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Auditor Resource Constraints and the Determinants of Client-Continuance Decisions

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DEDICATIONS

This work is dedicated to my wife, Emily R. Conley. I would have never been able to earn this degree without your devoted love and continuous support. I am so glad you accompanied me on this journey and am ecstatic for the adventures to come.

This work is also dedicated to my children, Sebastian, and Isla. Sebastian, thank you for helping me see the important things in life. Sebastian, the lessons we've learned together made completing this goal possible. Isla, thank you for your sweet smiles and needed distractions.

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ABSTRACT

Past research has examined the effect of resource constraints on client-continuance decisions, but no studies to date have examined how these resource constraints affect the relation between various determinants and client-continuance decisions. In this study, I examine whether the determinants of auditor client-continuance decisions vary with the auditor's resource constraints, proxied for by whether the client has a December year-end (i.e., busy season client) versus a non-December year-end. I posit that auditors are more sensitive to client risks when anticipated resources are constrained. I find that some determinants of auditor client-continuance decisions differ between busy season and non-busy season clients, suggesting that auditors allow anticipated resource constraints to affect their client-continuance decisions. On average, across the full sample, auditors are less likely to continue working with busy season clients that issue non-timely 10-k filings (audit risk) and have higher market-value of equity (litigation risk) relative to non-busy season clients that also issue non-timely 10-K filings and have higher market-value of equity. For the auditor-client relationships that continue, auditors allocate more resources to busy season clients with low earnings quality and risky account balances (audit risk), as well as weak financial performance (financial risk) relative to non-busy season clients.

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1. INTRODUCTION

In this study, I examine whether the determinants of auditor client-continuance decisions vary with the auditor's resource constraints, proxied for by whether the client has a December year-end (i.e., a busy season client) versus a non-December year-end. During the preliminary engagement activities, auditors are supposed to anticipate potential risks and evaluate whether to continue or discontinue their relationship with the client. Client-continuance decisions are important to audit firms because the auditor's choice to maintain a relationship with the client means continuing with client-specific risks (e.g., weak internal controls, incentives to manipulate earnings, etc.). However, it is unclear whether auditors respond to client risks differently when their resources are constrained.

The Public Company Accounting Oversight Board (PCAOB) planning standards dictate that auditors assess the nature, timing, and extent of resources needed to complete an audit (PCAOB AS 2101, par. 10). Additionally, auditors' quality control (QC) policies state, "Auditors only continue auditing clients for whom the auditor can reasonably expect to complete audits with professional competence based on assessments of the risks of material misstatement for the client" (PCAOB QC 20, par. 15). In order to respond to higher risks of material misstatement, auditors can allocate resources in three ways: obtain more evidence (quantity); obtain higher-quality evidence (quality); or obtain evidence closer to year-end (timing). Alternatively, if the risks are too high and the auditor's costs to obtain sufficient evidence to offset those risks are too high, the auditor can decide to end the auditor-client relationship, thereby eliminating the risks associated with that client from the auditor's client portfolio.

Auditor resource allocation is particularly important for busy season clients because the timing of these engagements forces auditors to operate at maximum capacity. During busy

season, auditors try to maximize their audit efficiency while minimizing exposure to the risks of litigation claims or reputational costs due to failed audits (i.e., audits that fail to discover a material misstatement) (Biery 2018; DeZoort and Lord 1997). Because higher-risk audits require more time, more evidence, and/or more audit procedures closer to the client's fiscal year-end, higher-risk clients can encumber a substantial portion of available resources during busy season, leaving fewer resources available for other engagements. In contrast, during the non-busy season, while these firms have roughly similar resources available year-round, the non-busy season presents only a fraction of busy season's client demands, thus making it less likely that resources assigned to riskier clients will take resources from the remaining clients. Anecdotally, during the non-busy season, audit staff are in the office waiting to be assigned to an engagement, which suggests that plenty of resources are available to audit higher risk clients.[1]

Prior literature finds that auditor changes are more likely for companies with indications of earnings management (audit risk), financial distress (financial risk), or legal liability exposure (litigation risk). (Ghosh and Tang 2015; Johnstone and Bedard 2004; Kim and Park 2014; Krishnan, Sun, and Yang 2013; Landsman, Nelson, and Rountree 2009; Mande and Son 2013; Shu 2000). Some auditor changes are also initiated by the client. Whether the auditor resigns, increases fees to the extent that the client does not want to continue, or does not discount the audit fees to the point at which the client will retain them, auditor changes are often viewed from the perspective of an auditor's client-continuance decisions (Bockus and Gigler 1998). Auditors are less likely to continue working with clients with poor financial reporting quality (audit risk), financial distress (financial risk), or legal liability exposure (litigation risk).

[1] Auditors are still responsible for reviewing quarterly financial statements or auditing benefit plans in the non-busy season, but the quantity of resources needed to review quarterly financial statements and audit benefit plans is not nearly as demanding as auditing annual financial statements (Lopez and Peters, 2011).

Theory on resource constraints suggests that pressure and stress are a function of environmental demand, constraints, resources and the balance thereof (French, Caplan, and Van Harrison 1982; Lazarus 1995; Spielberger and Reheiser 1995). In an auditing context, prior literature consistently finds that resource constraints in the form of time pressure negatively impact the effectiveness of auditor tasks (Alderman and Deitrick 1982; Bills, Swanquist, and Whited 2016; DeZoort and Lord 1994; Kelly and Margheim 1990; Rhode 1978). Because resources are naturally constrained during busy season, I hypothesize that concerns about workload constraints could affect the determinants of auditors' client-continuance decisions. In other words, auditors may be more sensitive to factors that increase the audit's riskiness – such as the risk of material misstatement (audit risk), financial distress (financial risk), or legal liability exposure (litigation risk) for busy season clients than for non-busy season clients.

My sample includes 31,839 auditor-client engagement observations during the period from 2004 through 2015. Using Audit Analytics, I identify all 8-K announcements for auditor switches to proxy for the auditors' client-continuance decisions. Following prior literature, I estimate the determinants of client continuance using three types of audit engagement risk factors: (1) audit risk (or risk of issuing an incorrect audit opinion), measured as an absolute value of discretionary accruals (following Dechow, Sloan, and Sweeny, 1995), revenue growth, internal control over financial reporting weakness, non-timely financial reporting (Wang, Raghunandan, and McEwen 2013), mergers and acquisitions, and the ratio of inventory and receivables to total assets; (2) financial risks (or client business risks), measured as return on assets, whether the client experienced a loss in the prior year, the ratio of leverage to total assets, the ratio of cash to total assets, and the Altman Z-score (1968) as modified by Shumway (2001);

and (3) litigation risks, measured according to the client's market-value of equity and the highly litigious industries, following Matsumoto (2002).

For many of the factors examined, there is no difference in auditor client-continuance decisions between busy-season and non-busy season clients, suggesting that auditors did not allow anticipated resource constraints to affect their client-continuance decisions. However, consistent with my hypothesis, I find a few instances where auditors have risk preferences that are different when their resources are constrained (i.e., the client is audited during busy season) compared to when resources are not constrained. First, on average across the full sample, auditors are less likely to continue working with busy season clients who were late filing their annual financial statements with the SEC (audit risk) and had high market-value of equity (litigation risk) compared to non-busy season clients. Second, during the post-SOX period, auditors were less likely to continue working with busy season clients with a material weakness of internal controls (audit risk), high leverage (financial risk), and high market-value of equity (litigation risk) compared to non-busy season clients. Third, Big Four auditors are less likely to continue working with busy season clients with a material weakness of internal controls (audit risk), high leverage (financial risk), and high market-value of equity (litigation risk) compared to non-busy season clients. The overall lack of significant differences between busy and non-busy seasons may be attributed to client-acceptance decisions made with these risks and anticipated resources in mind. Therefore, I examine a sample of auditor-client engagements that do not switch in the prior year to examine how auditors respond to client risk when resources are constrained. I find that more resources are allocated to earnings quality and risky account balances (audit risk), and clients with weak financial performance (financial risk). These results suggest that auditors are strategic with *initial* client-acceptance decisions and either engage with

clients who fit their risk preferences or allocate additional resources to address the client's risk. Thus, auditors do not always have to weigh the risks of busy versus non-busy season when reevaluating these clients during *continuance* decisions.

My study makes a number of contributions to the audit literature. First, I add to the literature on auditor client-continuance by demonstrating the importance of resource constraints on the determinants of auditor client-continuance decisions. Second, I provide evidence suggesting that, as seen in client-continuance decisions and audit effort, auditors' sensitivity to audit, financial, and litigation risk does differ depending on the resources available. Third, this study sheds some light on the asymmetric preferences of auditors during the client-continuance decision-making process. Finally, this study contributes to regulators, specifically the PCAOB and their inspections of an audit firm's quality control effectiveness, which includes inspecting how the auditor addresses the risks of their clients. These results should be of interest to the PCAOB in determining whether these asymmetric risk preferences are in line with PCAOB expectations and standards.

In the next section, I document the prior literature and hypothesis development. Section Three describes the model development and the determinants included therein (i.e., audit risk, financial risk, and litigation risk), after which, I discuss my results and additional analysis. The final section concludes my study.

2. PRIOR LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1 Client-Continuance Decisions

Each year, the auditor must decide whether to continue or end the audit engagement with each client. Client-continuance decisions are important to every audit firm's overall quality control because they are a tool to manage the auditor's exposure to clients with certain negative characteristics that should be avoided (e.g., the client has a bad reputation or poor financial reporting quality). However, the PCAOB audit standards are vague and provide little insight as to what auditors should consider when making the client-continuance decisions, possibly because even the highest-risk clients need assurance services, and specific standards could deter auditors from accepting them. Audit engagement planning guidance and quality control standards require the auditor to consider modifying engagement terms or discontinuing the auditor-client relationship in response to identified risks (PCAOB AS 2101, par. 6a). This guidance requires the auditor to consider information from the previous audit: the environment, the management's "tone at the top," and other factors that could adversely affect the integrity of the audit and professional service provided (PCAOB AS 2105, par .5).

Client-continuance procedures should be designed to provide reasonable assurance that the firm (1) "appropriately consider the risks associated with providing professional services in the particular circumstances", and (2) "undertakes only those engagements that the firm can reasonably expect to be completed with professional competence" (PCAOB QC 20, par. 15). The auditor is also responsible for establishing policies and procedures that obtain an understanding of the client to minimize the risk of misunderstanding the nature, scope, and limitations of audit services to be performed (PCAOB QC 20, par. 16). Therefore, auditors must evaluate the client's

risks and the audit firm's capability to manage those risks to determine whether continuing the auditor-client relationship is in line with applicable professional standards.

In addition to these standards, prior literature has shed light on the topic of client-continuance through interviews and empirical studies. Gendron (2002) discusses the decision-making process of client acceptance and retention and how the client-continuance decision is more difficult than the initial acceptance, while Bockus and Gigler (1998) use analytical modeling to explain why audit firms discontinue their relationship with clients based on client risk. They show that litigation risk is more likely to result in an auditor discontinuing the auditor-client relationship, which is consistent with archival results examining auditor changes and litigation risk. Shu (2000) finds that client legal exposure and increased client legal exposure also affect the auditor's client-continuance decision. Other studies examine how the auditor's overall portfolio risk and shifts in overall portfolio risk affect the client continuance decision. These studies demonstrate that auditors shed clients with higher risk (Johnstone and Bedard 2004; Landsman et al. 2009; Schroeder and Hogan 2013).

For example, following the Sarbanes–Oxley (SOX) Act and the collapse of Arthur Andersen, the Big Four firms were faced with a potential influx of new clients. Instead of dividing all the clients among the remaining Big Four, studies find that the Big Four accepted the higher quality Andersen clients and shed existing riskier clients to realign the overall portfolio risk with the influx of potential clients (Landsman et al. 2009). These client-continuance decisions and portfolio rebalancing were based on concerns about (1) the increased workload post-SOX (due to new requirements about testing internal controls) and (2) auditors becoming more conservative about the client-level risks they were willing to maintain (Landsman et al. 2009). Empirically, Landsman et al. (2009) find that changes in client portfolios post-Andersen

and post-SOX were driven by concerns about auditor-client misalignment, rather than by concerns about client risk.

Following the implementation of AS No. 5, which reduced a substantial amount of internal control testing required post-SOX, Schroeder and Hogan (2013) examine whether auditors' concerns about lost revenues would encourage auditors to take on riskier clients compared to the post-SOX period. Contrary to these concerns, Schroeder and Hogan (2013) find that Big Four auditors' portfolio risk, after the implementation of AS No. 5, was unchanged, and auditors continued to decrease the probability of auditor-client misalignment, even under pressures to lower fees.

2.2 Effects of Resource Constraints

The literature on resource constraints suggests that pressure and stress are a function of environmental demand, constraints, resources and the balance thereof (French et al. 1982; and Lazarus 1995; Spielberger and Reheiser 1995). The empirical evidence in auditing studies consistently documents how resource constraints decrease the effectiveness of auditors (Alderman and Deitrick 1982; Bills et al. 2016; DeZoort and Lord 1994; Kelly and Margheim 1990; McDaniel 1990; Rhode 1978). For example, Bills et al. (2016) find that audit offices with high client growth that subject their staff to a higher workload have lower audit quality. McDaniel (1990) finds that audit effectiveness decreases with time pressure, with or without structure. Moreover, pressure affects individuals differently depending on the necessary tasks performed and the level of experience.[2]

Many studies have documented the negative effects of pressure on the ability to audit effectively. However, the accounting literature has done little to examine whether auditors

[2] Workload/time pressure, client pressure, and litigation pressure all impact task efficiency and effectiveness. DeZoort and Lord (1997) provide a review and synthesis of the effects of pressure in accounting research .

behave differently or are more sensitive to certain risks than to others during the client-continuance decision-making process.

2.3 Hypothesis Development

One of the most commonly discussed topics in practitioner blogs and articles is the increased effort required during busy season. This time period typically extends from January to March and requires auditors to work an elevated number of hours each week (often more than 14 hours per day [Butcher, 2016]) to meet deadlines for busy season clients. Moreover, the hours worked during busy season are similar to the hours worked in investment banking, but without the increase in pay (Butcher 2016; 2017). Busy season clients make up 64% of an auditor's fees in a given year (Lopez and Peters 2012), and these clients all have 10-K filing requirements ranging from 60 to 90 days following year-end. While auditors have gone to substantial lengths to improve the effectiveness of interim testing (Appelbaum, Kogan, and Vasalheyli 2017), auditing standards suggest that auditors should wait closer to year-end when auditing their client's highest-risk accounts and assertions (e.g., inventory valuation, accounts receivable confirmation, and management's estimates) (PCAOB AS 2301, par. 14). Thus, a substantial amount of work will always remain in the busy season.

