announced (Franz et al. 1998; Chaney and Philipich 2002), providing further evidence of a perception of contagion effects in accounting malpractice. Following these arguments, we expect that there could also be an increased perception of risk associated with the non-litigation clients of auditors who are sued consequent to a client's accounting malpractice.

3.2.4 Post-litigation audit fees for non-litigation clients of litigation and LF-NL offices

Given the foregoing arguments, following a lawsuit, auditors may re-evaluate client risk at a higher level for their non-litigation clients and, thus, exert more effort in auditing all of their clients to reduce the probability of future litigation. The increased effort could include various measures such as establishing new quality control systems and providing more personnel training. Consistent with this argument, Lennox and Li (2014) find that following a lawsuit against an auditor, there is a lower likelihood of a future client misstatement for both the particular audit office involved in the lawsuit and the other non-litigation offices of the same audit firm.

Therefore, it appears that auditors increase audit effort to improve audit quality following auditor litigation. Prior literature has shown that increasing audit effort will lead to an increase in audit fees (e.g. Bedard and Johnstone 2004; Bell et al. 2001). Moreover, as discussed earlier, auditors could also rationally reassess the riskiness of all their clients following litigation, including the non-litigation clients of both litigation and LF-NL offices. If litigation results in uncovering information that also increases the risk profile of non-litigation clients, we would expect to see higher risk premiums incorporated in their fees, reflecting the expected increase in risk. These arguments follow prior studies, which suggest that audit fees reflect both the amount of audit evidence collected and an additional premium to cover litigation risk (Pratt and Stice 1994; DeFond and Zhang 2014).

On the other hand, litigation is likely to damage the auditor's reputation. Because auditors' reputations are positively associated with audit fee premiums (Beatty 1989; Francis et al. 2005; Ferguson et al.2003), reputational damage to an audit firm is likely to reduce its ability to charge high audit fees. Davis and Simon (1992) find that SEC disciplinary actions against an audit firm adversely affect the firm's audit fees and market share. Specifically, they find that after

controlling for other factors shown to affect audit fees, new clients of sanctioned accounting firms receive a fee discount over and above that normally received by clients switching auditors. An implication of this result is that the reduction in audit fees follows from the impairment in the auditor's reputation resulting from government disciplinary action, which reduces the auditor's bargaining power with new clients. Drawing on the findings of the impact of auditor reputational loss on audit fees, auditor litigation could have a negative effect on audit fees for the non-litigation clients.

To sum up, auditors have an incentive to also charge non-litigation clients higher fees in order to cover the increase in audit effort and/or to reflect a higher risk premium. On the other hand, auditors may have to reduce their audit fees for such clients in response to the reputational loss caused by litigation. Further, these competing influences may affect litigation offices and LF-NL offices differently. Because litigation offices are responsible for the failed audits which result in litigation, they are likely to face greater pressure to improve audit quality through increased audit effort relative to the other offices of litigation firms. For example, litigation offices may need to hire additional and/or more competent and qualified auditing staff. In addition, because the non-litigation clients of litigation offices may be considered to have a higher likelihood of misstatement due to the spillover effect (Francis and Michas 2013), their risk premiums may also be assessed higher than that for the clients of LF-NL offices. However, at the same time, litigation offices are likely to suffer greater reputational damage than LF-NL offices. Thus, the overall impact of auditor litigation on audit fees for non-litigation clients of the litigation and LF-NL offices is unclear. Our first hypothesis is as follows (stated in the null form):

H1a: Following the filing of a lawsuit, there is no significant change in audit fees for non-litigation clients of litigation offices, compared to the corresponding audit fees charged by non-litigation audit firms.

H1b: Following the filing of a lawsuit, there is no significant change in audit fees for non-litigation clients of the litigation firms' non-litigation (LF-NL) offices, compared to the corresponding audit fees charged by non-litigation audit firms.

3.2.5 Client acceptance decisions after litigation

Recall that auditors experience significant reputational damage after litigation (Palmrose 1988). Further, Hennes et al. (2014) find that auditors are more likely to be dismissed by their clients after restatements, consistent with the argument that restating companies switch auditors to restore financial reporting credibility. Skinner and Srinivasan (2012) study events around a substantial audit failure of one of the largest Japanese audit firms and find that around one quarter of the clients left the auditor after the audit failure, indicating that auditor reputation is important in client retention. Similarly, potential clients may perceive auditors that have recently been sued as having lower audit quality, and may, therefore, be less willing to hire these auditors, leading to fewer new engagements for litigation auditors compared to non-litigation auditors. For instance, Swanquist and Whited (2015) find that management and audit committees are less likely to select an audit office whose reputation has been impaired by its client's restatement announcement.

Auditors have competing incentives regarding new client acceptance decisions following a lawsuit. On the one hand, auditors may become more conservative in assessing potential clients' risk characteristics after lawsuits, and may forego some new engagements that they now classify as potentially too risky but would have accepted pre-litigation. This would result in fewer new engagements for litigation auditors compared to non-litigation auditors. On the other hand, to cover the economic losses (increased client dismissals, settlement payments, increase in insurance premiums, etc.) caused by lawsuits, litigation auditors have incentives to increase revenues by accepting more new clients, even if these clients are riskier than their existing clients.

These competing incentives make it ambiguous as to whether auditors would be willing to accept more or fewer new clients following litigation. The above arguments lead to our second hypothesis (stated in the null form):

H2: Following the filing of a lawsuit, there is no difference in the likelihood of new engagements for litigation offices and litigation firm, non-litigation (LF-NL) offices, compared to the offices of non-litigation audit firms.

Due to the monetary costs resulting from litigation, the reputational damage caused by litigation, and the desire to avoid future litigation, it is possible that auditors change the way in which they evaluate potential clients following litigation. Therefore, we next investigate how the characteristics of auditors' new clients following litigation differ from those of new clients prior to litigation.

As noted above, an important factor in client acceptance decisions is the client's *ex ante* litigation risk. Johnstone and Bedard (2004) find that auditors practice risk avoidance and that new clients are less risky than existing clients. Following a lawsuit, the auditor is likely to be under increased scrutiny from regulators and investors. Audit offices would have strong incentives to decrease the risk profile of their client portfolio. Therefore, audit offices may be less likely to accept potential clients with higher *ex ante* litigation risk, such as those in high litigation industries or those with poor financial reporting quality.

However, as discussed earlier, the reputational damage from the lawsuit may decrease the size of the auditor's client pool because potential clients may be less willing to engage these auditors. This leaves the auditor with fewer choices for low-risk new clients. Further, the

economic incentive of increasing revenues to cover the costs of the litigation may lead auditors to deviate from risk avoidance and accept more new clients, even if they are risky.[23]

Following these competing arguments, we examine if new client characteristics such as litigation risk, size, and profitability differ pre- and post-litigation by asking the following research question:

RQ1: Following the filing of a lawsuit, how do the characteristics of new clients differ from those of new clients prior to litigation for litigation offices and litigation firm, non-litigation (LF-NL) offices?

3.3 Main Variables, Sample and Empirical Models

3.3.1. Main Variables Definition

For each litigation case, we use two treatment groups - the non-litigation clients of litigation offices (*LIT_OFFICE*), and clients of the litigation firms' non-litigation offices (*LF_NL OFFICE*), and two periods, a pre-litigation and a post-litigation period. Following Lennox and Li (2014), we define the post-litigation period as the three years following the year in which the lawsuit is filed. Similarly, the pre-litigation period is defined as the three years before the year in which the lawsuit is filed. Accordingly, we create the following four indicator variables. $LIT\_OFFICE_{i,(t-3,t-1)}$ ($LIT\_OFFICE_{i,(t+1,\ t+3)}$) equals one if a company is a client of an audit office that was responsible for a lawsuit filed during the prior three years (the following three years), and zero if a company is a client of a non-litigation audit firm. $LF\_NL\_OFFICE_{i,(t-3,t-1)}$ ($LF\_NL\_OFFICE_{i,(t+1,t+3)}$) equals one if a company is a client of an auditor that had a lawsuit filed against it during the prior three years (the following three years), but is not audited by the office responsible for the lawsuit, and zero if a company is a client of a non-litigation audit firm.