Empirical studies document how auditors allocate resources based on engagement characteristics such as size, industry affiliation, client complexity, risk, and non-audit services (Choi, Kim, and Zang 2010; Eshleman and Guo 2014; Hackenbrak and Knechel 1997). There is a positive relation between the client's risk and the hours worked on the audit engagement (Bell, Landsman, and Shackelford 2001), and auditors are not always able to recoup the costs of the additional effort required to offset client risk (Bockus and Gigler 1998). Bell et al. (2001) find that, on average, the profit margin on clients with more risk is not higher than the profit margin

for clients with lower risk. These results suggest that audit effort is allocated to riskier clients to avoid the negative consequences of a failed audit. Other studies find that auditors examine the client's characteristics and continue with more attractive clients (Johnston and Bedard 2004). Thus, auditors have incentives to shed these riskier clients and to shift effort to less risky ones, especially when resources are constrained.

The demand for assurance services and audit resources are higher during the busy season than during the non-busy season, creating a high-pressure environment. Approximately 67% of all audit opinions are issued during busy season; however, auditor resources are relatively fixed. Higher risk clients take up a substantial portion of busy season resources because higher risk requires more time, more evidence, and or evidence closer to year-end, leaving fewer resources available for other engagements. In contrast, during the non-busy season, auditors have roughly the same resources available, yet have a fraction of the client demands, making it less likely that resources assigned to riskier clients will take away from the remaining clients. Therefore, it is reasonable to expect resource constraints in the form of time pressure to produce differences between auditors' risk preferences for busy season and non-busy season clients.

Considering the relation between the busy season and resource constraints, I posit that auditors will have different risk preferences for client-continuance decisions for busy season clients when resources are more constrained than with the non-busy season clients when auditors have more unencumbered resources. Stated in the alternative form:

H1: The determinants of client-continuance will differ between busy season and non-busy season clients.

Based on the relation between the busy season and resource allocation, I posit that auditors who continue working with their clients adjust their audit fees to mitigate the anticipated

audit, financial, and litigation risks for busy season clients compared to non-busy season clients. Stated in the alternative form:

H2: When an auditor-client relationship continues from year t-1 to year t, the determinants of client-continuance will differ between busy season and non-busy season clients.

3. MODEL DEVELOPMENT

I focus on the effect that the anticipated resource constraints of auditing during busy season have on determinants of auditor client-continuance decisions (i.e., audit, financial, and litigation). In the remainder of this section, I will discuss each of these determinants, beginning with audit risk.

3.1 Audit Risk

The PCAOB defines audit risk as "the risk that the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated, i.e., the financial statements are not presented fairly in conformity with the applicable financial reporting framework." Audit risk is a function of the risk of material misstatement and detection risk (PCAOB AS 1101, par. 4). Detection risk is the type and amount of evidence that an auditor obtains to offset the risk of material misstatement; the higher the risk of material misstatement, the higher the quality and quantity of audit evidence that the auditor must obtain. However, detection risk is unobservable. Therefore, I proxy for audit risk using client characteristics that have been shown to be associated with the risk of material misstatement. Specifically, I use abnormal discretionary accruals using performance-adjusted modified Jones model (Dechow et al. 1995; Jones 1991), following (Kothari et al. 2005), to proxy for earnings quality (Doyle, Weili, and McVay 2007).[3] I include revenue growth to proxy for the risk associated with clients with significant expansion (Woo and Koh 2001). The risk of material misstatement is also high for clients with weak internal controls over the financial reporting process (Knechel and Payne 2001), thus, I include whether the company reported a disclosure control weakness in Section 302 or 404 report. I also

[3] Using all firms in Compustat with available data, I estimate the absolute value of discretionary accruals (ABS_DA) cross-sectionally by year and two-digit SIC industry following Kothari et al. (2005). Thus, I estimate the performance-adjusted modified Jones model (Jones 1991; Dechow et al. 1995) by including lagged return-on-assets and retaining only those industry-years with a minimum of 10 observations.

include whether the client issued the annual financial statement late (non-timely filing notice) to proxy for alternative risk factors captured due to delays in the financial statement issuing process (Wang et al. 2013). Finally, to incorporate the determinants that increase the inherent risk of an audit due to complex transactions and risky balances, I include the ratio of inventory and receivables to total assets and an indicator variable equal to 1 if the client experiences a significant merger and acquisition activity during the current year (Krishnan 1994).

3.2. Financial Risk

Clients with weak financial performance have increased incentives to manipulate the financial statements (Choi, Doogar, and Ganguly 2004; Johnstone and Bedard 2004). Additionally, clients in financial distress may be less likely to maintain their relationship with the auditor in due to the risk of bankruptcy, so auditors may not be able to recoup their investments in the auditor–client relationship (Jones and Raghunandan 1998; Morgan and Stocken 1998). To proxy for financial risk, I include return on assets, an indicator variable for clients experiencing a loss, the ratio of debt to total assets, and the ratio of cash to total assets. I also include a measure of bankruptcy risk (Landsman et al. 2009; Schroeder and Hogan 2013; Shumway 2001).

3.3 Litigation Risk

As described previously, one of the leading determinants of an auditor's client-continuance decision is the probability that the engagement will result in litigation for the auditor. Litigation risk is the risk that the auditor is sued by the client's shareholders. This risk is also referred to as the auditor's business risk (Schroeder and Hogan 2013). To proxy for litigation risk, I include the log of the market value of equity. Larger clients are more likely to be sued; they also have higher switching costs (Palmrose and Scholz 2004). Because high-risk industries are more likely to be sued than other industries, I follow Schroeder and Hogan (2013)

and include an indicator variable equal to 1 if the company is included in a high-risk industry as defined by Matsumoto (2002), and 0 if otherwise.

3.4 Empirical Model

My analysis of auditor client-continuance decisions follows Lopez and Peters (2011) and Schroder and Hogan (2013). I extend these studies with a focus on anticipated resource constraints, which I posit to be an important factor in client-continuance decisions. To test *H1*, I estimate a client-continuance decision determinants model, and interact with each of the determinants with BUSY, an indicator variable equal to 1 for clients with a December year-end, and 0 otherwise. Specifically, I estimate the following logistic regression model of the likelihood of the client switching from one audit firm to another as a function of the auditor's resource constraints and the client risk variables:

$$SWITCH_{it+1} = \beta_0 + BUSY + Audit\ Risk_{it} + Audit\ Risk_{it} * BUSY + Financial\ Risk_{it} + Financial\ Risk_{it} * BUSY + Litigation\ Risk_{it} + Litigation\ Risk_{it} * BUSY + \varepsilon_{it} \quad [1]$$

$$SWITCH_{it+1} = \beta_0 + Audit\ Risk_{it} + Financial\ Risk_{it} + Litigation\ Risk_{it} + \varepsilon_{it} \quad [2]$$

where:[4]

BUSY, my measure of resource constraint, is the independent variable of interest, and SWITCH is my measure of the likelihood of auditor client-continuance. Directional predictions for the coefficients on the interaction terms are based on findings in prior studies (Bills et al. 2013; Johnstone and Bedard 2004; Landsman et al. 2009; Lopez and Peters 2011; Schroeder and Hogan 2013). The proxies for each type of risk are described above and defined in Table 1.

To test *H2,* in which I investigate the effects of anticipated resource constraints on audit effort allocation when the auditor-client relationship continues, I modify the models [1] and [2].

[4] This model uses client-continuance determinants from Lopez and Peters (2011) and Schroder and Hogan (2013), as described previously.

Specifically, I estimate the following ordinary least squares regression model of the affect busy season has on the relation between an audit effort and the determinants of client continuance decisions for auditor-client relationships that did not realign in the previous year:

$$LN\_AUDFEE_t = \gamma_0 + BUSY + Audit\ Risk_{it} + Audit\ Risk_{it} * BUSY + Financial\ Risk_{it} + Financial\ Risk_{it} * BUSY + Litigation\ Risk_{it} + Litigation\ Risk_{it} * BUSY + \varepsilon_{it} \quad [3]$$

$$LN\_AUDFEE_t = \gamma_0 + Audit\ Risk_{it} + Financial\ Risk_{it} + Litigation\ Risk_{it} + \varepsilon_{it} \quad [4]$$

where:

LN_AUDFEE, the natural log of audit fees, is my measure of audit effort.

I include year-fixed effects to control for time-induced variation in auditor client-continuance decisions (SWITCH) and audit fees (LN_AUDFEE) throughout my sample period. I also include industry-fixed effects based on two-digit SIC codes for inherent differences in switching behavior between industries. All errors are clustered by client to allow for serial correlation between client years. I winsorize continuous variables at the 1st and 99th percentiles of the sample.

4. EMPIRICAL METHOD AND RESULTS

4.1 Sample Selection

The sample consists of U.S. listed companies in the Compustat database from 2004 through 2015.[5] For each auditor-client engagement observation, I obtain the client's financial statement information from Compustat (111,861). I use 8-K announcements of auditor changes from Audit Analytics to proxy for auditors switching. When I merge the specific auditor, audit fees, audit opinion, continuation status, and timely filing status from the Audit Analytics Database, I lose 23,152 observations.[6] To ensure my results are not driven by very small companies, I eliminate observations with less than one million dollars in total assets (17,625). I also delete observations from regulated industries, SIC code range 6000-6999 and 4000-4999 (22,261). Finally, I eliminate all observations with missing data for the test variables (16,729). I winsorize all continuous variables at the top and bottom 1% of the distribution to control for possible outliers at the sample level.

4.2 Descriptive Statistics and Univariate Results

Descriptive statistics for my client continuance decision dependent variable measure are presented in Table 3. The proportion of auditor changes decreased over the sample period, changes related to financial statements issued for the 2004 fiscal year (the first year in the sample) versus the 2015 fiscal year (the last year in the sample) were 11% and 6%, respectively. However, the proportion of auditor changes related to financial statements issued for the fiscal year 2010 was the lowest at 3.5%.

[5] In 2004, the SEC expanded the number of required 8-K reportable events to include auditor changes. Therefore, 2004 is the earliest year for which I can obtain a comprehensive sample of auditor switches from Audit Analytics.
[6] I use the CIK linking-table in WRDS SEC Analytics Suite to address the difference between Audit Analytics' and Compustat's CIK referencing methods.

Univariate statistics are presented in Table 4. It is worth noting that busy-season auditor-client relationships do not have a significantly different proportion of discontinued engagements compared to non-busy-season clients. The mean value of BUSY in the first column (n = 31,839) indicates that 67% of the observations are busy season clients. The univariate results show that the differences between busy season and non-busy season clients are statistically significant across nearly all the company characteristics. Relative to non-busy season clients, busy-season clients have, on average, higher discretionary accruals (Lopez and Peters 2012), revenue growth, likelihood of experiencing a loss, leverage, proportion of cash to assets, market value of equity, likelihood of being audited by one of the Big Four audit firms, and likelihood of being in a high-risk industry. In contrast, busy season clients have a lower proportion of inventory and receivables, return on assets, and Altman Z-score (which suggests a higher probability of bankruptcy), and are less likely to issue an NT 10-K Filing.

Correlation coefficients are reported in Table 5. The highest correlations, as expected, are between the proxies for financial risk: ROA, LOSS ALTMAN_Z, LEVERAGE and CASH. Untabulated, the mean-variance inflation factor for the model – omitting fixed effects and interaction terms is 6.49. Importantly, none of the correlations with my variable of interest, BUSY, are more than 0.12.

4.3 Multivariate Results of Client-Continuance Decisions

The results for the estimation of equations [1] and [2] are reported in Table 6. Directional predictions for the main effect and interaction terms are based on findings in prior literature (Choi et al. 2004; Johnstone and Bedard 2004; Knechel and Payne 2001; Krishnan 1994; Lopez and Peters 2011; Palmrose and Scholz 2004; Shu 2000). For my main analysis of the effect resource constraints have on the determinants of auditors' client continuance decisions, I

estimate three models in Panel A: (1) a fully interacted auditor continuance determinants model in column one; (2) an auditor continuance determinants model for busy season auditor-client relationships in column two; and (3) an auditor continuance determinants model for non-busy season auditor-client relationships in column three. I present the joint test (Determinant + Determinant*BUSY) in Panel B.

4.3.1 Audit Risk

As it relates to audit risk, the probability of auditor client-continuance is lower for companies with weak internal controls (ICOFR, p-value < 0.01), and delinquent 10-k filings (NT_FILING, p-value < 0.01). The significant interaction coefficient on NT_FILING*BUSY (p-value < 0.10) indicates that the probability of the auditor continuing is incrementally lower when clients file their annual financial statements after the statutory deadlines. This suggests that the auditors are more sensitive to audit risk factors, measured using client-continuance decisions, for busy season clients compared to non-busy season clients. The joint test for the effect of NT_FILING on busy season clients is positive and significant, suggesting the effect of the non-timely filing is significant for busy season clients.[7]

4.3.2 Financial Risk

As it relates to financial risk, the probability of auditor client-continuance is lower for clients with non-December year-ends experiencing a loss (LOSS, p-value < 0.1), and the result continue for clients with December year-ends (LOSS + LOSS*BUSY, p-value > 0.01). However, the coefficient on the financial risk proxied by the ratio of cash to total assets suggests that the client's financial risk is a significant factor for busy season client but not significant for

[7] If I include abnormal audit fees as an audit risk factor in the model, the results do not change. Furthermore, auditors are not incrementally more sensitive to busy season clients that pay abnormal audit fees compared to non-busy season clients.

non-busy season clients, while also not being significantly different from the probability of client continuance for non-busy season clients.

4.3.3 Litigation Risk

Finally, as it relates to litigation risk, the probability of auditor client-continuance is higher for large clients (SIZE, p-value < 0.01). However, the significant interaction coefficient on SIZE*BUSY (p-value < 0.05) indicates that the probability of the auditor continuing is incrementally lower for clients with high market-value of equity. This suggests that auditors are more sensitive to litigation risk factors, measured using client-continuance decisions, for busy season clients compared to non-busy season clients. The joint test for the effect of SIZE (SIZE +SIZE*BUSY, p-value < 0.05) on busy season client's is negative and significant, suggesting that the probability of auditor client-continuance is higher for large busy season clients compared to small busy season clients.

In summary, the results in Table 6 provide some evidence that supports the resource constraint prediction in *H1* that the determinants of client-continuance decisions vary when the auditors' resources are constrained, but only when the client files a Form NT 10-K (audit risk) or high market-value of equity (litigation risk). Finally, there seems to be no meaningful difference between auditor's sensitivity to busy season client financial risk compared to non-busy season clients.[8] Overall, in my main sample, there appears to be marginal evidence that auditor realignment decisions are sensitive to concerns about resource constraints.

[8] The decision to continue the auditor- client relationship is a joint decision between the auditor and the client. To control for the clients' decision, I estimate the model with client fixed effects. The results remain largely the same. However, for the litigation risk, the interaction between SIZE (market-value of equity) and BUSY is not significant with a p-value of 0.111 compared to a p-value of 0.012.

4.4 Multivariate Results of Audit Effort Allocation

To test *H2,* I estimate equations [3] and [4], reported in Table 7. Directional predictions for the main effects and interaction coefficients are based on findings in prior literature (Caramanis and Lennox 2007; Eshleman and Guo 2014; Hay, Knechel, and Wong 2006; Simunic 1980). I only examine auditor-client engagement observations where the auditor-client relationship did not realign in the prior year.[9] For my analysis of the effect resource constraints have on the relation between auditor effort allocation and audit, financial, and litigation risk, I estimate three models in Panel A:[10] (1) a fully interacted auditor continuance determinants model in column one; (2) an auditor continuance determinants model for busy season auditor-client relationships in column two; and (3) an auditor continuance determinants model for non-busy season auditor-client relationships in column three. I present the joint test (Determinant + Determinant*BUSY) in Panel B.

4.4.1 Audit Risk

As it relates to audit risk, auditor effort is higher for companies with low reported discretionary accruals (ABS_DA, p-value < 0.01), low revenue growth (REV_GROWTH, p-value, p-value < 0.01), weak internal controls (ICOFR, p-value < 0.01), delinquent 10-k filings (NT_FILING, p-value < 0.01), merger or acquisition (M&A, p-value <0.01), and a high ratio of inventory and receivable to total assets (INV_REC, p-value < 0.01). The significant interaction coefficient on ABS_DA*BUSY (p-value < 0.10) indicates that the audit effort is incrementally higher when clients have a low absolute value of discretionary accruals. This suggesting that the

[9] The sample dropped from 31,839 observations to 24,898 observations because the restriction requires data from the prior year, thus eliminating the first year of my sample period, all initial auditor-client relationships that appear in the sample, all observations without data in the prior year, and realigned auditor-client relationships.
[10] All equations in this analysis have audit fees as the dependent variable and the determinants of client continuance as the independent variables.

auditors are more sensitive to audit risk factors, measured using audit effort allocation, for busy season clients compared to non-busy season clients. The significant interaction coefficient on INV_REC*BUSY (p-value < 0.05) indicates that audit effort is incrementally higher when clients have high levels of inventory and receivables. This suggests that the auditors more sensitive to audit risk factors, measured using audit effort allocation, for busy season clients compared to non-busy season clients.

4.4.2 Financial Risk

As it relates to financial risk, auditor effort is higher for clients experiencing a loss (LOSS, p-value < 0.05), and high leverage (LEVERAGE, p-value < 0.01). The coefficient on CASH is negative and significant, however, the coefficient on the interaction of CASH*BUSY and the joint-test of CASH + CASH*BUSY is insignificant, suggesting auditors are sensitive to the ratio of cash to total assets for non-busy season clients, but there is not a significant difference compared to busy season client.

The significant interaction coefficient on ROA*BUSY (p-value < 0.10) indicates that audit effort is incrementally higher when clients have low financial performance, suggesting that the auditors are more sensitive to audit risk factors, measured using audit effort allocation, for busy season clients compared to non-busy season clients.

4.4.3 Litigation Risk

Finally, as it relates to litigation risk, the coefficient on SIZE is positive and significant, which suggests that larger clients require more audit effort. In addition, the interaction between size and busy-season clients is not significant, suggesting that client size does not affect audit effort differently for busy season clients compared to non-busy season clients. The joint test of the sum of the coefficients of SIZE and the interaction of SIZE and BUSY is positive and

significant, suggesting that the effect of SIZE on audit effort also influences audit effort for busy season clients.

In summary, the majority of audit risks are important to the auditor for both busy-season and non-busy-season clients (internal control weaknesses, NT filing, mergers and acquisitions, and complex accounting balances), and the only significant difference between busy season clients and non-busy season clients is the association between audit fees and earnings quality. The inverse relation between earnings quality and audit fees is consistent with prior literature. Next, there seems to be no meaningful relation between auditor realignment and financial risk. Overall, in my main sample, there appears to be marginal evidence that auditor effort allocation is sensitive to concerns about resource constraints.[11]

[11] If I instead include client fixed effects in the model, which controls for the clients' decisions, my results do not change.

5. ADDITIONAL ANALYSIS

5.1 Time-Period Analysis

In this section of the paper, I explore three different time periods: (1) the post-SOX period which spans the three years before the recession, 2004 through 2006; (2) the recession period which spans the three years during the recession, 2007 through 2009;[12] and (3) the post-recession period which spans the six years after the recession, 2010 through 2015. These three periods capture three different audit markets. During the post-SOX period, two years after SOX was implemented – audit firms were evaluating their risks and adjusting their client portfolios (Landsman et al., 2009). However, during the recession, audit firms were dealing with the risks of the financial crisis and the economic effects that were impacting their clients, possibly, affecting auditor business risk and client-continuance decisions. And last, based on discussions with audit partners at Global Six[13] audit firms, the post-recession period was a different market for auditors because they were rebounding from the financial crisis, evaluating their client portfolio, and rebalancing their portfolio risks.

5.1.1 Client continuance decisions

5.1.1.1 Audit Risk

As it relates to audit risk, the probability of auditor switching is higher for clients with weak internal controls (ICOFR, p-value < 0.05) during the all three periods (2004-2015), annual financial statements filed after the statutory SEC deadline (NT_FILING, p-value < 0.1) during post-SOX and post-recession periods.

[12] The National Bureau of Economic Research estimated that the most recent economic recession started December 2007 and ended June 2009 (see http:www.nber.org/cycles.html).
[13] The Global Six audit firms include the Big Four (Deloitte, PWC, Ernst & Young, and KPMG) and the next two largest global accounting firms, Grant Thornton and McGladrey (Kuehner-Hebert, 2014).

In the post-SOX period, the probability of auditor continuance is incrementally lower for clients with a material weakness opinion over the financial reporting process (ICOFR*BUSY, p-value < 0.01). However, in the recession and post-recession period, the probability of auditor continuance is incrementally lower for clients that do not meet the deadline for issuing the annual financial statements and must notify the SEC (NT_FILING*BUSY, p-value < 0.10). These results suggest that the auditor's sensitivity to audit risk factors, measured using auditor-client continuance decisions, is affected by resource constraints. However, the probability of an auditor switching is higher for clients with higher inventory, receivables and December year-ends in the post-recession period, but the difference between busy season and non-busy season clients is not significant.

5.1.1.2 Financial Risk

As it relates to financial risk, the probability of auditor client-continuance is lower for non-December year-end clients with weak financial performance (LOSS, p-value < 0.01) and higher for companies with low cash in the recession period (CASH, p-value < 0.10). In the post-recession period (2010–2015), financial performance does impact the decision on whether to continue the auditor-client relationship for busy season clients (LOSS+LOSS*BUSY, p-value < 0.05; CASH + CASH*BUSY, p-value < 0.05; ALTMAN_Z + ALTMAN_Z*BUSY, p-value < 0.10) but there is no significant difference between busy season clients compared to non-busy season clients.

Financial risks are important to the decision-making process. I find that, during the post-SOX period, the probability of auditor client-continuance is lower (higher) for busy season clients with high (low) leverage compared to non-busy season clients (LEVERAGE*BUSY, p-value < 0.05).

5.1.1.3 Litigation Risk

As it relates to litigation risk, the probability of client continuance is higher for clients with a high market-value of equity (SIZE, p-value < 0.01) in all periods (2004-2015). However, in the post-SOX period (2004-2006), the probability of client continuance is lower for clients with high market value for busy season clients compared to non-busy season client (SIZE*BUSY, p-value < 0.01) even though the probability of client continuance is higher for busy season clients with high market-value of equity compared to clients with low market value of equity. This suggests that auditors are more sensitive to their busy season clients' litigation risk compared to their non-busy season clients.

5.1.2 Audit Effort Allocation

5.1.2.1 Audit Risk

As it relates to audit risk, auditor effort is higher for clients experiencing low revenue growth (REV_GROWTH, p-value < 0.01) and higher for clients with material weakness of internal controls (ICOFR, p-value <0.01), NT filings (NT_FILING, p-value<0.01), and mergers and acquisitions (M&A, p-value < 0.01), as well as with a high ratio of inventory and receivables (INV_REC, p-value < 0.01). The coefficient on the interaction of ABS_DA*BUSY is negative and significant in columns (2) and (3) (ABS_DA*BUSY, p-value < 0.01). This result suggests that the audit effort is incrementally higher when clients have a low absolute value of discretionary accruals. Auditors were more sensitive to audit risk factors, measured using audit effort allocation, for busy season clients relative to non-busy season clients in the post-SOX and recession periods. The coefficient on NT_FILING*BUSY is positive and significant in column (2) only, suggesting that auditors were more sensitive to clients filing their 10-K late (NT_FILING*BUSY) in the post-SOX period. This result may be driven by auditors waiting

longer to sign their opinion on the financial statements because they needed more time to address their concerns about the new regulation.

5.1.2.2 Financial Risk

As it related to financial risk, audit effort is higher for clients that experienced a loss during the recession and post-recession periods; high leverage during the post-SOX, recession, and post-recession period; low cash during the post-SOX and post-recession period; and higher risk of bankruptcy during the post-recession period. None of the interaction terms are statistically significant (all p-values > 0.10), suggesting that the auditor's sensitivity to financial risk factors, measured using audit effort allocation, does not significantly differ between busy season and non-busy season clients.

5.1.2.3 Litigation Risk

As it relates to litigation risk, audit effort is higher for large clients (SIZE, p-value < 0.01). In the column (4), the interaction term on SIZE*BUSY is positive and significant. This result suggests that auditors allocated more effort to large busy season clients than large non-busy season client during the post-recession period.

5.2 Big Four and non-Big Four

According to a 2008 GAO study, 84% of publicly traded clients are audited by Big Four firms.[14] The Big Four audit firms are inspected annually and are considered to provide higher quality audits than some of the smaller audit firms (Simunic, 1980). Furthermore, the client portfolios of the Big Four accounting firms differ from the portfolios of small accounting firms

[14] My sample contains 74% of the clients audited by one of the Big Four audit firms. The difference between my sample and the 2008 GAO report may be due to fluctuations in Big Four market share over time and the fact that I eliminate clients from the highly regulated industries.

(Lopez and Peter, 2011). Thus, in this section, I estimate equations [1] and [3] for only Big Four audit firm client-continuance decisions.

5.2.1 Client Continuance Decisions for Big Four and non-Big Four Clients

In Table 10 and 11, I estimate equation [1] using only Big Four and non-Big Four auditor-client relationships, respectively.

5.2.1.1 Audit Risk

As it relates to audit risk, the probability of Big Four auditor client continuance is lower for clients with internal control weaknesses (ICOFR, p-value < 0.01) in columns (1) – (4) and late annual SEC filing status (NT_FILING, p-value < 0.01) in columns (1) and (4). These results provide limited evidence showing that effective internal controls are important to Big Four audit firms in all periods, whereas a client filing its annual financial statements late appears to be significant in the post-recession period. I find that auditors are more sensitive to the presence of internal control weaknesses for busy season clients compared to non-busy season clients for the entire sample period (ICOFR*BUSY, p-value < 0.05) and in the post-recession period (ICOFR, p-value < 0.10). These results suggest that clients with internal control weaknesses are costlier to audit and that it is not worth increasing the amount of audit effort to mitigate the risk of issuing an incorrect audit opinion.

As with the results above, as it relates to audit risk, the probability of non-Big Four client continuance is lower for clients with material weakness over internal controls in columns (1) – (4) (ICOFR, p-value < 0.01) and non-timely annual financial statement filings in columns (1) - (3) (NT_FILING, p-value < 0.10). The significant interaction coefficient on NT_FILING*BUSY (p-value, < 0.05) in columns (1) and (2) indicates that the auditor is less likely to continue working with a busy season client that files its annual financial statements late compared to a

non-busy season client. The significant interaction coefficient on M&A*BUSY (p-value < 0.10) in column (3) indicates that the auditor was less likely to continue working with busy season clients that experienced a merger or acquisition during the recession. This suggests that auditors are sensitive to audit risk factors, measured using client continuance decisions, for busy season clients compared to non-busy season client.

5.2.1.2 Financial Risk

As it relates to financial risk, the probability of auditor client-continuance is less likely for clients experiencing a loss (LOSS, p-value < 0.05), low cash (CASH, p-value <0.01), or a high likelihood of bankruptcy (ALTMAN_Z, p-value <0.05).

The significant interaction coefficient on LEVERAGE*BUSY (p-value < 0.01) indicates that the probability of auditor client continuance is incrementally higher (lower) for clients with a high (low) debt to asset ratio, suggesting that the auditors' sensitivity to financial factors, measuring client-continuance decisions, does significantly differ between busy season and non-busy season clients. The joint test for the effect of LEVERAGE on busy season clients is positive and significant, suggesting that the effect of the ratio of debt-to-assets is significant for only busy season clients and not non-busy season clients.

As it relates to financial risk, the probability of auditor client continuance is less likely for non-busy season clients with a high ratio of debt to total assets (LEVERAGE, p-value < 0.10). However, the joint test of LEVERAGE on busy season clients is insignificant, suggesting non-Big Four auditors are only sensitive to non-busy season client financial risk.

5.2.1.3 Litigation Risk

As it relates to litigation risk, the probability of client continuance is more likely for busy season clients with high market-value of equity (SIZE, p-value < 0.05). However, Big Four

auditors are more sensitive to busy season litigation risk compared to non-busy season. The significant interaction coefficient on SIZE*BUSY indicates that the probability of client continuance is incrementally lower (higher) for clients with high market-values of equity. The joint test for the effect of SIZE on busy season clients is negative and significant, suggesting that the effect of the market-value of equity is not totally mitigated by auditor resource constraints.

As it relates to litigation risk of non-Big Four auditors, the probability of client continuance is more likely for non-busy season clients with high market-value of equity. However, the significant interaction coefficient on SIZE*BUSY (p-value < 0.10) indicates that the probability of client continuance is incrementally lower (higher) for clients with high (low) market-value of equity, suggesting that auditors' sensitivity to litigation risk factors, measured using client-continuance decisions, does significantly differ between busy season and non-busy season clients. The joint test for the effect of SIZE on busy season clients is insignificant, suggesting that the effect of the market-value of equity is significant for only non-busy season clients and not for busy season clients.

In summary, it appears that the Big Four audit firms are more sensitive to audit risk (material weakness of internal controls over the financial reporting process), financial risk (leverage to asset ratio), and litigation risk (market-value of equity) of busy season clients compared to those of non-busy season clients. Although auditors are sensitive to audit and financial risk in the main analysis in Table 6, the Big Four are more sensitive to different busy season client risk factors compared to non-busy season clients.

5.2.2 Audit Effort for Big Four and non-Big Four clients

In Tables 12 and 13, I estimate equation [3] using only Big Four and non-Big Four auditor-client relationships, respectively.