[23] Stice (1991) shows that the likelihood of litigation against an audit firm is heightened for newly accepted clients, suggesting that newly accepted clients may be riskier than existing clients, after controlling for the determinants of litigation.

We also create an indicator variable to represent the litigation time period (*POSTLIT*), which equals one if an observation is from the post-litigation sample, and zero if an observation is from the pre-litigation sample.

3.3.2 Sample Selection

Our data are from *Audit Analytics* and *Compustat*. There are 1,832 legal cases with at least one auditor as defendant in the litigation database in *Audit Analytics* from 2000 to 2011. We deleted 763 cases that are unrelated to accounting and disclosure malpractice, which results in 1,069 cases. We manually collect litigation company data that are not available in the *Audit Analytics* litigation database over the internet using the case name and/or the court identified docket number. We drop litigation cases (1) that involve private companies, (2) where the clients are not sued, and (3) those with missing audit office information, which results in our final sample of 385 cases.

For the overall sample, we start with 141,071 firm-year observations with non-zero audit fee data from *Audit Analytics,* covering the period 2000 to 2011. We exclude 87,517 observations without auditor opinions, auditor local office information or with missing *Compustat* data needed to calculate necessary control variables. Following Lennox and Li (2014), we exclude the litigation clients from our analyses.[24] The above procedures reduce our sample to 52,169 firm-year observations, which includes 7,788 client firm-year observations for audit offices with at least one lawsuit filed against them in the previous 3 years or in the following 3 years (*LIT_OFFICE*) and 26,057 client firm-year observations for non-litigation offices with at

[24] Because litigation clients bear a large portion of the responsibility for lawsuits against auditors, and they would likely pay higher fees even if they switch auditors, we do not think there is any question that the litigation clients' fees will increase following litigation and we confirm this in untabulated tests. We exclude the litigation clients from our sample to avoid biasing the results for non-litigation clients.

least one lawsuit filed against the audit firm in the previous three years or in the following 3 years (*LF_NL_OFFICE*).

Because the litigation risk of clients of litigation and LF-NL offices may be different from that of clients of non-litigation audit firms, and *ex-ante* litigation risk is associated with audit fees, it is important to match clients of litigation offices and LF-NL offices with clients of non-litigation audit firms with similar litigation risk for our audit fee analyses.[25] The matching design also allows us to identify the event year (i.e. the year of commencement of litigation) for the control groups so we can conduct difference-in-difference analyses. To perform the one-to-one matching, we first calculate the client's *ex-ante* litigation probability based on our auditor litigation data[26]. Then for each treatment observation (i.e. $LIT\_OFFICE_{i,(t-3,t-1)}$ =1 or $LIT\_OFFICE_{i,(t+1,\,t+3)}$ =1 or $LF\_NL\_OFFICE_{i,(t-3,t-1)}$ =1 or $LF\_NL\_OFFICE_{i,(t+1,t+3)}$ =1), we restrict the control group to the same fiscal year, and similar industry and size as the treatment group by requiring that clients of the non-litigation audit firms (1) are in the same fiscal year, (2) are in the same 2-digit industry and (3) are no larger than 130% and no smaller than 70% of the respective treatment observation in size. We next identify the matched observation by identifying an observation with the closest litigation probability in the same fiscal year. After eliminating the observations that cannot be paired, we have a sample of 6,300 observations for the audit fee analysis of H1a, which consists of 3,150 non-litigation client observations for litigation offices and 3,150 matched client observations for non-litigation firms. We also have a sample of 15,976

[25] We cannot perform matching for our new engagement analyses, because we are interested in the likelihood of getting new engagements for each audit office, and thus, we need to keep all the client firm-year observations for the individual audit office to conduct the analysis.

[26] Based on the prior literature (e.g. Shu 2000, Kim et al.2012), the litigation risk is calculated using the following model: $LIT=\beta_0 SIZE+ \beta_1 REC+ \beta_2 INV+ \beta_3 LEVERAGE+ \beta_4 ROA+ \beta_5 LITINDUSTRY+ \beta_6 SALEGROWTH+ \beta_7 QAO$, where *LIT*=1 if the auditor is sued due to the client firm's accounting malpractice and 0 otherwise. *SIZE* is the log of the firm's total assets, *REC* is the accounts receivables scaled by total assets, *INV* is the inventory scaled by the total assets, *LEVERAGE* is total debt scaled by total assets, *ROA* is net income scaled by total assets, *LITINDUSTRY* is a litigious industry indicator, *SALES_GROWTH* is the percentage of sales growth, and *QAO* is an indicator variable that equals 1 if a firm receives a qualified audit opinion.

observations for the audit fee analysis of H1b, which consists of 7,988 client observations for LF-NL offices and 7,988 matched client observations for non-litigation firms.

3.3.3 Empirical models and variable definitions

The auditor pricing model draws on Simunic (1980), Beatty (1993), Francis et al. (1994) and Bell et al. (2001) to identify variables that influence audit fees. We employ a difference-in-difference design and specify our OLS audit fee models as the following:

$$\begin{aligned} AUDITFEE_{i,t} = {} & \beta_0 + \alpha_1 LIT\_OFFICE(LF\_NL\_OFFICE) + \alpha_2 POSTLIT \\ & + \alpha_3 LIT\_OFFICE(LF\_NL\_OFFICE)*POSTLIT + \beta_1 SIZE_{i,t} + \beta_2 SALE_{i,t} + \beta_3 ROA_{i,t} \\ & + \beta_4 SEGNUM_{i,t} + \beta_5 FOREIGN_{i,t} + \beta_6 LITINDUSTRY_{i,t} + \beta_7 EQUITYISSUE_{i,t} \\ & + \beta_8 BKMK_{i,t} + \beta_9 GC_{i,t} + \beta_{10} RESTATE_{i,t-1} + \beta_{11} BIG6_{i,t} + \beta_{12} DELAY_{i,t} + \beta_{13} YEAR \\ & + \beta_{14} INDUSTRY + \varepsilon_{i,t} \end{aligned} \quad (1)$$

For H1a, *LIT_OFFICE* equals one if a company is a non-litigation client of an audit office that was responsible for a lawsuit filed during the prior three years or the following three years, and zero if a company is a matched non-litigation audit firm's client. That is, *LIT_OFFICE* is a combination of $LIT\_OFFICE_{i,(t-3,t-1)}$ and $LIT\_OFFICE_{i,(t+1,\,t+3)}$. For H1b, *LF_NL_OFFICE* equals one if a company is a non-litigation client of an auditor that had a lawsuit filed against it during the prior three years or the following three years, but is not audited by the office responsible for the lawsuit, and zero if a company is a matched non-litigation audit firm's client. *POSTLIT* is a dummy variable that equals one if the observation is from the post-litigation period. Our variable of interest is the interaction between *LIT_OFFICE* (*LF_NL_OFFICE*) and *POSTLIT*, which captures the incremental effect of the change in audit fees from the pre-litigation period to the post-litigation period for litigation office clients (LF-NL office clients) compared to non-litigation audit firms' clients. We do not have a signed expectation for the coefficients on the interactions because of the two competing arguments behind H1.