5.2.2.1 Audit Risk

As it relates to audit risk, auditor effort is higher for Big Four clients with low revenue growth (REV_GROWTH, p-value < 0.01) and higher for clients with material weakness of internal controls (ICOFR, p-value < 0.01), NT filings (NT_FILING, p-value < 0.01), mergers and acquisitions (M&A, p-value < 0.01), and a high ratio of inventory and receivables to total assets (INV_REC, p-value <0.01). The coefficient on the interaction of ABS_DA*BUSY is negative and significant in column (1) – (3) (ABS_DA*BUSY, p-value < 0.10). These results suggest that the audit effort is incrementally higher when clients have a low absolute value of discretionary accruals. Thus, auditors are more sensitive to audit risk factors, measured using audit effort allocation, for busy season clients relative to non-busy season clients in the full sample, post-SOX and recession periods. The coefficient on the interaction of NT_FILING*BUSY (p-value < 0.10) is positive and significant in column (2), suggesting that auditors were more sensitive to clients filing their annual financial statement late during the post-SOX period. This result may be driven by auditors waiting longer to sign their opinion on the financial statement because they needed more time to address their concerns. The coefficient on INV_REC*BUSY is positive and significant during the recession and post-recession period, suggesting that auditors' allocation more resources to clients with a high ratio of inventory and receivables to total assets.

5.2.2.2 Financial Risk

As it relates to financial risk, auditor effort is higher for Big Four clients with weak financial performance in the post SOX period (ROA, p-value < 0.01), experiencing a loss in the full sample and post-SOX period (LOSS, p-value < 0.05), high leverage in all periods (LEVERAGE, p-value < 0.01); and with low cash in all periods (CASH, p-value < 0.10). The

significant interaction coefficient on ROA*BUSY is negative (p-value < 0.01) indicates that the audit effort is incrementally higher when clients have low returns on assets. This result suggests that auditors allocate more effort to clients with weak financial performance.

5.2.2.3 Litigation Risk

As it relates to litigation risk, audit effort is higher for large Big Four clients (SIZE, p-value <0.01). In the post-SOX period, the interaction term on SIZE*BUSY is positive and significant. This result suggests that auditor allocate more effort to large busy season clients than large non-busy season client.

In summary, it appears that the Big Four audit firms are more sensitive to busy season client audit risk (absolute value of discretionary accruals) compared to non-busy season clients.

5.3 Client Continuance Decisions within 90 days of the Annual Filing

Under common circumstances, auditors usually begin preliminary engagement activities at the beginning of the fiscal year, after the audit opinion is signed (Pacheco-Paredes, Rama, and Wheatley 2017). Before the quarterly financial review begins, the auditor must sign an engagement letter to either audit or review the interim financial statements (PCAOB AS 1301, par 6-7).[15] It is, therefore, reasonable to expect that client-continuance decisions made during the preliminary procedures within 90 days of auditors issuing their audit opinion on the annual financial statements will be more closely related to the prior year's financial statements. In this section, I estimate equation [1] with the dependent variable equal to 1 if the auditor-client relationship ended no more than 90 days after the audit report was signed.

[15] To estimate the time-period when an auditor would discontinue working with a client based on the prior year's financial statement audit, I estimate the number of days between the date the auditor signs the audit opinion and the quarterly financial statement review deadline. Quarterly financial statements deadlines are 40 to 45 days after the quarter-end. Publicly traded clients have 60 to 90 days to file their annual financial statements (Form 10-K) which allows 40 to 70 days to engage the client for another year (see https://www.sec.gov/fast-answers/answers-form10khtm.html).

In Tables 13 and 14, I estimate equation [1] using SWITCH_90 as the dependent variable.

5.3.1.1 Audit Risk

As it relates to audit risk, the probability of client continuance is lower for clients with internal control weaknesses (ICOFR, p-value < 0.05) in columns (1) – (4), and late annual SEC filing status (NT_FILING, p-value < 0.05) in columns (1), (3), and (4). The coefficient on the interaction NT_FILING*BUSY is positive and significant in column (3). These results suggest that during the recession, auditors were more sensitive to risks associated with filing the 10-K late.

5.3.1.2 Financial Risk

As it relates to financial risk, the probability of auditor client-continuance is lower for clients experiencing a loss (LOSS, p-value < 0.10). The significant interaction coefficient on LEVERAGE*BUSY (p-value < 0.10) in column (2) indicates that the auditor is less likely to continue working with a client with high leverage. This result suggests that auditors were more sensitive to financial risk of busy season clients compared to non-busy season clients during the post-SOX period.

5.3.1.3 Litigation Risk

As it relates to litigation risk, the probability of client continuance is higher for large clients (SIZE, p-value < 0.01) but lower for clients in highly litigious industries in the full sample (LIT_RISK, p-value < 0.10). The significant interaction coefficient on SIZE*BUSY is positive and significant in column (1) – (3) (SIZE*BUSY, p-value < 0.05) indicating that the auditor is more sensitive to clients with high market-value of equity, measured using client continuance decision, for busy season clients compared to non-busy season clients. This result

suggests that auditors are more sensitive to busy season litigation risk compared to non-busy season clients.

5.4 Change in Risk Factors

To allow for tests in which I investigate the effects of resource constraints and determinants of client continuance vary based on unanticipated risks (e.g., changes to risky account balances, changes in financial performance, new internal control weaknesses), I estimate a changes model to address the serial correlation of risk factors over time to identify expected vs. unexpected risk. For all continuous variables, I calculated the change from t − 1 to t. However, for the indicator variables, simply identifying a change from year t − 1 to year t does not capture whether the company changed from a 1 in year t − 1 to a 0 in year t or vice versa. Therefore, I create two variables for each indicator variable that identifies when the value switched from a 1 in year t − 1 to 0 in year t or 0 in year t – 1 to 1 in year t, and 0 otherwise. I do not make predictions for the variables that change from 1 in year t – 1 to 0 in year t. Additionally, I do not interpret the coefficients on LIT_RISK because it is an indicator variable equal to 1 if a client is in a highly litigious industry which means it is time-invariant and not any different from the prior models.

5.4.1 Client Continuance and Change in Risk Factors

In Tables 15 and 16, I estimate equation [1] using SWITCH as the dependent variable with a changes model.

5.4.1.1 Audit Risk

As it relates to changes in audit risk, in the full sample, the probability of client continuance is higher for clients with a new internal control weakness (Δ_ICOFR_0_1, p-value < 0.01), and NT filing in year t (Δ_NT_FILING_0_1, p-value < 0.05). The significant interaction

on Δ_ICOFR_1_0 (p-value < 0.05) indicates that the probability of client continuance is incrementally lower for clients with improvements in their internal controls over the financial reporting process. The significant interaction coefficient on Δ_NT_FILING_0_1*BUSY (p-value < 0.10) indicates that the probability of client continuance is incrementally lower for clients that file their financial statements late in the current year but not the prior year. These results suggest that the auditors' sensitivity to changes in audit risk factors, measured using auditor client-continuance decisions, does significantly differ between busy season and non-busy season clients.

5.4.1.2 Financial Risk

As it relates to financial risk, the probability of auditor client-continuance is lower for companies experiencing a loss in year t while recognizing a gain in year t − 1 (Δ_LOSS_0_1, p-value < 0.01), or an increased risk of bankruptcy (Δ_ALTMAN_Z, p-value < 0.10). In the full sample period, I find that none of the interaction terms are statistically significant (all p-values > 0.01), suggesting that the auditor's sensitivity to financial risk factors, measured using auditor client-continuance decisions, does not significantly differ between busy season and non-busy season clients.

5.4.1.2 Litigation Risk

As it relates to litigation risk, in the full sample, the probability of auditor client-continuance is not affected by changes in the market value of equity (SIZE, p-value > 0.01). I find that none of the interaction terms are statistically significant (all p-values > 0.01), suggesting that auditors' sensitivity to changes in litigation risk factors, measured using auditor-client continuance decisions, does not significantly differ between busy season and non-busy season clients.

5.4.2 Changes in Audit Effort and Changes in Risk Factors

In Tables 17 and 18, I estimate equation [3] using Δ_LN_AUDFEE as the dependent variable with a changes model.

5.4.1.1 Audit Risk

As it relates to changes in audit risk, during the full sample, audit effort allocation is higher for clients with a new internal control weakness (Δ_ICOFR_0_1, p-value < 0.01), and with an NT filing in year t (Δ_NT_FILING_0_1, p-value < 0.05), and a new merger and acquisition in year t (M&A, p-value<0.01). The significant interaction on Δ_ICOFR_1_0 (p-value < 0.05) indicates that the probability of auditor client-continuance is incrementally lower for clients with improvements in their internal controls over the financial reporting process. This suggests that auditors are sensitive to changes in audit risk factors, measured using audit effort allocation, for busy season clients compared to non-busy season clients.

5.4.1.2 Financial Risk

As it relates to financial risk, additional audit effort is allocated to companies experiencing decreased financial performance (Δ_ROA, p-value < 0.05), increased leverage (Δ_LEVERAGE, p-value < 0.01), and decreased cash (Δ_CASH, p-value < 0.01). In the full sample period, none of the interaction terms are statistically significant (all p-values > 0.10), suggesting that the auditors' sensitivity to changes in financial risk factors, measured using auditor continuance decisions, does not significantly differ between busy season and non-busy season clients.

5.4.1.2 Litigation Risk

As it relates to litigation risk, in the full sample, audit effort allocation increases when the market-value of equity increases (Δ_SIZE, p-value < 0.01). I find that none of the interaction

terms are statistically significant (all p-values > 0.01), suggesting that auditors' sensitivity to changes in litigation risk factors, measured using audit effort allocation, does not significantly differ between busy season and non-busy season clients.

6. CONCLUSION

This paper examines auditor client-continuance decisions when resources are constrained. Auditors should be careful with the risk composition of their auditor's client-portfolio. Prior research suggests that clients' risk characteristics (i.e., audit, financial, and litigation risks) are the primary factors influencing auditor client-continuance decisions. However, when resources are constrained, these risks could cause incremental effects on the likelihood that the auditor–client relationship continues.

I examine the factors influencing auditor client-continuance using a sample of auditor-client engagement observations. My results suggest that, in some instances, auditors are more sensitive to risks when their resources are constrained. However, for many factors, I find no difference in client continuance decisions between busy season and non-busy season clients. This result is not surprising, because auditors choose clients with certain risks in mind and do not make drastic shifts in their risk preferences on an annual basis. Thus, my study does not provide stark evidence of risk preferences held by auditors; however, I have shown that there is not a significant difference between client-continuance decisions for auditors with resource constraints when auditing December year-end clients.

I acknowledge that prior work suggests that auditor switching is less likely for December year-end clients due to switching costs (Lopez and Peters, 2011). However, this study provides evidence that there is little-to-no difference between the sensitivity of auditor risk for December year-end clients over non-December year-end clients. Furthermore, in the additional analysis, I provide evidence that, during certain time periods, auditors are more sensitive to risk for busy-season clients than for non-busy season clients.

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APPENDICES

Appendix A
Variable Definitions

Variable	Source	Definition
Dependent Variables:		
SWITCH	Audit Analytics	1 if an auditor-client engagement is discontinued, and, 0 otherwise
SWITCH_90	Audit Analytics	1 if an auditor-client engagement is discontinued within 90 days of issuing the auditor's opinion;
LN_AUDFEE	Audit Analytics	natural log of total audit fees;
Δ_LN_AUDFEE	Audit Analytics	is calculated as the change in the log value of audit fee;
Variable of Interest:		
BUSY	Audit Analytics	1 if the client has a December year-end, and 0 otherwise;
Determinants :		
ABS_DA	Compustat	Absolute value of performance adjusted discretionary accruals (see Kothari et al. 2005);
REV_GROWTH	Compustat	change in total revenues scaled by total assets;
ICOFR	Audit Analytics	1 if the company reported a disclosure controls weakness in Section 302 or 404 report during the current year, 0 otherwise;
NT_FILING	Audit Analytics	1 if the company filed a Form NT 10-K (non-timely) to notify the SEC that the 10-K will be late.
M&A	Compustat	1 if a company experience significant merger and acquisition activity during the current or the last year, and 0 otherwise;
INV_REC	Compustat	ratio of inventory plus receivables to total assets;
ROA	Compustat	net income before extraordinary items divided by average total assets;
LOSS	Compustat	1 if a company suffered a loss during the current, and 0 otherwise;
LEVERAGE	Compustat	ratio of debt to total assets;

Determinants :

CASH	Compustat	ratio of cash to total assets;
ALTMAN_Z (a measure of financial risk	Compustat	Estimated using the coefficients obtained from Shumway (2001) as follows: 1.2(CA-CL)/TA + 0.6(RE/TA) + 10(EBITA) + 0.05(MVE/TL) - 0.47(SALES/TA) where: CA = Current Assets (ACT) CL = Current Liabilities (LCT); TA = Total assets (AT); RE = Retained earnings (RE); EBITA = Earnings before interest and tax dividend by total assets (EBIT/AT); MVE = Market value of equity (CSHO * PRCC_F); TL = Total liabilities (LT); SALES = Total revenue (REVT);
SIZE	Compustat	Natural log of the market value of equity (CSHO*PRCC_F);
LIT_RISK	Compustat	1 if the company is included in a high-risk industry as defined by Matsumoto (2002), and 0 otherwise. High-risk industries are defined as firms with SIC codes in the following industries: 2833-2836 (biotechnology); 3570-3577 and 7370-7374 (computers); 3600-3674 (electronics); and 5200-5961 (retailing);
BIG_4	Audit Analytics	1 if the client is audited by a Big 4 audit firm;
Δ_ABS_DA	Compustat	is calculated as the change in absolute discretionary accruals;
Δ_REV_GROWTH	Compustat	is calculated as the change in the ratio of revenue growth;
Δ_ICOFR_1_0	Audit Analytics	1 if the company reported a disclosure controls weakness in Section 302 or 404 report during the previous year and not in the current year, 0 otherwise;
Δ_ICOFR_0_1	Audit Analytics	1 if the company reported a disclosure controls weakness in Section 302 or 404 report during the current year but not in the previous year, 0 otherwise;

Determinants :

Δ_NT_FILING_1_0	Audit Analytics	1 if the company filed a Form NT 10-K (non-timely) in the previous year but not in the current year;
Δ_NT_FILING_0_1	Audit Analytics	1 if the company filed a Form NT 10-K (non-timely) in the current year but not in the previous year;
Δ_M&A_1_0	Compustat	1 if a company experience significant merger and acquisition activity during the previous year but not in the current year, and 0 otherwise;
Δ_M&A_0_1	Compustat	1 if a company experience significant merger and acquisition activity during the current year but not in the previous year, and 0 otherwise;
Δ_INV_REC	Compustat	is calculated as the change in the ratio of inventory and receivables to cash
Δ_ROA	Compustat	is calculated as the change in the return on assets;
Δ_LOSS_1_0	Compustat	1 if a company suffered a loss during the current or the prior year but not during the current year, and 0 otherwise;
Δ_LOSS_0_1	Compustat	1 if a company suffered a loss during the current or the current year but not during the prior year, and 0 otherwise;
Δ_LEVERAGE	Compustat	is calculated as the change in the ratio of debt to total assets;
Δ_CASH	Compustat	is calculated as the change in the ratio of cash to total assets;
Δ_ALTMAN_Z	Compustat	is calculated as the change in the Altman Z score;
Δ_SIZE	Compustat	is calculated as the change in the natural log of the market value of equity (CSHO*PRCC_F);

Appendix B
Tables

TABLE 1
Sample Selection

Sample construction criteria		Observations
Sample		
Compustat beginning sample (2004 - 2015)		111,861
Less:		
Partial years	(255)	
Missing Audit Analytics identifier (AUDITOR_FKEY)	(23,152)	
Auditor-Client engagements with fewer than 1 million in assets	(17,625)	
Auditor-Client engagement observations in Regulated industries (6000-6999, 4000-4999)	(22,261)	
Auditor-Client engagement observations with requisite data to construct independent variables	(16,729)	
Final Sample		31,839
Auditor-Company engagement observations in prior draft		29,629
Sample size increase		2,210

TABLE 2
Auditor Switches by Year

Year	SWITCH		Total	%SWITCH
Fiscal	0	1		
2004	1,964	246	2,210	11.1%
2005	2,474	224	2,698	8.3%
2006	2,754	195	2,949	6.6%
2007	2,857	161	3,018	5.3%
2008	2,466	120	2,586	4.6%
2009	2,486	113	2,599	4.3%
2010	2,630	95	2,725	3.5%
2011	2,566	103	2,669	3.9%
2012	2,490	112	2,602	4.3%
2013	2,500	142	2,642	5.4%
2014	2,485	140	2,625	5.3%
2015	2,373	143	2,516	5.7%
Total	30,045	1,794	31,839	5.6%

Notes: This table presents descriptive statistics of the porportion of auditor switches per year.

TABLE 3
Summary Statistics

Panel A: Full Sample (N = 31,839)

Variable	Mean	S.D.	Min	0.25	Median	0.75	Max
SWITCH	0.06	0.23	0.00	0.00	0.00	0.00	1.00
SWITCH_90	0.03	0.17	0.00	0.00	0.00	0.00	1.00
LN_AUDFEES	13.74	1.28	10.90	12.88	13.75	14.54	17.04
BUSY	0.67	0.47	0.00	0.00	1.00	1.00	1.00
ABS_DA	0.07	0.09	0.00	0.02	0.04	0.09	0.44
REV_GROWTH	0.07	0.22	-0.76	-0.01	0.06	0.16	0.82
ICOFR	0.09	0.28	0.00	0.00	0.00	0.00	1.00
NT_FILING	0.06	0.23	0.00	0.00	0.00	0.00	1.00
M&A	0.39	0.49	0.00	0.00	0.00	1.00	1.00
INV_REC	0.25	0.18	0.00	0.10	0.23	0.36	0.78
ROA	0.03	0.30	-1.75	0.04	0.04	0.09	0.45
LOSS	0.33	0.47	0.00	0.00	0.00	1.00	1.00
LEVERAGE	0.17	0.18	0.00	0.00	0.13	0.28	0.68
CASH	0.25	0.25	0.00	0.06	0.16	0.37	0.97
ALTMAN_Z	0.95	3.43	-17.42	0.54	1.72	2.65	5.91
SIZE	9.15	3.13	2.63	7.10	8.92	11.01	17.95
LIT_RISK	0.21	0.40	0.00	0.00	0.00	0.00	1.00
BIG4	0.74	0.44	0.00	0.00	1.00	1.00	1.00

Note: See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 3 (continued)
Summary Statistics

Panel B: Change Variables

Variable	Mean	S.D.	Min	0.25	Mdn	0.75	Max
Δ_LN_AUDFEE	0.05	0.33	-2.80	-0.08	0.02	0.14	4.38
Δ_ABS_DA	0.00	0.11	-0.48	-0.04	0.00	0.03	0.44
Δ_REV_GROWTH	-0.01	0.28	-1.08	-0.11	-0.01	0.08	1.03
Δ_ICOFR_1_0	0.05	0.21	0.00	0.00	0.00	0.00	1.00
Δ_ICOFR_0_1	0.04	0.20	0.00	0.00	0.00	0.00	1.00
Δ_NT_FILING_1_0	0.04	0.19	0.00	0.00	0.00	0.00	1.00
Δ_NT_FILING_0_1	0.03	0.18	0.00	0.00	0.00	0.00	1.00
Δ_M&A_1_0	0.12	0.32	0.00	0.00	0.00	0.00	1.00
Δ_M&A_0_1	0.12	0.32	0.00	0.00	0.00	0.00	1.00
Δ_INV_REC	0.00	0.06	-0.23	-0.02	0.00	0.02	0.17
Δ_ROA	0.02	0.27	-0.90	-0.04	0.00	0.04	1.74
Δ_LOSS_1_0	0.09	0.28	0.00	0.00	0.00	0.00	1.00
Δ_LOSS_0_1	0.10	0.30	0.00	0.00	0.00	0.00	1.00
Δ_LEVERAGE	0.00	0.09	-0.38	-0.03	0.00	0.02	0.33
Δ_CASH	0.00	0.10	-0.36	-0.04	0.00	0.04	0.38
Δ_ALTMAN_Z	0.00	1.39	-5.46	-0.33	0.01	0.28	7.62
Δ_SIZE	0.14	0.59	-1.95	-0.06	0.08	0.25	2.65

See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE 3 (continued)
Summary Statistics

Panel C: Univariate Statistics

	BUSY (N= 21,389)		Non-BUSY (N=10,450)		
Variable	**Mean**	**Median**	**Mean**	**Median**	**Test of Differences**
SWITCH	0.05	0.00	0.06	0.00	*
SWITCH_90	0.03	0.00	0.03	0.00	
LN_AUDFEES	13.77	14.56	13.66	13.70	***
ABS_DA	0.07	0.09	0.06	0.04	***
REV_GROWTH	0.07	0.16	0.06	0.06	**
MW	0.08	0.00	0.09	0.00	
NT_FILING	0.05	0.00	0.07	0.00	***
M&A	0.38	1.00	0.40	0.00	**
INV_REC	0.23	0.33	0.30	0.27	***
ROA	-0.05	0.09	0.01	0.05	***
LOSS	0.36	1.00	0.28	0.00	***
LEVERAGE	0.18	0.30	0.15	0.11	***
CASH	0.26	0.40	0.22	0.15	***
ALTMAN_Z	0.65	2.43	1.55	2.16	***
SIZE	9.24	11.07	8.96	8.86	***
LIT_RISK	0.17	0.00	0.27	0.00	***
BIG4	0.76	1.00	0.71	1.00	***

*, **, *** Indicates a significant difference at one-tailed p-values <0.10, <0.05, <0.01, respectively, using a T-test for comparison of mean values for continuous variables and chi-squared test for comparison of dichotomous variables. See Table 1 for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles of the sample.

TABLE 4
Correlation Table

Variables	Correlations															
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
SWITCH (1)	1															
DEC_YE (2)	-0.01	1														
ABS_DA (3)	0.03	0.06	1													
REV_GROWTH (4)	-0.01	0.01	0.11	1												
ICOFR (5)	0.14	-0.01	0.09	0.01	1											
NT_FILING (6)	0.13	-0.03	0.06	0.00	0.40	1										
M&A (7)	-0.03	-0.01	-0.08	0.10	-0.03	-0.01	1									
INV_REC (8)	0.03	-0.17	0.02	0.12	0.03	0.03	0.02	1								
ROA (9)	-0.04	-0.09	-0.22	0.16	-0.08	-0.08	0.17	0.24	1							
LOSS (10)	0.07	0.08	0.13	-0.24	0.12	0.11	-0.19	-0.18	-0.60	1						
LEVERAGE (11)	-0.01	0.07	-0.06	-0.02	-0.01	0.02	0.14	0.01	0.06	-0.02	1					
CASH (12)	0.00	0.08	0.13	-0.06	-0.01	-0.04	-0.25	-0.41	-0.41	0.31	-0.43	1				
ALTMAN_Z (13)	-0.04	-0.12	-0.13	0.17	-0.06	-0.05	0.17	0.34	0.62	-0.52	0.08	-0.41	1			
SIZE (14)	-0.10	0.04	-0.20	-0.01	-0.13	-0.13	0.29	-0.14	0.27	-0.30	0.17	-0.24	0.26	1		
LIT_RISK (15)	0.00	-0.12	-0.02	0.02	0.01	0.00	-0.03	-0.11	-0.04	0.03	-0.10	0.16	-0.04	-0.01	1	
BIG4 (16)	-0.05	0.05	-0.17	-0.02	-0.12	-0.11	0.17	-0.11	0.13	-0.14	0.12	-0.04	0.13	0.51	0.02	1

See Table 1 for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles of the sample.

TABLE 5
Resource Constraints and Determinants of Auditor Client-Continuance Decisions
Main Multivariate Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)		
		(2004-2015)			(2004-2015)			(2004-2015)		
		SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.355	(0.181)							
Audit Risk										
ABS_DA	+	-0.017	(0.513)		1.145	(0.000)	***	1.081	(0.018)	**
REV_GROWTH	+	-0.160	(0.191)		0.008	(0.478)		-0.034	(0.568)	
ICOFR	+	0.796	(0.000)	***	0.804	(0.000)	***	0.882	(0.000)	***
NT_FILING	+	0.451	(0.000)	***	0.615	(0.000)	***	0.506	(0.001)	***
M&A	+	0.029	(0.388)		0.144	(0.022)	**	0.077	(0.243)	
INV_REC	+	-0.004	(0.494)		0.070	(0.387)		0.309	(0.178)	
ABS_DA*BUSY	+	0.252	(0.342)							
REV_GROWTH*BUSY	+	0.115	(0.311)							
ICOFR*BUSY	+	0.139	(0.179)							
NT_FILING*BUSY	+	0.266	(0.050)	**						
M&A*BUSY	+	-0.059	(0.684)							
INV_REC*BUSY	+	-0.271	(0.197)							
Financial Risk										
ROA	-	-0.053	(0.387)		0.054	(0.665)		0.161	(0.478)	
LOSS	+	0.326	(0.002)	***	0.016	(0.423)		0.245	(0.036)	**
LEVERAGE	+	-0.220	(0.216)		0.032	(0.434)		-0.082	(0.791)	
CASH	-	-0.327	(0.890)		-0.215	(0.888)		0.166	(0.573)	
ALTMAN_Z	-	0.004	(0.625)		-0.022	(0.011)	**	-0.002	(0.878)	

(Continued on the next page)

TABLE 5 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)		
		(2004-2015)			(2004-2015)			(2004-2015)		
		SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	0.259	(0.245)							
LOSS*BUSY	+	-0.062	(0.650)							
LEVERAGE*BUSY	+	0.125	(0.712)							
CASH*BUSY	-	-0.111	(0.720)							
ALTMAN_Z*BUSY	-	-0.017	(0.325)							
Litigation Risk										
SIZE	-	-0.157	(0.000)	***	-0.125	(0.000)	***	-0.114	(0.000)	***
LIT_RISK	+	0.083	(0.521)		-0.002	(0.509)		0.201	(0.110)	
SIZE*BUSY	+	0.047	(0.024)	**						
LIT_RISK*BUSY	+	0.100	(0.489)							
Constant		-0.691	(0.142)		-0.512	(0.318)		-3.146	(0.002)	***
Observations		31,839			21,368			10,312		
Number of Switches		1,794			1,175			619		
Area Under ROC		0.708			0.6859			0.7329		
Pseudo R^2		0.0765			0.0591			0.0907		
Year FE		Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equations [1] and [2]. Column 1 represents a logistic regression model examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH. Column 2 and 3 represent logistic regression models examining the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH for busy season and non-busy season clients, respectively. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 5 (continued)

Panel B: Joint Tests of Coefficients

Joint Test	Sum	χ^2	p-val	
Audit Risk				
ABS_DA + ABS_DA*BUSY	0.235	0.48	(0.487)	
REV_GROWTH + REV_GROWTH*BUSY	-0.045	0.09	(0.761)	
ICOFR + ICOFR*BUSY	0.935	112.35	(0.000)	***
NT_FILING + NT_FILING*BUSY	0.717	52.21	(0.000)	***
M&A + M&A*BUSY	-0.030	0.26	(0.877)	
INV_REC + INV_REC*BUSY	-0.275	1.34	(0.247)	
Financial Risk				
ROA + ROA*BUSY	0.206	2.66	(0.103)	
LOSS + LOSS*BUSY	0.264	10.90	(0.001)	***
LEVERAGE + LEVERAGE*BUSY	-0.095	0.23	(0.631)	
CASH + CASH*BUSY	-0.438	6.25	(0.012)	**
ALTMAN_Z + ALTMAN_Z*BUSY	-0.013	1.47	(0.225)	
Litigation Risk				
SIZE + SIZE*BUSY	-0.110	78.20	(0.000)	***
LIT_RISK + LIT_RISK*BUSY	0.183	3.48	(0.062)	*

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term differ from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 6
Audit Effort and the Determinants of Auditor Client-Continuance Decisions
Main Multivariate Analysis

Panel A: Ordinary Least Square Regression Results

		(1)			(2)			(3)		
		(2005-2015)			(2005-2015)			(2005-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		0.005	(0.953)							
Audit Risk										
ABS_DA	-	-0.327	(0.003)	***	-0.494	(0.000)	***	-0.304	(0.005)	***
REV_GROWTH	-	-0.206	(0.000)	***	-0.23	(0.000)	***	-0.202	(0.000)	***
ICOFR	+	0.259	(0.000)	***	0.272	(0.000)	***	0.309	(0.000)	***
NT_FILING	+	0.196	(0.000)	***	-0.309	(1.000)		0.0346	(0.286)	
M&A	+	0.151	(0.000)	***	0.158	(0.000)	***	0.143	(0.000)	***
INV_REC	+	0.686	(0.000)	***	0.885	(0.000)	***	0.729	(0.000)	***
ABS_DA*BUSY	-	-0.220	(0.064)	*						
REV_GROWTH*BUSY	+	-0.005	(0.544)							
ICOFR*BUSY	+	-0.128	(0.992)							
NT_FILING*BUSY	+	0.018	(0.385)							
M&A*BUSY	+	0.010	(0.359)							
INV_REC*BUSY	+	0.197	(0.048)	**						
Financial Risk										
ROA	-	0.112	(0.894)		-0.012	(0.775)		0.097	(0.274)	
LOSS	+	0.070	(0.007)	***	0.077	(0.000)	***	0.0677	(0.018)	**
LEVERAGE	+	1.077	(0.000)	***	0.957	(0.000)	***	1.112	(0.000)	***
CASH	-	-0.164	(0.034)	**	-0.097	(0.081)	*	-0.143	(0.132)	
ALTMAN_Z	-	-0.007	(0.116)		0.0027	(0.462)		-0.008	(0.162)	

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TABLE 6 (continued)