Based on the prior literature, (Simunic 1980; Beatty1993; Francis et al.1994; Bell et al. 2001), we expect that client companies which are larger, in worse financial health and are more complex will pay higher fees. We include the natural log of total assets (*SIZE*), the ratio of sales to total assets (*SALE*), return on assets (*ROA*), number of business segments (*SEGNUM*) and whether the company has foreign earnings (*FOREIGN*) in the model, and predict that they will be positively associated with audit fees. Companies in litigious industries (*LITINDUSTRY*) and those that issue new equities (*EQUITYISSUE*) also pay higher audit fees. We include controls for the book-to-market ratio (*BKMK*) and whether a client received a going concern opinion (*GC*), and predict that *BKMK* will be negatively, and *GC* positively associated with audit fees. Companies with previous restatement announcements (*RESTATE*) and those audited by big auditors[27] (*BIG6*) also pay higher audit fees. In addition, we include the length of the audit delay (*DELAY*) and predict it to be positively associated with audit fees. We control for year and industry fixed effects based on the Fama-French 48 industry model. Table 8 summarizes the definitions of the variables. Because there are multiple firm-year observations, we adjust for firm clustering effects in Model (1).

---------- Insert Table 8 here ----------

Our H2 tests whether the litigation offices and LF-NL offices are more or less likely to have new engagements in the three years after the filing of a lawsuit against the audit firm. We use the following logistic regression model to examine the impact of litigation on the likelihood of new engagements:

[27] BIG 6 is an indicator variable which is equal to 1 if the firm is audited by PwC, Ernst &Young, Deloitte, KPMG, BDO or Grant Thornton.

$$NEWENG_{i,t} = \gamma_0 + \delta_1 LIT\_OFFICE_{i,(t-3,t-1)} + \delta_2 LF\_NL\_OFFICE_{i,(t-3,t-1)} + \delta_3 LIT\_OFFICE_{i,(t+2,t+3)} + \delta_4 LF\_NL\_OFFICE_{i,(t+1,t+3)} + \gamma_1 SIZE_{i,t-1} + \gamma_2 LITINDUSTRY_{i,t-1} + \gamma_3 BKMK_{i,t-1} + \gamma_4 GC_{i,t-1} + \gamma_5 ROA_{i,t-1} + \gamma_6 RESTATE_{i,t-1} + \gamma_7 ACCRUAL_{i,t-1} + \gamma_8 BIG6_{i,t} + \gamma_9 BUSYMONTH_{i,t} + \gamma_{10} CLI\_IMPORTANCE_{i,t} + \gamma_{11} YEAR + \gamma_{12} INDUSTRY + \varepsilon_{i,t} \quad (2)$$

NEWENG equals one if a company is a new engagement of an audit office in year t, and zero otherwise. The control sample in Model (2) consists of clients of non-litigation audit firms during our sample period. If there is a difference in the likelihood of new engagements between our treatment and control groups in the post-litigation period, an alternative explanation is that such a difference could have always existed. To help rule out this alternative explanation, we include both the post-litigation period ($LIT\_OFFICE_{i,(t-3,t-1)}$, $LF\_NL\_OFFICE_{i,(t-3,t-1)}$) and pre-litigation period ($LIT\_OFFICE_{i,(t+1,\,t+3)}$, $LF\_NL\_OFFICE_{i,(t+1,t+3)}$ =1) for litigation office clients and LF_NL office clients in Model (2), and test if such a difference exists only for the post-litigation period.[28] Because of the competing arguments behind H2, we do not have signed expectations for *LIT_OFFICE* and *LF_NL_OFFICE*. We obtain the new engagement data from auditor change announcements in *Audit Analytics*. We control for client size (*SIZE*), client litigation risk (*LITINDUSTRY*), financial health (*BKMK*, *GC* and *ROA*), and financial reporting quality (*RESTATE* and *ABACCRUAL*). We also control for auditor type (*BIG6*), whether the fiscal year-end date falls in the busy months for audit firms (*BUSYMONTH*), and the client's importance to the current audit office (*CLI_IMPORTANCE*). We include year and industry fixed effects based on the Fama-French 48 industry model. We also adjust for firm clustering effects in Model (2).

[28] We do not include interactions between litigation (LF-NL) offices and the post-litigation period dummy as we do in Model (1) because we do not have the event year for control companies. As explained earlier, we cannot perform matching procedures for the new engagement analysis because we are interested in the likelihood of getting new engagements for each audit office and, thus, we need to retain all client firm-year observations for the individual audit.

3.4 Empirical Results

3.4.1. Post litigation audit fees for non-litigation clients of litigation and LF-NL offices

Table 9 provides summary statistics for the variables in the audit fee analyses and compares means and medians for litigation office clients, LF-NL office clients, and their respectively matched control groups, i.e., clients of non-litigation audit firms. Both the mean and median results in Table 9 show that compared to their matched control group, litigation office clients have higher audit fees, more total assets, lower sales, lower book to market ratio, and more segments, are more likely to have foreign transactions, to receive going concern opinions, and to be audited by Big 6 audit firms. Compared to their matched control group, LF_NL_OFFICE clients have higher audit fees, more total assets, lower sales, lower book to market ratios, more segments, are more likely to have foreign transactions, are less likely to have equity issuance and restatement announcements, and are more likely to be audited by Big 6 audit firms.[29] Although our treatment and control groups differ along several dimensions, we conduct a difference-in-difference analysis to help mitigate the concern that the fundamental differences between the two groups drive the results.

---------- Insert Table 9 here ----------

The first column of Table 10 presents the regression results for H1a. The coefficient on *LIT_OFFICE* is not significant, suggesting there is no significant difference in audit fees between clients of litigation offices and non-litigation audit firms before the litigation starts. To test whether the audit fees charged by litigation offices increased to a greater extent following the filing of the lawsuit compared to non-litigation audit firms, we examine the interaction between *LIT_OFFICE* and *POSTLIT*. The coefficient on the interaction term is significantly

[29] Because the control firms have no litigation during the sample period, they are much less likely to be Big 6 auditors. We examine the effect of big 6 audit firms in additional analyses.

positive (coefficient = 0.056, *p*-value = 0.030), suggesting that compared to non-litigation audit firms, litigation offices significantly increase audit fees for their clients following litigation. Economically, after controlling for the other determinants of audit fees, the audit fees charged to non-litigation clients of the litigation offices increased by 5.8% in the three years after litigation began, compared to the audit fees charged to the clients of non-litigation audit firms. In addition, the sum of *LIT_OFFICE* and *LIT_OFFICE* × *POSTLIT* is significantly positive, indicating clients of litigation offices pay higher audit fees than those of non-litigation audit firms after the litigation starts (*p*-value = 0.001). Thus, the regression analysis suggests that audit fees paid by non-litigation clients of the litigation offices significantly increase after auditors are sued[30].

The second column of Table 10 presents the regression results for H1b. The coefficient on LF_NL_OFFICE is significantly positive, implying that prior to the commencement of litigation, LF-NL offices charge clients higher fees than non-litigation audit firms. Our variable of interest, the interaction of LF_NL_OFFICE and POSTLIT, is not significant (coefficient = -0.013, *p*-value = 0.667). Thus, we fail to find evidence suggesting that, relative to the control group, the audit fees charged by non-litigation offices of litigation firms change significantly following litigation.

As for control variables in Tables 3, consistent with prior literature, we find that larger firms, firms with higher sales, lower ROAs, lower book-to-market value, more business segments, foreign transactions, equity issuances, going concern opinions, restatement announcements, Big 6 auditors, and longer audit delays pay higher audit fees. In addition, firms in litigious industries pay higher audit fees.

---------- Insert Table 10 here ----------

[30] Because audit firms are likely to charge clients low fees in the first few years of the engagement in order to attract new clients (Deangelo 1981), we run the same regression after excluding the new engagements from the sample to eliminate the "low balling" effect, and find the results hold.