Panel A: Regression Results

		(1)			(2)			(3)		
		(2005-2015)			(2005-2015)			(2005-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	-0.141	(0.077)	*						
LOSS*BUSY	+	-0.008	(0.589)							
LEVERAGE*BUSY	+	-0.105	(0.836)							
CASH*BUSY	-	0.085	(0.804)							
ALTMAN_Z*BUSY	-	0.01	(0.942)							
Litigation Risk										
SIZE	+	0.340	(0.000)	***	0.327	(0.000)	***	0.341	(0.000)	***
LIT_RISK	+	-0.101	(0.983)		-0.104	(0.999)		-0.105	(0.041)	**
SIZE*BUSY	+	-0.004	(0.695)							
LIT_RISK*BUSY	+	-0.011	(0.591)							
Constant		9.920	(0.000)	***	12.000	(0.000)	***	8.536	(0.000)	***
Observations		24,898			16,621			8,261		
R^2		0.780			0.779			0.791		
Year FE		Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equations [1] and [2]. Column 1 represents an ordinary least squares regression model examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor effort allocation, LN_AUDFEE. Column 2 and 3 represent ordinary least square regression models examining the relation between the determinants of client continuance and auditor effort allocation, LN_AUDFEE for busy season and non-busy season clients, respectively. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 6 (continued)

Panel B: Joint Tests of Coefficients

Joint Test	**Sum**	***F*-test**	**p-val**	
Audit Risk				
ABS_DA + ABS_DA*BUSY	-0.55	50.11	(0.000)	***
REV_GROWTH + REV_GROWTH*BUSY	-0.21	55.62	(0.000)	***
ICOFR + ICOFR*BUSY	0.13	17.76	(0.000)	***
NT_FILING + NT_FILING*BUSY	0.21	34.01	(0.000)	***
M&A + M&A*BUSY	0.16	126.79	(0.000)	***
INV_REC + INV_REC*BUSY	0.88	98.09	(0.000)	***
Financial Risk				
ROA + ROA*BUSY	-0.03	0.50	(0.481)	
LOSS + LOSS*BUSY	0.06	10.42	(0.001)	***
LEVERAGE + LEVERAGE*BUSY	0.97	250.67	(0.000)	***
CASH + CASH*BUSY	-0.08	2.12	(0.145)	
ALTMAN_Z + ALTMAN_Z*BUSY	0.00	1.00	(0.318)	
Litigation Risk				
SIZE + SIZE*BUSY	0.336	5662.38	(0.000)	***
LIT_RISK + LIT_RISK*BUSY	-0.112	11.91	(0.001)	***

Notes: Panel B presents the results from the F-test for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 7
Auditor Client-Continuance Decisions - Time-Period Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)		
		(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-1.414	(0.002)	***	-0.038	(0.945)		0.273	(0.522)	
Audit Risk										
ABS_DA	+	-0.205	(0.592)		-0.146	(0.553)		0.582	(0.252)	
REV_GROWTH	+	-0.281	(0.834)		-0.246	(0.739)		-0.311	(0.831)	
ICOFR	+	0.540	(0.005)	***	0.954	(0.000)	***	1.057	(0.000)	***
NT_FILING	+	0.424	(0.014)	***	0.289	(0.123)		0.473	(0.035)	**
M&A	+	0.184	(0.119)	*	-0.106	(0.696)		-0.101	(0.712)	
INV_REC	+	0.460	(0.157)	*	-0.071	(0.551)		-0.357	(0.780)	
ABS_DA*BUSY	+	-0.070	(0.526)		0.296	(0.411)		-0.012	(0.505)	
REV_GROWTH*BUSY	+	-0.033	(0.534)		0.498	(0.143)		0.371	(0.175)	
ICOFR*BUSY	+	0.404	(0.053)	**	-0.118	(0.654)		-0.163	(0.749)	
NT_FILING*BUSY	+	0.165	(0.244)		0.452	(0.093)	*	0.548	(0.039)	**
M&A*BUSY	+	-0.203	(0.848)		0.301	(0.117)		-0.039	(0.572)	
INV_REC*BUSY	+	-0.131	(0.596)		0.303	(0.327)		-0.577	(0.868)	
Financial Risk										
ROA	-	-0.001	(0.499)		0.116	(0.600)		-0.063	(0.419)	
LOSS	+	0.237	(0.098)	**	0.536	(0.011)	**	0.249	(0.097)	*
LEVERAGE	+	-0.587	(0.895)		-0.070	(0.548)		0.026	(0.478)	
CASH	-	0.060	(0.556)		-0.803	(0.082)	*	-0.430	(0.167)	
ALTMAN_Z	-	0.014	(0.689)		-0.006	(0.422)		-0.005	(0.401)	

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TABLE 7 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)		
		(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	0.162	(0.655)		-0.055	(0.460)		0.375	(0.860)	
LOSS*BUSY	+	0.001	(0.500)		-0.233	(0.790)		0.026	(0.455)	
LEVERAGE*BUSY	+	1.073	(0.031)	**	-0.186	(0.604)		-0.418	(0.777)	
CASH*BUSY	-	-0.166	(0.373)		0.719	(0.859)		-0.272	(0.293)	
ALTMAN_Z*BUSY	-	-0.020	(0.288)		0.023	(0.715)		-0.017	(0.244)	
Litigation Risk										
SIZE	-	-0.212	(0.000)	***	-0.110	(0.001)	***	-0.130	(0.000)	***
LIT_RISK	+	-0.070	(0.640)		0.128	(0.327)		0.162	(0.226)	
SIZE*BUSY	+	0.125	(0.000)	***	-0.025	(0.719)		0.017	(0.303)	
LIT_RISK*BUSY	+	0.123	(0.295)		0.074	(0.404)		0.127	(0.291)	
Constant		0.059	(0.935)		-0.140	(0.886)		-2.441	(0.001)	***
Observations		7,823			7,972			15,705		
Number of Switches		665			394			735		
Area Under ROC		0.7042			0.7105			0.7015		
Pseudo R^2		0.0824			0.0740			0.0717		
Year FE		Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1]. Columns 1 - 3 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH during three separate time periods. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 7 (continued)

Panel B: Joint Tests of Coefficients

	(1)				(2)				(3)			
	(2005-2006)				(2007-2009)				(2010-2015)			
	LN_AUDFEE				LN_AUDFEE				LN_AUDFEE			
Joint Test	**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**	
Audit Risk												
ABS_DA+ABS_DA*BUSY	-0.693	17.89	(0.000)	***	-0.78	31.93	(0.000)	***	-0.423	19.76	(0.000)	***
REV_GROWTH+REV_GROWTH*BUSY	-0.158	4.91	(0.027)	**	-0.188	20.29	(0.000)	***	-0.249	35.44	(0.000)	***
ICOFR+ICOFR*BUSY	0.307	40.57	(0.000)	***	0.176	8.94	(0.003)	***	0.02	0.22	(0.639)	
NT_FILING+NT_FILING*BUSY	0.271	24.42	(0.000)	***	0.136	4.24	(0.040)	**	0.188	9.38	(0.002)	***
M&A+M&A*BUSY	0.102	20.33	(0.000)	***	0.159	71.96	(0.000)	***	0.18	96.72	(0.000)	***
INV_REC+INV_REC*BUSY	0.797	41.25	(0.000)	***	0.887	60.42	(0.000)	***	0.911	78.11	(0.000)	***
Financial Risk												
ROA+ROA*BUSY	-0.18	4.71	(0.030)	**	-0.09	1.51	(0.220)		0.014	0.09	(0.766)	
LOSS+LOSS*BUSY	-0.02	0.22	(0.640)		0.04	1.43	(0.232)		0.093	14.52	(0.000)	***
LEVERAGE+LEVERAGE*BUSY	0.94	102.17	(0.000)	***	0.91	113.68	(0.000)	***	1.023	201.01	(0.000)	***
CASH+CASH*BUSY	-0.10	1.46	(0.227)		-0.07	1.03	(0.311)		-0.072	1.21	(0.271)	
ALTMAN_Z+ALTMAN_Z*BUSY	0.00	0.4	(0.528)		0.00	0.4	(0.525)		0.003	0.88	(0.349)	
Litigation Risk												
SIZE+SIZE*BUSY	0.344	3298.77	(0.000)	***	0.336	3663.55	(0.000)	***	0.334	4364.04	(0.000)	***
LIT_RISK+LIT_RISK*BUSY	-0.121	7.94	(0.498)		-0.138	11.95	(0.500)		-0.098	6.95	(0.496)	

Notes: Panel B presents the results from the *F*-test for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 8
Audit Effort and Client-Continuance Decisions - Time-Periods Analysis

Panel A: Regression Results

		(1)			(2)			(3)		
		(2005-2015)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.116	(0.401)		0.101	(0.387)		-0.0298	(0.781)	
Audit Risk										
ABS_DA	-	-0.104	(0.351)		-0.306	(0.074)	*	-0.442	(0.001)	***
REV_GROWTH	-	-0.187	(0.033)	**	-0.253	(0.000)	***	-0.179	(0.000)	***
ICOFR	+	0.549	(0.000)	***	0.260	(0.000)	***	0.108	(0.047)	**
NT_FILING	+	0.065	(0.184)		0.249	(0.000)	***	0.196	(0.020)	**
M&A	+	0.116	(0.004)	***	0.187	(0.000)	***	0.143	(0.000)	***
INV_REC	+	0.766	(0.000)	***	0.662	(0.000)	***	0.678	(0.000)	***
ABS_DA*BUSY	-	-0.589	(0.030)	**	-0.474	(0.030)	**	0.019	(0.546)	
REV_GROWTH*BUSY	+	0.029	(0.406)		0.065	(0.177)		-0.070	(0.859)	
ICOFR*BUSY	+	-0.242	(0.998)		-0.084	(0.830)		-0.088	(0.873)	
NT_FILING*BUSY	+	0.206	(0.012)	**	-0.113	(0.877)		-0.008	(0.527)	
M&A*BUSY	+	-0.014	(0.609)		-0.028	(0.755)		0.037	(0.136)	
INV_REC*BUSY	+	0.031	(0.429)		0.225	(0.070)	*	0.233	(0.043)	**
Financial Risk										
ROA	-	0.037	(0.585)		0.078	(0.690)		0.134	(0.908)	
LOSS	+	0.032	(0.315)		0.08	(0.034)	**	0.070	(0.028)	**
LEVERAGE	+	1.015	(0.000)	***	1.055	(0.000)	***	1.112	(0.000)	***
CASH	-	-0.215	(0.064)	*	0.007	(0.523)		-0.226	(0.015)	**
ALTMAN_Z	-	0.000	(0.500)		-0.003	(0.347)		-0.009	(0.088)	*

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TABLE 8 (continued)

Panel A: Regression Results

		(1)			(2)			(3)		
		(2004-2015)			(2004-2015)			(2004-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	-0.212	(0.871)		-0.166	(0.168)		-0.120	(0.142)	
LOSS*BUSY	+	-0.051	(0.256)		-0.045	(0.805)		0.023	(0.301)	
LEVERAGE*BUSY	+	-0.071	(0.329)		-0.149	(0.857)		-0.089	(0.754)	
CASH*BUSY	-	0.112	(0.763)		-0.08	(0.265)		0.154	(0.906)	
ALTMAN_Z*BUSY	-	0.004	(0.634)		0.007	(0.757)		0.012	(0.952)	
Litigation Risk										
SIZE	+	0.323	(0.000)	***	0.340	(0.000)	***	0.341	(0.000)	***
LIT_RISK	+	-0.054	(0.193)		-0.068	(0.890)		-0.139	(0.994)	
SIZE*BUSY	+	0.021	(0.012)	**	-0.004	(0.693)		-0.007	(0.820)	
LIT_RISK*BUSY	+	-0.067	(0.151)		-0.070	(0.886)		0.0408	(0.238)	
Constant		9.417	(0.000)	***	10.44	(0.000)	***	10.12	(0.000)	***
Observations		3,871			7,060			13,967		
R^2		0.758			0.774			0.792		
Year FE		Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [3]. Columns 1 - 3 represent ordinary least squares regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor effort allocation, LN_AUDFEE during three separate time periods. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 8 (continued)

Panel B: Joint Tests of Coefficients

	(1)				(2)				(3)			
	(2005-2006)				(2007-2009)				(2010-2015)			
	LN_AUDFEE				LN_AUDFEE				LN_AUDFEE			
Joint Test	**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**	
Audit Risk												
ABS_DA+ABS_DA*BUSY	-0.693	17.89	(0.000)	***	-0.78	31.93	(0.000)	***	-0.423	19.76	(0.000)	***
REV_GROWTH+REV_GROWTH*BUSY	-0.158	4.91	(0.027)	**	-0.188	20.29	(0.000)	***	-0.249	35.44	(0.000)	***
ICOFR+ICOFR*BUSY	0.307	40.57	(0.000)	***	0.176	8.94	(0.003)	***	0.02	0.22	(0.639)	
NT_FILING+NT_FILING*BUSY	0.271	24.42	(0.000)	***	0.136	4.24	(0.040)	**	0.188	9.38	(0.002)	***
M&A+M&A*BUSY	0.102	20.33	(0.000)	***	0.159	71.96	(0.000)	***	0.18	96.72	(0.000)	***
INV_REC+INV_REC*BUSY	0.797	41.25	(0.000)	***	0.887	60.42	(0.000)	***	0.911	78.11	(0.000)	***
Financial Risk												
ROA+ROA*BUSY	-0.18	4.71	(0.030)	**	-0.09	1.51	(0.220)		0.014	0.09	(0.766)	
LOSS+LOSS*BUSY	-0.02	0.22	(0.640)		0.04	1.43	(0.232)		0.093	14.52	(0.000)	***
LEVERAGE+LEVERAGE*BUSY	0.94	102.17	(0.000)	***	0.91	113.68	(0.000)	***	1.023	201.01	(0.000)	***
CASH+CASH*BUSY	-0.10	1.46	(0.227)		-0.07	1.03	(0.311)		-0.072	1.21	(0.271)	
ALTMAN_Z+ALTMAN_Z*BUSY	0.00	0.4	(0.528)		0.00	0.4	(0.525)		0.003	0.88	(0.349)	
Litigation Risk												
SIZE+SIZE*BUSY	0.344	3298.77	(0.000)	***	0.336	3663.55	(0.000)	***	0.334	4364.04	(0.000)	***
LIT_RISK+LIT_RISK*BUSY	-0.121	7.94	(0.498)		-0.138	11.95	(0.500)		-0.098	6.95	(0.496)	