3.4.2 The effects of switching costs on the audit fees of litigation offices

Our previous results suggest that, relative to non-litigation audit firms, litigation offices significantly increase the post-litigation audit fees charged to their non-litigation clients. Our result raises the intriguing question of why clients would agree to pay higher fees rather than switch to a different audit firm. Clients who face high auditor switching costs may be more willing to put up with an increase in audit fees. Accordingly, we investigate whether auditor switching costs play a role in the audit firm's strategy of selectively increasing audit fees. Client risk could be a proxy for audit switching costs. Specifically, it seems plausible that clients, who are perceived to be riskier, might find it more difficult to switch auditors. Following this argument and the results reported by Boone et al. (2011) who, using a simultaneous equations analysis, find a positive association between abnormal accruals and the likelihood of litigation, we categorize clients who have engaged in earnings management through accruals manipulation as having higher litigation risk. We divide the audit office sample from Table 10 into subsamples according to whether the client's prior-year absolute value of abnormal accruals is above the sample median.

Table 11 presents the results for the two subsamples based on the median level of abnormal accruals for year t-1. The results show that for the higher abnormal accrual subsample (*HIGH_ABACCRUAL* = 1), the coefficient on the interaction term, *LIT_OFFICE*POSTLIT*, is significantly positive (coefficient = 0.100, *p*-value = 0.005), suggesting that, post-litigation, auditors increase their audit fees for clients with high financial reporting risk relative to the control group. However, for clients in the lower prior-year abnormal accrual subsample (*HIGH_ABACCRUAL* = 0), the coefficient on *LIT_OFFICE*POSTLIT* is positive but not significant, which suggests that post-litigation, there is no significant increase in the audit fees

for clients of litigation offices with low financial reporting risk relative to the control group of non-litigation firm clients.

---------- Insert Table 11 here ----------

3.4.3 The effects of bargaining power on audit fees of litigation offices

Another factor affecting the auditor's ability to raise audit fees is the client's relative bargaining power. Important clients have higher bargaining power relative to their auditors, and litigation offices may find it difficult to increase audit fees for these clients (Casterella et al. 2004; Huang et al. 2007). To investigate the effect of client bargaining power on audit fees following litigation, we identify important clients according to whether the client's audit fees are greater than 10% of the audit office's total revenue (*BIGCLI* = 1). We then split the sample from Table 10 into important clients and less important clients.

Table 12 reports the results based on client importance. For the important client subsample, the coefficient on the interaction term, *LIT_OFFICE*POSTLIT*, is positive but insignificant. For the less important client subsample, the coefficient on the interaction term, *LIT_OFFICE*POSTLIT,* is positive and significant (coefficient =0.054, *p*-value = 0.027), which provides support for the argument that relative to the control sample of non-litigation audit firms, litigation offices are able to significantly increase their audit fees for less important non-litigation clients.

In sum, we find that client switching costs and bargaining power help explain how auditors are able to charge higher fees post-litigation for litigation office clients. Specifically, litigation offices are only able to increase audit fees for non-litigation clients with higher

switching costs (clients with higher financial reporting risk) or with lower bargaining power (less important clients).[31]

---------- Insert Table 12 here ----------

3.4.4 The likelihood of getting new engagements after litigation

As discussed earlier, the occurrence of lawsuits may lead to a change in the client portfolios of litigation auditors. Therefore, we next examine the likelihood of new engagements post litigation to test H2. To eliminate the effect of clients leaving litigation auditors, we exclude dismissals and resignations of the litigation auditors in the post-litigation period from our sample which results in 31,184 observations for the client portfolio analyses.

Table 13 reports the results for the analysis of new engagements. The testing variables are $LIT\_OFFICEi,(t-3,t-1)$, and $LF\_NL\_OFFICE_{i,(t-3,t-1)}$, which, respectively, indicate that the observation is a client of a litigation office or LF-NL office during the three years after litigation. The coefficient on $LIT\_OFFICEi,(t-3,t-1)$ is significantly negative (coefficient = -0.549, *p*-value = 0.022), as is the coefficient on $LF\_NL\_OFFICE_{i,(t-3,t-1)}$ (coefficient = -0.725, *p*-value = 0.023). Thus, our evidence suggests that both litigation and LF-NL offices are significantly less likely to have new engagements post-litigation relative to non-litigation auditors. An alternative explanation for this result is that litigation offices and LF-NL offices always have fewer new engagements for reasons unrelated to the litigation. Therefore, we also examine the likelihood of new engagements for litigation offices and LF-NL offices during the three years before litigation begins using the variables, $LIT\_OFFICE_{i,(t+1,\ t+3)}$ and $LF\_NL\_OFFICE_{\ i,(t+1,\ t+3)}$. The coefficients on both these variables are insignificant. Economically, the likelihood of getting a new engagement is lower by 36.6% for litigation offices, and 32.2% for LF-NL offices relative to the corresponding values for the control group.

[31] We run the same cross-sectional analyses for LF-NL offices, but do not find any cross-sectional variations.

Thus, the negative impact of auditor litigation on the likelihood of new engagements is economically large.

---------- Insert Table 13 here ----------

3.4.5 Client portfolio changes after the lawsuits

RQ1 investigates whether the new engagements of litigation offices and LF-NL offices differ before and after the litigation. Table 14 presents the results of this comparison. The sample is restricted to the new engagements of both offices during the three years prior to and the three years after the litigation. In Panel A, the means test suggests that for litigation offices, the new engagements following litigation are likely to be larger, have lower leverage, and are less likely to receive a going concern opinion compared to the new engagements before the litigation. For LF-NL offices in Panel B, we find that new engagements following litigation do not significantly differ from the new engagements prior to litigation on any of the characteristics examined. Thus, based on the new clients' improved financial performance post-litigation, it appears that litigation audit offices become more conservative in their new client acceptance strategies following litigation.

---------- Insert Table 14 here ----------

To summarize, our results provide evidence that audit offices responsible for the failed audits that result in litigation charge significantly higher audit fees during the first three years after the filing of the lawsuits. Further analyses suggest that the increase in audit fees charged by litigation offices is restricted to clients with high switching costs and low bargaining power. The likelihood of receiving new engagements is also significantly reduced not only for litigation offices, but also for LF-NL offices. Moreover, for litigation offices, the new clients engaged

following litigation are larger, have lower leverage, and are less likely to receive a going concern opinion compared to the new clients prior to the litigation.

3.5 Additional Analyses

3.5.1 The effect of Big 6 Auditors

Most lawsuits in our sample involve Big 6 audit firms, so a majority of the control sample is non-Big 6 clients. Although we conduct a difference-in-difference design, there may still be a concern that the increased audit fees charged by the litigation offices are driven by the differences between Big 6 and non-Big 6 clients. To mitigate this concern, we compare the audit fees of the litigation audit offices versus the LF_NL offices that are Big 6 auditors. Specifically, we replicate our analysis in Table 10 by replacing the clients of non-litigation audit firms with clients of LF_NL offices and restrict the sample to Big 6 audit firms. The untabulated results show that consistent with Table 10, the interaction between LIT_OFFICE and POSTLIT is significantly positive (coefficient = 0.034, *p*-value = 0.049), indicating that compared to LF_NL offices, litigation audit offices significantly increase audit fees for their clients following litigation.

3.5.2 The effect of the severity of the cases

We expect that auditors who bear higher legal costs would either reassess their clients' risk as being higher or do more work to prevent future litigation compared to auditors who bear lower legal penalties. We focus on a subsample of settled cases for which data on the actual amounts paid as settlements are available and limit our analyses to clients of litigation offices. We replace the first three variables in Model (1) with a continuous litigation cost variable (*Settlement*), which is the logarithm of the settlements paid by the auditor. The untabulated results show that consistent with our expectation, *Settlement* is significantly positive. These

results provide evidence that the litigation cost borne by auditors is associated with the subsequent audit fees they charge their clients, suggesting that the increase in fees may also be associated with cost recovery.[32]

3.6 Conclusion

This study examines how lawsuits against auditors affect the audit pricing and client acceptance strategies of both the audit offices responsible for the failed audits and also the other audit offices of the litigation audit firms. We find that audit fees increase significantly for non-litigation clients of the litigation office during the three years after the filing of the lawsuit. Additional tests show that audit fees increase for clients with high financial reporting risk (greater switching costs) but they do not increase for important clients who have more bargaining power. The results indicate that for non-litigation clients at the litigation offices, the increased audit effort and/or reassessed client litigation risk outweigh potential reputational damage. But such increases in audit fees are mitigated when clients have low switching costs or high bargaining power.