Notes: Panel B presents the results from the *F*-test for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 9
Auditor Client-Continuance Decisions - Big Four Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
VARIABLES	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-1.446	(0.000)	***	-2.192	(0.000)	***	-0.418	(0.649)		-0.950	(0.150)	
Audit Risk													
ABS_DA	+	-0.308	(0.664)		0.335	(0.366)		0.699	(0.316)		-0.878	(0.687)	
REV_GROWTH	+	-0.513	(0.980)		-0.728	(0.977)		-0.533	(0.841)		-0.476	(0.855)	
ICOFR	+	0.730	(0.000)	***	0.564	(0.015)	**	1.151	(0.001)	***	0.835	(0.007)	***
NT_FILING	+	0.590	(0.001)	***	0.547	(0.015)	**	-0.117	(0.611)		1.194	(0.001)	***
M&A	+	0.105	(0.186)		0.146	(0.198)		0.004	(0.494)		0.064	(0.385)	
INV_REC	+	0.381	(0.145)		0.535	(0.163)		0.514	(0.259)		0.192	(0.384)	
ABS_DA*BUSY	+	-0.037	(0.517)		-0.490	(0.651)		-0.836	(0.671)		0.369	(0.426)	
REV_GROWTH*BUSY	+	0.268	(0.195)		0.545	(0.128)		0.017	(0.490)		0.361	(0.259)	
ICOFR*BUSY	+	0.460	(0.015)	**	0.539	(0.038)	**	0.232	(0.302)		0.353	(0.185)	
NT_FILING*BUSY	+	-0.030	(0.449)		0.019	(0.476)		0.535	(0.165)		-0.325	(0.746)	
M&A*BUSY	+	-0.161	(0.864)		-0.215	(0.834)		0.215	(0.252)		-0.220	(0.802)	
INV_REC*BUSY	+	-0.383	(0.819)		-0.061	(0.538)		-0.173	(0.570)		-0.956	(0.910)	
Financial Risk													
ROA	-	-0.039	(0.449)		0.092	(0.577)		0.101	(0.589)		-0.300	(0.293)	
LOSS	+	0.342	(0.008)	***	0.299	(0.080)	*	0.558	(0.041)	**	0.169	(0.269)	
LEVERAGE	+	-0.919	(0.994)		-0.954	(0.960)		-0.077	(0.540)		-1.173	(0.957)	
CASH	-	-0.894	(0.007)	***	-0.616	(0.116)		-1.456	(0.037)	**	-0.881	(0.082)	*
ALTMAN_Z	-	-0.036	(0.018)	**	-0.034	(0.136)		-0.049	(0.127)		-0.044	(0.065)	*

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TABLE 9 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	-0.039	(0.904)		0.092	(0.804)		0.101	(0.440)		-0.300	(0.886)	
LOSS*BUSY	+	0.00136	(0.497)		0.067	(0.403)		-0.308	(0.780)		0.187	(0.274)	
LEVERAGE*BUSY	+	1.132	(0.004)	***	1.743	(0.004)	***	-0.498	(0.701)		1.135	(0.069)	*
CASH*BUSY	-	0.306	(0.769)		0.231	(0.648)		1.401	(0.928)		-0.0901	(0.449)	
ALTMAN_Z*BUSY	-	-0.013	(0.271)		-0.011	(0.389)		0.035	(0.746)		-0.0213	(0.266)	
Litigation Risk													
SIZE	-	-0.254	(0.000)	***	-0.28	(0.000)	***	-0.169	(0.003)	***	-0.244	(0.000)	***
LIT_RISK	+	-0.002	(0.505)		-0.135	(0.719)		0.389	(0.163)		-0.041	(0.554)	
SIZE*BUSY	+	0.124	(0.000)	***	0.164	(0.000)	***	0.019	(0.399)		0.114	(0.020)	**
LIT_RISK*BUSY	+	0.108	(0.282)		0.200	(0.231)		-0.273	(0.744)		0.187	(0.282)	
Constant		-0.294	(0.793)		1.721**	(0.019)		1.342	(0.274)		-0.454	(0.639)	
Observations		23,652			6,282			5,544			11,386		
Number of Switches		1,169			516			216			437		
Area Under ROC		0.7353			0.7336			0.7474			0.7215		
Pseudo R^2		0.1043			0.1138			0.1005			0.0827		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1].Columns 1 - 4 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH for Big Four auditor-client relationships. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 9 (continued)

Panel B: Joint Tests of Coefficients

	(1)				(2)				(3)				(4)			
	(2004-2006) SWITCH				(2007-2009) SWITCH				(2010-2015) SWITCH				(2010-2015) SWITCH			
Joint Test	**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**	
Audit Risk																
ABS_DA + ABS_DA*BUSY	-0.345	0.48	(0.486)		-0.155	0.03	(0.852)		-0.137	0.01	(0.912)		-0.509	0.46	(0.498)	
REV_GROWTH + REV_GROWTH*BUSY	-0.245	1.55	(0.214)		-0.183	0.34	(0.562)		-0.516	1.62	(0.203)		-0.115	0.12	(0.729)	
ICOFR + ICOFR*BUSY	1.19	109.22	(0.000)	***	1.103	49.28	(0.000)	***	1.383	27.85	(0.000)	***	1.188	33.67	(0.000)	***
NT_FILING + NT_FILING*BUSY	0.56	16.49	(0.000)	***	0.566	10.84	(0.001)	***	0.418	1.34	(0.248)		0.869	9.9	(0.002)	***
M&A + M&A*BUSY	-0.056	1.20	(0.548)		-0.069	0.96	(0.617)		0.219	1.14	(0.566)		-0.156	1.31	(0.512)	
INV_REC + INV_REC*BUSY	-0.002	0.00	(0.993)		0.474	0.94	(0.332)		0.341	0.21	(0.648)		-0.764	2.65	(0.104)	
Financial Risk																
ROA + ROA*BUSY	0.23	4.49	(0.034)	**	0.64	2.33	(0.127)		0.12	0	(0.971)		0.06	2.33	(0.127)	
LOSS + LOSS*BUSY	0.34	11.59	(0.000)	***	0.37	4.45	(0.035)	**	0.25	1.05	(0.305)		0.356	5.77	(0.016)	**
LEVERAGE + LEVERAGE*BUSY	0.21	0.82	(0.366)		0.79	4.25	(0.039)	**	-0.575	0.99	(0.319)		-0.038	0.01	(0.918)	
CASH + CASH*BUSY	-0.59	6.29	(0.012)	**	-0.39	1.08	(0.2997)		-0.055	0.01	(0.922)		-0.9711	6.68	(0.010)	***
ALTMAN_Z + ALTMAN_Z*BUSY	-0.05	13.42	(0.000)	***	-0.05	3.9	(0.0482)	**	-0.014	0.19	(0.662)		-0.0653	12.3	(0.001)	***
Litigation Risk																
SIZE + SIZE*BUSY	-0.13	52.67	(0.000)	***	-0.116	14.43	(0.000)	***	-0.150	12.39	(0.000)	***	-0.130	23.87	(0.000)	***
LIT_RISK + LIT_RISK*BUSY	0.106	0.74	(0.390)		0.065	0.11	(0.736)		0.146	0.16	(0.690)		0.146	0.54	(0.463)	

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 10
Auditor Client-Continuance Decisions - non-Big Four Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.070	(0.882)		-0.416	(0.723)		-1.161	(0.151)		0.909	(0.189)	
Audit Risk													
ABS_DA	+	0.920	(0.123)		1.334	(0.235)		-0.597	(0.631)		1.561	(0.035)	**
REV_GROWTH	+	0.045	(0.439)		0.604	(0.145)		-0.001	(0.501)		-0.264	(0.723)	
ICOFR	+	0.858	(0.000)	***	0.585	(0.066)	*	0.846	(0.003)	***	1.141	(0.000)	***
NT_FILING	+	0.36	(0.034)	**	0.591	(0.017)	**	0.596	(0.034)	**	0.139	(0.352)	
M&A	+	-0.211	(0.840)		0.428	(0.153)		-0.356	(0.819)		-0.549	(0.949)	
INV_REC	+	-0.321	(0.766)		1.181	(0.122)		-0.297	(0.635)		-0.752	(0.882)	
ABS_DA*BUSY	+	-0.370	(0.658)		-1.704	(0.787)		0.358	(0.429)		-0.201	(0.565)	
REV_GROWTH*BUSY	+	0.119	(0.371)		-1.278	(0.951)		0.688	(0.163)		0.539	(0.163)	
ICOFR*BUSY	+	-0.293	(0.905)		0.012	(0.490)		-0.498	(0.893)		-0.574	(0.961)	
NT_FILING*BUSY	+	0.567	(0.005)	***	0.155	(0.352)		0.299	(0.252)		1.077	(0.004)	***
M&A*BUSY	+	0.287	(0.122)		-0.104	(0.584)		0.615	(0.041)	**	0.462	(0.117)	
INV_REC*BUSY	+	-0.127	(0.594)		-0.913	(0.783)		1.053	(0.150)		-0.640	(0.803)	
Financial Risk													
ROA	-	-0.194	(0.232)		-0.484	(0.199)		0.094	(0.549)		0.089	(0.594)	
LOSS	+	0.219	(0.129)		-0.0250	(0.523)		0.462	(0.046)	**	0.276	(0.161)	
LEVERAGE	+	0.847	(0.046)	**	-0.378	(0.612)		0.302	(0.391)		1.802	(0.003)	***
CASH	-	0.027	(0.524)		1.803	(0.965)		-0.424	(0.311)		-0.254	(0.350)	
ALTMAN_Z	-	0.0409	(0.977)		0.079	(0.939)		0.034	(0.733)		0.023	(0.752)	

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TABLE 10 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015) SWITCH			(2004-2006) SWITCH			(2007-2009) SWITCH			(2010-2015) SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	0.113	(0.643)		0.154	(0.594)		-0.253	(0.389)		0.039	(0.536)	
LOSS*BUSY	+	-0.079	(0.629)		0.072	(0.447)		-0.249	(0.719)		-0.092	(0.606)	
LEVERAGE*BUSY	+	-1.239	(0.978)		-0.214	(0.550)		0.543	(0.335)		-2.703	(1.000)	
CASH*BUSY	-	-0.104	(0.420)		-1.224	(0.153)		0.781	(0.788)		-0.174	(0.408)	
ALTMAN_Z*BUSY	-	-0.006	(0.414)		-0.015	(0.411)		0.020	(0.612)		0.002	(0.519)	
Litigation Risk													
SIZE	-	-0.082	(0.023)	**	-0.293	(0.002)	***	-0.045	(0.266)		-0.023	(0.344)	
LIT_RISK	+	0.167	(0.218)		0.125	(0.397)		-0.223	(0.701)		0.399	(0.048)	**
SIZE*BUSY	+	0.0682	(0.039)	**	0.252	(0.023)	**	0.106	(0.117)		-0.034	(0.696)	
LIT_RISK*BUSY	+	0.212	(0.182)		0.096	(0.428)		0.556	(0.106)		0.070	(0.417)	
Constant		-1.889	(0.003)	***	-1.670	(0.153)		-1.532	(0.305)		-2.568	(0.005)	***
Observations		8,072			1,473			2,245			4,249		
Number of Switches		625			149			178			298		
Area Under ROC		0.6629			0.6812			0.6889			0.6979		
Pseudo R^2		0.0507			0.0798			0.0682			0.075		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1]. Columns 1 - 4 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH for non-Big Four auditor-client relationships. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 10 (continued)

Panel B: Joint Tests of Coefficients

	(5)				(6)				(7)				(8)			
	(2004-2006) SWITCH				(2007-2009) SWITCH				(2010-2015) SWITCH				(2010-2015) SWITCH			
Joint Test	**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**	
Audit Risk																
ABS_DA + ABS_DA*BUSY	0.55	1.45	(0.228)		-0.37	0.11	(0.735)		-0.239	0.06	(0.806)		1.36	4.54	(0.033)	
REV_GROWTH + REV_GROWTH*BUSY	0.164	0.55	(0.459)		-0.674	1.62	(0.204)		0.687	2.95	(0.086)	*	0.275	0.72	(0.395)	
ICOFR + ICOFR*BUSY	0.565	18.06	(0.000)	***	0.597	4.92	(0.027)	**	0.348	1.7	(0.192)		0.567	8.75	(0.003)	***
NT_FILING + NT_FILING*BUSY	0.927	41.81	(0.000)	***	0.746	8.94	(0.003)	***	0.895	8.32	(0.004)	***	1.216	27.77	(0.000)	***
M&A + M&A*BUSY	0.076	1.36	(0.506)		0.324	2.45	(0.294)		0.259	2.14	(0.343)		-0.087	2.81	(0.245)	
INV_REC + INV_REC*BUSY	-0.448	1.27	(0.261)		0.268	0.11	(0.746)		0.756	1.14	(0.287)		-1.392	6.49	(0.011)	**
Financial Risk																
ROA + ROA*BUSY	-0.08	0.25	(0.616)		-0.33	1.04	(0.309)		-0.159	0.12	(0.733)		0.128	0.34	(0.559)	
LOSS + LOSS*BUSY	0.14	1.09	(0.296)		0.05	0.02	(0.882)		0.213	0.69	(0.408)		0.184	0.88	(0.347)	
LEVERAGE + LEVERAGE*BUSY	-0.39	1.17	(0.280)		-0.59	0.33	(0.568)		0.845	1.69	(0.193)		-0.901	3.28	(0.070)	
CASH + CASH*BUSY	-0.08	0.07	(0.786)		0.58	0.75	(0.388)		0.357	0.43	(0.513)		-0.428	1.27	(0.259)	
ALTMAN_Z + ALTMAN_Z*BUSY	0.03	3.82	(0.051)	*	0.06	2.28	(0.131)		0.054	1.5	(0.221)		0.025	1.44	(0.230)	
Litigation Risk																
SIZE + SIZE*BUSY	-0.0138	0.24	(0.627)		-0.041	0.36	(0.546)		0.061	1.29	(0.257)		-0.057	2.25	(0.134)	
LIT_RISK + LIT_RISK*BUSY	0.379	5.02	(0.025)	**	0.221	0.39	(0.531)		0.469	1.12	(0.290)		0.469	4.13	(0.042)	**

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 11
Audit Effort and Client-Continuance Decisions - Big Four Analysis

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.128	(0.278)		-0.200	(0.174)		-0.166	(0.260)		-0.108	(0.433)	
Audit Risk													
ABS_DA	-	-0.043	(0.369)		0.109	(0.654)		0.043	(0.573)		-0.194	(0.109)	
REV_GROWTH	-	-0.159	(0.000)	***	-0.147	(0.093)	*	-0.116	(0.044)	**	-0.181	(0.002)	***
ICOFR	+	0.356	(0.000)	***	0.427	(0.000)	***	0.403	(0.000)	***	0.254	(0.001)	***
NT_FILING	+	0.303	(0.000)	***	0.212	(0.001)	***	0.318	(0.000)	***	0.409	(0.000)	***
M&A	+	0.125	(0.000)	***	0.134	(0.001)	***	0.140	(0.000)	***	0.118	(0.000)	***
INV_REC	+	0.964	(0.000)	***	0.911	(0.000)	***	0.908	(0.000)	***	1.016	(0.000)	***
ABS_DA*BUSY	+	-0.235	(0.066)	*	-0.694	(0.017)	**	-0.376	(0.091)	*	0.039	(0.582)	
REV_GROWTH*BUSY	+	0.008	(0.444)		0.030	(0.412)		0.032	(0.342)		-0.040	(0.703)	
ICOFR*BUSY	+	-0.139	(0.995)		-0.120	(0.919)		-0.156	(0.939)		-0.114	(0.902)	
NT_FILING*BUSY	+	0.025	(0.348)		0.119	(0.096)	*	-0.054	(0.688)		-0.061	(0.678)	
M&A*BUSY	+	0.019	(0.264)		-0.047	(0.816)		0.017	(0.348)		0.036	(0.166)	
INV_REC*BUSY	+	0.169	(0.110)		0.052	(0.383)		0.244	(0.076)	*	0.192	(0.117)	
Financial Risk													
ROA	-	-0.103	(0.271)		-0.488	(0.002)	***	-0.231	(0.182)		0.075	(0.650)	
LOSS	+	0.062	(0.037)	**	0.017	(0.397)		0.042	(0.214)		0.083	(0.031)	**
LEVERAGE	+	1.065	(0.000)	***	0.991	(0.000)	***	1.001	(0.000)	***	1.133	(0.000)	***
CASH	-	-0.297	(0.002)	***	-0.327	(0.014)	**	-0.222	(0.049)	**	-0.321	(0.004)	***
ALTMAN_Z	-	-0.003	(0.345)		0.007	(0.754)		-0.001	(0.458)		-0.006	(0.212)	