With respect to auditors' client acceptance strategies, we find that litigation audit offices and LF-NL offices have fewer new engagements following lawsuits. These results are consistent with the arguments that potential clients view litigation audit firms as having lower audit quality. We also find that post-litigation, the new clients of litigation offices are larger, have lower leverage, and are less likely to receive a going concern opinion compared to their pre-litigation new clients. This result suggests that litigation offices become more conservative in accepting new clients following litigation.

[32] We do not find a significant relationship between settlement payment and the audit fees charged by LF-NL offices.

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Tables

Table 1: Sample Selection

Restatements from Audit Analytics:		9005
Less:	Observations missing necessary variables from Compustat	4617
	Restatements due to the change of GAAP	547
	Multiple restatements for the same company	796
	Observations not covered by BoardEx	1452
Restatements in the auditor dismissal sample		1593

Table 2: Definition of Variables

DISMISS	1 a company dismisses the incumbent auditor within 12 months after the restatement announcement, 0 otherwise.
INTERLOCK	1 if at least one AC member is on the AC of another company which is audited by the same auditor, and 0 otherwise
SIZE	The natural logarithm of total assets at the end of year t.
LOSS	1 if a company has a negative net income in year t, 0 otherwise
GC	1 if a company receives a going concern opinion in year t, 0 otherwise
LEVERAGE	Total long-term debt / total assets at the end of year t.
EMPLOYMENT	1 if the CEO and(or) CFO have the experience of working for the incumbent auditor, 0 otherwise
BOARDSIZE	Number of members on the board of directors
ACSIZE	Number of members on the audit committee
MGRCHG	1 if the firm changes either CEO or CFO in the two-year window, 0 otherwise
BIG4	1 if a firm has a Big 4 auditor in year t, 0 otherwise.
TENURE	The natural logarithm of audit tenure at the end of year t.
AUDFEE	The natural logarithm of audit fees in year t.
ACCRUAL	The absolute value of abnormal accruals based on Modified Jones model.
POSTRES	1 if a firm-year observation belongs to the post-restatement period, and 0 otherwise.
CFO	Net operating cash flows in year t, scaled by total asset.
MB	Market to book ratio.
MA	1 if a firm undertook a merger or acquisition in year t, 0 otherwise.
RESTRUCT	1 if a firm recognized restructuring charges in year t, 0 otherwise
FINANCING	1 if a firm issues new equity or new debt of at least $5 million in the following year, and 0 otherwise.
SI	1 if a firm has special items in year t, 0 otherwise.
SEGNUM	The natural logarithm of the total number of geographic and operating segments at the end of year t.
AGE	The natural logarithm of the number of years the company has been covered by CRSP (Compustat if the company is not covered by CRSP).
SALEGROWTH	The annual growth of sales.
REPLAG	The log number of days between the auditor report date and the year-end date

Table 3 Descriptive Statistics of Variables in Model 1

	INTERLOCK=1 N=446		INTERLOCK=0 N=1147			
Variable	**MEAN**	**MEDIAN**	**MEAN**	**MEDIAN**	**t**	**Pr > |t|**
DISMISS	0.108	0.000	0.160	0.000	-2.67	0.008
SIZE	6.961	6.812	5.787	5.850	11.29	0.001
LOSS	0.329	0.000	0.449	0.000	-4.45	0.001
GC	0.017	0.000	0.068	0.000	-4.11	0.001
LEVERAGE	0.247	0.182	0.234	0.153	0.92	0.355
MB	2.004	2.272	1.927	2.132	0.27	0.786
EMPLOYMENT	0.067	0.000	0.037	0.000	2.69	0.007
BOARDSIZE	8.868	8.000	7.914	7.000	7.44	0.001
ACSIZE	3.656	3.000	3.364	3.000	6.6	0.001
MGRCHG	0.320	0.000	0.330	0.000	-0.36	0.718
BIG4	0.963	1.000	0.608	1.000	15.18	0.001
TENURE	1.671	1.946	1.292	1.609	8.22	0.001
AUDFEE	7.680	7.795	7.397	7.447	3.75	0.001

This table reports the descriptive statistics of variables in Model 1. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers.

Table 4 Logistic Regression Results of Auditor Dismissal

Variable	Sign	Coefficient	Chisq	P
INTERCEPT		-2.807	7.162	0.007
INTERLOCK	**?**	**-0.344**	**4.586**	**0.032**
SIZE	-	-0.058	0.634	0.213
LOSS	+	-0.066	0.188	0.664
GC	+	0.503	3.177	0.037
LEVERAGE	+	0.101	0.159	0.345
MB	?	0.001	1.749	0.186
EMPLOYMENT	?	-0.364	0.998	0.318
BOARDSIZE	?	-0.035	0.711	0.399
ACSIZE	?	0.062	0.418	0.518
MGRCHG	+	0.402	6.455	0.011
BIG4	-	-0.382	4.365	0.018
AUDTENURE	-	-0.108	2.541	0.055
AUDFEE	+	0.198	4.879	0.014
Year Dummy		Included		
R^2		0.133		
N		1593		

This table reports the regression results on the relation between AC-Auditor Interlocking and auditor dismissal after the restatements occur. The dependent variable is DISMISS which is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. INTERLOCK is equal to 1 if there is an AC-Auditor Interlocking, and 0 otherwise. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 5 Panel A: Cross-Sectional Analyses for Auditor Dismissal-The Effect of Familiarity

Variable	Sign	Coefficient	Chisq	P	Coefficient	Chisq	P
INTERCEPT		-3.548	1.708	0.191	-3.670	1.690	0.193
NUM_INTERLOCK	**?**	**-0.481**	**4.131**	**0.042**			
OFFICE	**?**				**-0.119**	**1.920**	**0.092**
SIZE	-	0.171	0.802	0.185	0.139	0.476	0.490
LOSS	+	0.529	2.334	0.127	0.498	2.016	0.079
GC	+	1.604	3.768	0.026	1.364	2.624	0.053
LEVERAGE	+	0.955	3.053	0.040	1.041	3.803	0.026
MB	?	0.018	0.958	0.328	0.012	0.449	0.506
EMPLOYMENT	?	-1.556	1.653	0.199	-1.447	1.346	0.248
BOARDSIZE	?	-0.261	5.975	0.015	-0.254	5.760	0.017
ACSIZE	?	0.169	0.598	0.439	0.060	0.073	0.785
MGRCHG	+	0.330	0.668	0.414	0.275	0.504	0.240
BIG4	-	-0.614	0.587	0.222	-0.684	0.706	0.200
AUDTENURE	-	-0.035	0.034	0.427	-0.028	0.023	0.441
AUDFEE	+	0.279	1.266	0.130	0.274	1.145	0.143
Year Dummy		Included			Included		
R^2		0.170			0.151		
N		446			446		

This table reports the cross-sectional analyses results on the relation between AC-Auditor Interlocking and auditor dismissal after the restatements occur. The dependent variable is DISMISS which is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. INTERLOCK is equal to 1 if there is an AC-Auditor Interlocking, and 0 otherwise. NUM_INTERLOCK is the log number of non-restatement companies that share the audit committee member and the auditor with the restatement company. OFFICE is an indicator variable that is equal to 1 if the interlocking is formed at the audit office level, and 0 otherwise. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 5 Panel B: Cross-Sectional Analyses for Auditor Dismissal-The Effect of The Auditor's Quality

Variable	Sign	Coefficient	Chisq	P
INTERCEPT		-5.030	2.993	0.085
AVG_ABACCRUAL	**?**	**0.700**	**2.040**	**0.071**
SIZE	-	0.227	1.254	0.263
LOSS	+	0.455	1.588	0.209
GC	+	1.559	3.648	0.057
LEVERAGE	+	0.699	1.346	0.245
MB	?	0.007	0.116	0.735
EMPLOYMENT	?	-1.254	1.103	0.295
BOARDSIZE	?	-0.243	4.494	0.034
ACSIZE	?	-0.092	0.152	0.697
MGRCHG	+	0.171	0.160	0.686
BIG4	-	-0.569	0.360	0.552
AUDTENURE	-	0.006	0.001	0.974
AUDFEE	+	0.467	3.610	0.058
Year Dummy		Included		
R^2		0.162		
N		376		

This table reports the cross-sectional analyses results on the relation between AC-Auditor Interlocking and auditor dismissal after the restatements occur. The dependent variable is DISMISS which is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. INTERLOCK is equal to 1 if there is an AC-Auditor Interlocking, and 0 otherwise. AVG_ABACCRUAL is the average absolute abnormal accrual of the non-restatement companies that share the audit committee member and the auditor with the restatement company. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 6 Panel A: Regression Results for Abnormal Accruals

Variable	Sign	Coefficient	t	P
INTERCEPT		0.074	3.90	0.001
DISMISS	?	0.014	2.14	0.032
POSTRES	?	-0.004	-1.95	0.051
DISMISS*POSTRES	**?**	**-0.017**	**-2.10**	**0.036**
SIZE	-	-0.008	-7.02	0.001
LOSS	+	0.001	0.24	0.404
CFO	-	0.001	0.12	0.499
LEVERAGE	+	0.010	1.31	0.095
MB	+	0.001	0.32	0.374
RESTRUCT	+	-0.001	-0.21	0.837
MA	+	-0.003	-0.86	0.392
SI	+	0.005	1.70	0.045
SEGNUM	+	0.002	0.73	0.232
BIG4	-	-0.003	-1.23	0.109
FINANCING	+	0.009	3.46	0.001
Year Dummy		Included		
Industry Dummy		Included		
R^2		0.116		
N		2370		

This table reports the regression results for the effect of auditor dismissal on the subsequent abnormal accruals for companies with AC-Auditor Interlocking. The dependent variable is ABACCRUAL which is the absolute value of abnormal accruals using modified Jones Model. DISMISS is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. POSTRES is equal to 1 if a firm-year observation belongs to the post-restatement period which is the first three years after the restatement occurs. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 6 Panel B: Regression Results for Going Concerns

Variables	Sign	Coefficient	Chisq	P
Intercept		-6.278	49.16	0.001
DISMISS	?	-0.395	2.55	0.110
POSTRES	?	0.422	5.38	0.020
DISMISS*POSTRES	**?**	**0.547**	**3.17**	**0.075**
SIZE	-	-0.521	61.28	0.001
AGE	-	0.019	0.02	0.442
ROA	-	-0.398	6.29	0.006
CFO	-	-0.583	2.30	0.065
MB	-	0.000	0.60	0.219
SALEGROWTH	-	-0.023	1.21	0.136
FINANCING	-	-0.057	0.12	0.365
LEVERAGE	+	1.344	12.59	0.000
REPLAG	+	1.054	34.90	0.001
BIG4	+	0.171	0.92	0.169
Year Dummy		Included		
Industry Dummy		Included		
R^2		0.373		
N		1183		

This table reports the regression results for the effect of auditor dismissal on the subsequent going concern opinions for companies with AC-Auditor Interlocking. The dependent variable is GC which is equal to 1 if a company receives a going concern opinion in the fiscal year, and 0 otherwise. DISMISS is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. POSTRES is equal to 1 if a firm-year observation belongs to the post-restatement period which is the first three years after the restatement occurs, and 0 otherwise. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 7 Panel A: Second Stage Model for Abnormal Accruals

Variable	Sign	Coefficient	t	P
INTERCEPT		0.098	9.86	0.001
DISMISS	?	0.016	2.27	0.024
POSTRES	?	-0.004	-1.64	0.101
DISMISS*POSTRES	**?**	**-0.021**	**-2.56**	**0.010**
SIZE	-	-0.007	-7.43	0.001
LOSS	+	0.000	-0.07	0.945
CFO	-	-0.001	-0.12	0.450
LEVERAGE	+	0.005	0.81	0.209
MB	+	0.000	2.05	0.020
RESTRUCT	+	-0.002	-0.39	0.696
MA	+	-0.002	-0.58	0.561
SI	+	0.004	1.52	0.064
SEGNUM	+	0.002	1.06	0.145
BIG4	-	-0.002	-0.81	0.208
FINANCING	+	0.008	3.25	0.001
INVERSE_MILLS_RATIO	?	-0.008	-2.25	0.025
Year Dummy		Included		
Industry Dummy		Included		
R^2		0.118		
N		2370		

This table reports the regression results for second stage model (with Inverse Mills Ratio) of the audit quality analyses for companies with AC-Auditor Interlocking. The dependent variable is ABACCRUAL which is the absolute value of abnormal accruals using modified Jones Model. INVERSE_MILLS_RATIO is the inverse Mills ratio calculated from the first stage model. DISMISS is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. POSTRES is equal to 1 if a firm-year observation belongs to the post-restatement period which is the first three years after the restatement occurs. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 7 Panel B: Second Stage Model for Going Concerns

Variables	Sign	Coefficient	Chisq	P
Intercept		-8.286	60.88	0.001
DISMISS	?	-0.313	1.47	0.226
POSTRES	?	0.540	7.02	0.008
DISMISS*POSTRES	**?**	**0.667**	**3.95**	**0.047**
SIZE	-	-0.495	36.03	0.001
AGE	-	-0.167	1.42	0.117
ROA	-	-0.370	5.28	0.011
CFO	-	-0.735	3.76	0.026
MB	-	-0.001	3.64	0.028
SALEGROWTH	-	-0.020	1.31	0.126
FINANCING	-	-0.269	1.94	0.082
LEVERAGE	+	1.614	16.72	0.001
REPLAG	+	1.095	36.74	0.001
BIG4	+	0.037	0.03	0.431
INVERSE_MILLS_RATIO	?	1.653	10.31	0.001
Year Dummy		Included		
Industry Dummy		Included		
R^2		0.335		
N		1183		

This table reports the regression results for second stage model (with Inverse Mills Ratio) of the audit quality analyses for companies with AC-Auditor Interlocking. The dependent variable is GC which is equal to 1 if a company receives a going concern opinion in the fiscal year, and 0 otherwise. INVERSE_MILLS_RATIO is the inverse Mills ratio calculated from the first stage model. DISMISS is equal to 1 if the incumbent auditor is dismissed within 12 months after the restatement announcement, and 0 otherwise. POSTRES is equal to 1 if a firm-year observation belongs to the post-restatement period which is the first three years after the restatement occurs. Variables are defined in Table 2. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs. I winsorize the top and bottom 1% of each of the continuous variables to mitigate the influence of outliers. Standard errors are clustered by firm and year.

Table 8: Model Variable Definitions

Panel A: Model for audit fees

$LIT\_OFFICE_{i,t}$	1 if company i is a non-litigation client of a litigation office, and 0 if company i is a matched client of a non-litigation audit firm.
$LF\_NL\_OFFICE_{i,t}$	1 if company i is a client of a non-litigation office of a litigation audit firm, and 0 if company i is a matched client of a non-litigation audit firm.
$POSTLIT_{i,t}$	1 if the observation is from the post-litigation matched sample
$SIZE_{i,t}$	natural logarithm of company i's total assets at the end of year t.
$SALE_{i,t}$	sales scaled by total assets of company i at the end of year t.
$ROA_{i,t}$	net income scaled by total assets.
$SEGNUM_{i,t}$	number of segments of company i in year t.
$FOREIGN_{i,t}$	1 if company i has foreign income in year t, and 0 otherwise.
$LITINDUSTRY_{i,t}$	1 if company i is in a high litigation-risk industry, and 0 otherwise.
$EQUITYISSUE_{i,t}$	1 if company i issued equity in year t, and 0 otherwise.
$BKMK_{i,t}$	book to market ratio of company i at the end of year t..
$GC_{i,t}$	1 if company i received a going concern opinion for year t, and 0 otherwise.
$RESTATE_{i,t-1}$	1 if company i restated the financial statements in the prior two years, and 0 otherwise.
$BIG6_{i,t}$	1 if company i is audited by one of the Big 6 audit firms in year t, and 0 otherwise.
$DELAY_{i,t}$	natural log of the number of days between fiscal year-end and the audit report date

Table 8 (continued)

Panel B: Model for the new engagements

$LIT\_OFFICE_{i,,(t-3,t-1)}$	1 if a company is a client of an audit office that was responsible for a lawsuit filed in the prior three years, and zero if a company is a client of a non-litigation audit firm.
$LF\_NL\_OFFICE_{i,(,t-3,t-1)}$	1 if a company is a client of an auditor that had a lawsuit filed against it in the prior three years, but is not audited by the office responsible for the lawsuit, and zero if a company is a client of a non-litigation audit firm.
$LIT\_OFFICE_{i,,(t+1,t+3)}$	1 if a company is a client of an audit office that was responsible for a lawsuit filed in the following three years, and zero if a company is a client of a non-litigation audit firm.
$LF\_NL\_OFFICE_{i,(,t+1,t+3)}$	1 if a company is a client of an auditor that had a lawsuit filed against it in the following three years, but is not audited by the office responsible for the lawsuit, and zero if a company is a client of a non-litigation audit firm.
$SIZE_{i,t}$	natural logarithm of company i's total assets at the end of year t.
$LITINDUSTRY_{i,t}$	1 if company i is in a high litigation-risk industry, and 0 otherwise.
$BKMK_{i,t}$	book to market ratio of company i at the end of year t.
$GC_{i,t}$	1 if company i received a going concern opinion for year t, and 0 otherwise.
$ROA_{i,t}$	Return on assets of company i at the end of year t.
$RESTATE_{i,t-1}$	1 if company i restated its financial statements during the prior two years, and 0 otherwise.
$ABACCRUAL_{i,t-1}$	Absolute abnormal accrual of company i in year t-1 based on the modified Jones model.
$BIG6_{i,t}$	1 if company i is audited by one of the Big 6 audit firms in year t, and 0 otherwise.
$BUSYMONTH_{i,t}$	1 if company i's fiscal year-end falls in December, January or February, and 0 otherwise.
$CLI\_IMPORTANCE_{i,t}$	Company i's audit fee as a percentage of the audit office's total revenue during year t.

Table 9 Descriptive Statistics

	LIT_OFFICE CLIENTS N=3,150		CONTROL N=3,150				LF_NL OFFICE CLIENTS N=7,988		CONTROL N=7,988			
	MEAN	MEDIAN	MEAN	MEDIAN	t	Z	MEAN	MEDIAN	MEAN	MEDIAN	t	Z
AUDFEE	13.27	13.33	12.49	12.32	28.75*	27.29*	13.12	13.20	12.67	12.57	27.81*	27.73*
SIZE	5.68	5.61	4.79	4.72	22.70*	21.87*	5.41	5.39	5.01	4.84	15.89*	16.01*
SALE	1.06	0.88	1.13	0.92	-2.90*	-2.22†	1.06	0.86	1.10	0.89	-2.62*	-2.57*
ROA	-0.05	0.02	-0.04	0.02	-0.76	-0.95	-0.06	0.02	-0.05	0.02	-1.22	-1.58
BKMK	0.60	0.47	0.74	0.58	-2.99*	-2.14†	0.66	0.52	0.72	0.58	-7.43*	-7.18*
SEGNUM	4.87	4.00	4.31	4.00	8.16*	7.67*	4.57	4.00	4.23	4.00	7.67*	7.23*
FOREIGN	0.38	0.00	0.27	0.00	10.32*	10.24*	0.34	0.00	0.28	0.00	9.62*	9.59*
LITINDUSTRY	0.36	0.00	0.33	0.00	1.11	1.11	0.33	0.00	0.32	0.00	1.59	1.59
EQUITYISSUE	0.16	0.00	0.16	0.00	0.23	0.23	0.14	0.00	0.18	0.00	-6.56*	-6.55*
GC	0.05	0.00	0.04	0.00	2.43†	2.43†	0.05	0.00	0.05	0.00	0.05	0.05
RESTATE	0.07	0.00	0.09	0.00	-1.17	-1.17	0.07	0.00	0.09	0.00	-4.08*	-4.08*
BIG6	0.89	1.00	0.08	0.00	61.92*	65.09*	0.80	1.00	0.11	0.00	123.51*	89.46*
DELAY	4.09	4.13	4.16	4.23	-1.40	-1.35	4.15	4.19	4.21	4.28	-1.89‡	-1.82‡

Variables are defined in Table 1.* significant at the 0.01 level; † significant at the 0.05 level; and ‡ significant at the 0.10 level.

Table 10: Post-litigation Audit Fees of Litigation Audit Offices and LF_NL Offices

DV=AUDFEE

Parameter	predicted sign	Estimate	t Value	Pr > |t|	Estimate	t Value	Pr > |t|
Intercept		7.554	24.10	0.001	8.287	21.19	0.001
LIT_OFFICE	?	0.036	1.35	0.177			
LIT_OFFICE*POSTLIT	?	0.056	2.18	0.030			
LF_NL_OFFICE					0.083	2.80	0.005
LF_NL_OFFICE*POSTLIT					-0.013	-0.43	0.667
POSTLIT	?	-0.015	-0.70	0.487	0.025	1.02	0.307
SIZE	+	0.445	51.87	0.001	0.436	52.98	0.001
SALE	+	0.112	7.68	0.001	0.130	11.56	0.001
ROA	-	-0.278	-8.83	0.001	-0.274	-10.56	0.001
BKMK	-	-0.021	-3.42	0.001	-0.025	-4.71	0.001
SEGNUM	+	0.034	9.87	0.001	0.029	7.78	0.001
FOREIGN	+	0.278	11.50	0.001	0.270	11.31	0.001
LITINDUSTRY	+	0.018	0.56	0.288	0.068	1.78	0.038
EQUITYISSUE	+	0.157	6.98	0.001	0.183	9.27	0.001
GC	+	0.068	1.69	0.045	0.135	3.16	0.001
RESTATE	+	0.200	5.94	0.001	0.215	5.71	0.001
BIG6	+	0.389	13.71	0.001	0.369	11.33	0.001
DELAY	+	0.297	7.71	0.001	0.162	4.56	0.001
		N=6,300			N=15,976		
		No. of LIT_OFFICE Clients=3,150			No. of LF_NL_OFFICE Clients=7,988		
		Rsq=0.813			Rsq=0.776		

This table reports the regression results on the relation between auditor litigation and audit fee strategies for the litigation audit offices and litigation audit firms' non-litigation offices. The sample period is from 2000 to 2011. The dependent variable is the natural logarithm of the audit fee. *LIT_OFFICE* equals one if a company is a client of an audit office that had a lawsuit filed against it in the prior three years or in the following three years, and zero otherwise. *LF_NL_OFFICE* equals one if a company is a client of an auditor that had a lawsuit filed against it in the prior three years or in the following three years, but is not audited by the office responsible for the lawsuit, and zero otherwise. *POSTLIT* equals one if an observation is from the post-litigation matched sample, and zero otherwise. Variables are defined in Table1. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs.

Table 11: The Effect of Clients' Switching Costs on the Post –litigation Audit Fees of Litigation Offices

DV=AUDFEE

		HIGH_ ABACCRUAL =0			HIGH_ ABACCRUAL =1		
Parameter	predicted sign	Estimate	t Value	Pr > |t|	Estimate	t Value	Pr > |t|
Intercept		7.035	16.350	0.001	7.821	21.400	0.001
POSTLIT	?	-0.010	-0.340	0.735	-0.014	-0.480	0.630
LIT_OFFICE	?	0.167	5.350	0.001	0.103	3.510	0.001
LIT_OFFICE*POSTLIT	?	0.007	0.200	0.842	0.100	2.790	0.005
SIZE	+	0.442	34.840	0.001	0.443	41.220	0.001
SALE	+	0.111	5.080	0.001	0.100	5.530	0.001
ROA	+	-0.450	-8.330	0.001	-0.230	-6.710	0.001
BKMK	-	-0.005	-0.520	0.151	-0.029	-3.880	0.001
SEGNUM	+	0.033	6.790	0.001	0.032	7.430	0.001
FOREIGN	+	0.326	9.420	0.001	0.248	8.210	0.001
LITINDUSTRY	+	0.013	0.250	0.400	0.032	0.770	0.221
EQUITYISSUE	+	0.200	6.120	0.001	0.119	4.230	0.001
GC	+	0.059	0.760	0.225	0.113	2.510	0.006
RESTATE	+	0.172	3.570	0.001	0.217	4.690	0.001
BIG6	+	0.428	9.910	0.001	0.371	10.200	0.001
DELAY	+	0.316	4.960	0.001	0.317	9.720	0.001
			N=3,150			N=3,150	
			Rsq=0.835			Rsq=0.802	

This table reports the regression results on how the client's prior financial reporting quality affects the relation between auditor litigation and audit fee strategies for the litigation audit offices. The sample period is from 2000 to 2011. The dependent variable is the natural logarithm of audit fee. *LIT_OFFICE* equals one if a company is a client of an audit office that had a lawsuit filed against it in the prior three years or in the following three years, and zero otherwise. *POSTLIT* equals one if an observation is from the post-litigation matched sample, and zero otherwise. ABACCRUAL is the client's absolute value of abnormal accruals in the previous year. HIGH_ ABACCRUAL is equal to 1 if ABACCRUAL is greater than the median of the sample, and 0 otherwise. Variables are defined in Table1. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs.

Table 12: The Effect of Bargaining Power on the Post-litigation Audit fees of Litigation Offices

DV=AUDFEE

		BIGCLI=1			BIGCLI=0		
Parameter	predicted sign	Estimate	t Value	Pr > |t|	Estimate	t Value	Pr > |t|
Intercept		7.319	20.810	0.001	7.837	11.110	0.001
POSTLIT	?	0.030	0.970	0.330	-0.022	-1.100	0.271
LIT_OFFICE	?	0.293	4.430	0.001	0.196	8.640	0.001
LIT_OFFICE*POSTLIT	?	0.042	0.460	0.649	0.054	2.210	0.027
SIZE	+	0.452	23.940	0.001	0.423	45.510	0.001
SALE	+	0.081	3.790	0.001	0.119	8.290	0.001
ROA	-	-0.354	-7.240	0.001	-0.250	-7.100	0.001
BKMK	-	-0.014	-1.210	0.113	-0.021	-2.910	0.002
SEGNUM	+	0.031	3.940	0.001	0.032	9.370	0.001
FOREIGN	+	0.272	5.130	0.001	0.289	11.770	0.001
LITINDUSTRY	+	0.039	0.570	0.289	0.029	0.840	0.200
EQUITYISSUE	+	0.108	2.480	0.065	0.205	8.250	0.001
GC	+	0.047	0.600	0.275	0.115	2.480	0.065
RESTATE	+	0.188	2.890	0.002	0.202	5.380	0.001
BIG6	+	0.500	10.530	0.001	0.429	10.570	0.001
DELAY	+	0.336	5.430	0.001	0.309	7.580	0.001
			N=1592			N=4708	
			Rsq=0.827			Rsq=0.825	

This table reports the regression results on how the client's bargaining power affects the relation between auditor litigation and audit fee strategies for the litigation audit offices. The sample period is from 2000 to 2011. The dependent variable is the natural logarithm of the audit fee. *LIT_OFFICE* equals one if a company is a client of an audit office that had a lawsuit filed against it in the prior three years or in the following three years, and zero otherwise. *POSTLIT* equals one if an observation is from the post-litigation matched sample, and zero otherwise. *BIGCLI* equals 1 if the audit fee paid by the client is greater than 10% of the audit office's total revenue during the year, and 0 otherwise. Variables are defined in Table1. P-values are one tailed for variables with predicted signs, and two tailed for variables without predicted signs.

Table 13: The Post-litigation Likelihood of New Engagements

DV=NEWENG

	Estimate	Wald Chi-Square	p-value
Intercept	-1.360	172.866	0.001
$LIT\_OFFICE_{(t-3,t-1)}$	-0.549	5.213	0.022
$LF\_NL\_OFFICE_{(t-3,t-1)}$	-0.725	5.139	0.023
$LIT\_OFFICE_{(t+1,t+3)}$	0.034	0.025	0.874
$LF\_NL\_OFFICE_{(t+1,t+3)}$	-0.471	1.995	0.158
SIZE	-0.116	10.360	0.001
LITINDUSTRY	0.017	0.042	0.837
BKMK	0.033	3.422	0.064
GC	0.181	5.957	0.015
ROA	0.066	4.713	0.030
RESTATE	0.785	83.647	0.001
ABACCRUAL	0.183	3.238	0.072
BIG6	-0.408	1.614	0.204
BUSYMONTH	-0.016	0.119	0.730
CLI_IMPORTANCE	0.010	0.003	0.960

N=31,184

Rsq=0.094

This table reports the regression results on the relation between auditor litigation and the likelihood of new engagements in the first three years after the litigation begins. The sample period is from 2000 to 2011. The dependent variable is *NEWENG* which equals 1 if the firm-year observation is a new client of the audit office, and 0 otherwise. Variables are defined in Table1.

Table 14: Client Characteristics for New Engagements in the Pre-litigation and Post-litigation Periods

Panel A: Litigation offices

	Pre-litigation N=298	Post-litigation N=117	t/Chi-Square	p-value
SIZE	5.643	6.110	-2.280	0.023
LITINDUSTRY	0.332	0.308	0.040	0.967
BKMK	0.519	0.458	0.640	0.525
GC	0.045	0.028	2.160	0.031
ROA	-0.121	-0.036	-1.500	0.134
RESTATE	0.097	0.145	-0.870	0.383
ABACCRUAL	0.116	0.127	-0.610	0.545
LEVERAGE	0.276	0.198	2.160	0.031
BUSYMONTH	0.742	0.803	-0.990	0.324

This table compares the mean characteristics of the new clients of the litigation audit offices during the three years prior to the beginning of the litigation and in the first three years after the litigation begins. Variables are defined in Table1.

Panel B: Litigation firms' non-Litigation offices

	Pre-litigation N=750	Post-litigation N=365	t/Chi-Square	p-value
SIZE	5.544	5.460	0.640	0.521
LITINDUSTRY	0.297	0.323	-0.880	0.378
BKMK	0.542	0.480	0.700	0.482
GC	0.038	0.040	-0.110	0.913
ROA	-0.110	-0.082	-0.980	0.329
RESTATE	0.164	0.148	0.690	0.492
ABACCRUAL	0.137	0.129	0.600	0.552
LEVERAGE	0.267	0.241	1.390	0.165
BUSYMONTH	0.751	0.707	1.560	0.119

This table compares the mean characteristics of the new clients of the litigation audit firms' non-litigation offices (LF_NL offices) during the three years prior to the beginning of the litigation and in the first three years after the litigation begins. Variables are defined in Table1.