(Continued on the next page)

TABLE 11 (continued)

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	-0.090	(0.305)		0.276	(0.929)		-0.002	(0.497)		-0.266	(0.097)	*
LOSS*BUSY	+	-0.035	(0.804)		-0.050	(0.739)		-0.057	(0.822)		-0.015	(0.614)	
LEVERAGE*BUSY	+	-0.165	(0.928)		-0.069	(0.664)		-0.186	(0.896)		-0.175	(0.904)	
CASH*BUSY	-	0.116	(0.846)		0.110	(0.750)		0.074	(0.691)		0.138	(0.847)	
ALTMAN_Z*BUSY	-	0.012	(0.932)		-0.009	(0.230)		0.009	(0.773)		0.020	(0.987)	
Litigation Risk													
SIZE	+	0.293	(0.000)	***	0.292	(0.000)	***	0.287	(0.000)	***	0.295	(0.000)	***
LIT_RISK	+	-0.058	(0.855)		-0.035	(0.707)		-0.047	(0.769)		-0.075	(0.881)	
SIZE*BUSY	+	0.010	(0.129)		0.030	(0.001)	***	0.015	(0.079)	*	0.003	(0.378)	
LIT_RISK*BUSY	+	-0.049	(0.809)		-0.082	(0.895)		-0.080	(0.878)		-0.018	(0.607)	
Constant		10.760	(0.000)		9.863	(0.000)		11.220	(0.000)		10.950	(0.000)	
Observations		18,976			3,303			5,295			10,378		
Pseudo R^2		0.744			0.744			0.734			0.753		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [3].Columns 1 - 4 represent ordinary least square regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH for Big Four auditor-client relationships. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 11 (continued)

Panel B: Joint Tests of Coefficients

	(1) (2005-2006) SWITCH				(2) (2007-2009) SWITCH				(3) (2010-2015) SWITCH				(4) (2010-2015) SWITCH			
Joint Test	**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**	
Audit Risk																
ABS_DA + ABS_DA*BUSY	-0.278	10.73	(0.001)	***	-0.585	10.15	(0.001)	***	-0.333	4.38	(0.036)	**	-0.155	2.43	(0.119)	
REV_GROWTH + REV_GROWTH*BUSY	-0.151	25.07	(0.000)	***	-0.117	2.19	(0.139)		-0.084	3.47	(0.062)	*	-0.221	25.63	(0.000)	***
ICOFR + ICOFR*BUSY	0.217	46.21	(0.000)	***	0.307	34.79	(0.000)	***	0.247	11.89	(0.001)	***	0.140	11.91	(0.001)	***
NT_FILING + NT_FILING*BUSY	0.328	63.28	(0.000)	***	0.331	30.13	(0.000)	***	0.264	10.66	(0.001)	***	0.348	26.59	(0.000)	***
M&A + M&A*BUSY	0.144	83.29	(0.000)	***	0.087	17.41	(0.000)	***	0.157	48.39	(0.000)	***	0.154	62.04	(0.000)	***
INV_REC + INV_REC*BUSY	1.133	113.73	(0.000)	***	0.963	47.07	(0.000)	***	1.152	72.38	(0.000)	***	1.208	99.27	(0.000)	***
Financial Risk																
ROA + ROA*BUSY	-0.193	14.66	(0.000)	***	-0.212	5.07	(0.024)	**	-0.233	7.42	(0.007)	***	-0.191	10.02	(0.002)	***
LOSS + LOSS*BUSY	0.028	1.79	(0.181)		-0.033	0.59	(0.441)		-0.015	0.22	(0.639)		0.068	7.02	(0.008)	***
LEVERAGE + LEVERAGE*BUSY	0.900	182.99	(0.000)	***	0.922	92.57	(0.000)	***	0.815	78.51	(0.000)	***	0.958	152.15	(0.000)	***
CASH + CASH*BUSY	-0.181	8.63	(0.003)	***	-0.217	5.33	(0.021)	**	-0.148	3.2	(0.074)	*	-0.183	6.42	(0.011)	**
ALTMAN_Z + ALTMAN_Z*BUSY	0.010	4.34	(0.037)	**	-0.002	0.11	(0.743)		0.008	1.37	(0.243)		0.014	7.41	(0.007)	***
Litigation Risk																
SIZE + SIZE*BUSY	0.3026	3095.54	(0.000)	***	0.322	2339.36	(0.000)	***	0.302	1915.96	(0.000)	***	0.298	2352.55	(0.000)	***
LIT_RISK + LIT_RISK*BUSY	-0.1069	9.29	(0.002)		-0.117	6.6	(0.010)		-0.093	8.42	(0.004)		-0.093	5.4	(0.020)	

Notes: Panel B presents the results from the *F*-test for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 12
Audit Effort and Client-Continuance Decisions - Non-Big Four Analysis

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		Ln_FEES			Ln_FEES			Ln_FEES			Ln_FEES		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		0.302	(0.050)	**	0.093	(0.814)		0.468	(0.030)	**	0.244	(0.154)	
Audit Risk													
ABS_DA	-	-0.288	(0.049)	**	-0.084	0.457		-0.336	(0.136)		-0.330	(0.051)	*
REV_GROWTH	-	-0.173	(0.001)	***	-0.077	0.359		-0.230	(0.005)	***	-0.140	(0.016)	**
ICOFR	+	0.142	(0.008)	***	0.763	0.000	***	0.138	(0.062)	*	0.045	(0.268)	
NT_FILING	+	0.077	(0.128)		-0.074	0.627		0.162	(0.042)	**	0.096	(0.155)	
M&A	+	0.146	(0.000)	***	-0.020	0.531		0.166	(0.003)	***	0.165	(0.000)	***
INV_REC	+	0.431	(0.001)	***	0.513	0.053	*	0.444	(0.024)	**	0.381	(0.005)	***
ABS_DA*BUSY	+	-0.335	(0.941)		-0.341	0.687		-0.573	(0.943)		-0.091	(0.636)	
REV_GROWTH*BUSY	+	-0.053	(0.739)		-0.093	0.609		-0.069	(0.728)		-0.067	(0.759)	
ICOFR*BUSY	+	-0.009	(0.510)		-0.399	0.953		0.117	(0.171)		-0.046	(0.679)	
NT_FILING*BUSY	+	0.017	(0.420)		0.304	0.083	*	-0.181	(0.915)		-0.029	(0.595)	
M&A*BUSY	+	0.000	(0.516)		0.109	0.283		-0.045	(0.724)		0.001	(0.491)	
INV_REC*BUSY	+	-0.036	(0.632)		-0.143	0.743		-0.005	(0.523)		-0.048	(0.629)	
Financial Risk													
ROA	-	0.262	(0.996)		0.354	0.956		0.290	(0.944)		0.209	(0.971)	
LOSS	+	0.067	(0.042)	**	-0.102	0.802		0.075	(0.128)		0.066	(0.082)	*
LEVERAGE	+	0.628	(0.000)	***	0.890	0.022	**	0.814	(0.000)	***	0.527	(0.002)	***
CASH	-	-0.119	(0.220)		-0.092	0.504		0.161	(0.850)		-0.312	(0.034)	**
ALTMAN_Z	-	-0.018	(0.006)	***	-0.032	0.037	**	-0.012	(0.134)		-0.019	(0.021)	**

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TABLE 12 (continued)

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		Ln_FEES			Ln_FEES			Ln_FEES			Ln_FEES		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	-0.173	(0.060)	*	-0.356	(0.093)	*	-0.178	(0.189)		-0.126	(0.152)	
LOSS*BUSY	+	-0.031	(0.710)		0.212	(0.075)	*	-0.020	(0.601)		-0.074	(0.874)	
LEVERAGE*BUSY	+	0.053	(0.413)		-0.360	(0.795)		-0.030	(0.553)		0.158	(0.250)	
CASH*BUSY	-	-0.170	(0.121)		-0.092	(0.334)		-0.387	(0.023)	**	-0.049	(0.383)	
ALTMAN_Z*BUSY	-	0.013	(0.943)		0.050	(0.992)		0.004	(0.638)		0.012	(0.869)	
Litigation Risk													
SIZE	+	0.338	(0.000)	***	0.374	(0.000)	***	0.364	(0.000)	***	0.319	(0.000)	***
LIT_RISK	+	-0.054	(0.771)		-0.080	(0.679)		-0.031	(0.629)		-0.067	(0.784)	
SIZE*BUSY	+	-0.037	(0.986)		-0.005	(0.609)		-0.046	(0.974)		-0.037	(0.979)	
LIT_RISK*BUSY	+	0.034	(0.345)		0.052	(0.399)		-0.057	(0.718)		0.066	(0.244)	
Constant		10.170	(0.000)	***	9.645	(0.000)		9.02	0.000	***	9.915	(0.000)	***
Observations		5,922			568			1,765			3,589		
R2		0.629			0.646			0.640			0.643		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [3].Columns 1 - 4 represent ordinary least square regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor effort allocation, SWITCH for non-Big Four auditor-client relationships. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 12 (continued)

Panel B: Joint Test of Coefficients

	(1) (2005-2015) SWITCH				(2) (2005-2006) SWITCH				(3) (2007-2009) SWITCH				(4) (2010-2015) SWITCH			
Joint Test	**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**	
Audit Risk																
ABS_DA + ABS_DA*BUSY	-0.623	10.73	(0.001)	***	-0.425	10.15	(0.001)	***	-0.909	4.38	(0.036)	**	-0.421	2.43	(0.119)	
REV_GROWTH + REV_GROWTH*BUSY	-0.226	25.07	(0.000)	***	-0.170	2.19	(0.139)		-0.299	3.47	(0.062)	*	-0.207	25.63	(0.000)	***
ICOFR + ICOFR*BUSY	0.133	46.21	(0.000)	***	0.364	34.79	(0.000)	***	0.255	11.89	(0.001)	***	-0.001	11.91	(0.001)	***
NT_FILING + NT_FILING*BUSY	0.093	63.28	(0.000)	***	0.230	30.13	(0.000)	***	-0.019	10.66	(0.001)	***	0.067	26.59	(0.000)	***
M&A + M&A*BUSY	0.146	83.29	(0.000)	***	0.089	17.41	(0.000)	***	0.121	48.39	(0.000)	***	0.166	62.04	(0.000)	***
INV_REC + INV_REC*BUSY	0.395	113.73	(0.000)	***	0.370	47.07	(0.000)	***	0.439	72.38	(0.000)	***	0.333	99.27	(0.000)	***
Financial Risk																
ROA + ROA*BUSY	0.089	14.66	(0.000)	***	-0.002	5.07	(0.024)	**	0.112	7.42	(0.007)	***	0.083	10.02	(0.002)	***
LOSS + LOSS*BUSY	0.036	1.79	(0.181)		0.110	0.59	(0.441)		0.055	0.22	(0.639)		-0.007	7.02	(0.008)	***
LEVERAGE + LEVERAGE*BUSY	0.681	182.99	(0.000)	***	0.530	92.57	(0.000)	***	0.784	78.51	(0.000)	***	0.685	152.15	(0.000)	***
CASH + CASH*BUSY	-0.289	8.63	(0.003)	***	-0.184	5.33	(0.021)	**	-0.226	3.2	(0.074)	*	-0.361	6.42	(0.011)	**
ALTMAN_Z + ALTMAN_Z*BUSY	-0.005	4.34	(0.037)	**	0.018	0.11	(0.743)		-0.008	1.37	(0.243)		-0.007	7.41	(0.007)	***
Litigation Risk																
SIZE + SIZE*BUSY	0.3009	3095.54	(0.000)	***	0.369	2339.36	(0.000)	***	0.319	1915.96	(0.000)	***	0.282	2352.55	(0.000)	***
LIT_RISK + LIT_RISK*BUSY	-0.0201	9.29	(0.002)		-0.028	6.6	(0.010)		0.000	8.42	(0.004)		0.000	5.4	(0.020)	

Notes: Panel B presents the results from the *F*-test for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 13
90 Day Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH_90			SWITCH_90			SWITCH_90			SWITCH_90		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.758	(0.036)	**	-1.688	(0.006)	***	-0.080	(0.917)		-0.422	(0.461)	
Audit Risk													
ABS_DA	+	-0.149	(0.417)		-0.891	(0.778)		-0.085	(0.521)		0.652	(0.289)	
REV_GROWTH	+	-0.161	(0.264)		0.292	(0.217)		-0.830	(0.934)		-0.499	(0.866)	
ICOFR	+	0.756	(0.000)	***	0.521	(0.021)	**	1.187	(0.000)	***	0.796	(0.002)	***
NT_FILING	+	0.524	(0.002)	***	0.601	(0.008)	***	0.018	(0.483)		0.722	(0.016)	**
M&A	+	0.168	(0.115)		0.339	(0.051)	*	-0.167	(0.700)		0.041	(0.431)	
INV_REC	+	-0.277	(0.237)		-0.664	(0.838)		-0.153	(0.575)		-0.128	(0.583)	
ABS_DA*BUSY	+	0.296	(0.366)		0.428	(0.390)		0.043	(0.492)		-0.014	(0.504)	
REV_GROWTH*BUSY	+	0.042	(0.450)		-0.600	(0.876)		0.637	(0.171)		0.504	(0.185)	
ICOFR*BUSY	+	0.193	(0.173)		0.401	(0.102)		-0.333	(0.786)		0.187	(0.289)	
NT_FILING*BUSY	+	0.074	(0.375)		-0.013	(0.517)		0.724	(0.084)	*	-0.033	(0.531)	
M&A*BUSY	+	-0.142	(0.200)		-0.372	(0.924)		0.375	(0.159)		-0.080	(0.612)	
INV_REC*BUSY	+	-0.159	(0.364)		0.365	(0.318)		0.321	(0.366)		-0.742	(0.849)	
Financial Risk													
ROA	-	0.315	(0.880)		0.520	(0.873)		0.158	(0.613)		0.308	(0.807)	
LOSS	+	0.274	(0.034)	**	0.264	(0.138)		0.466	(0.095)	*	0.102	(0.341)	
LEVERAGE	+	0.079	(0.421)		-0.494	(0.768)		0.013	(0.494)		0.686	(0.131)	
CASH	-	-0.443	(0.881)		-0.803	(0.098)	*	-0.889	(0.154)		0.004	(0.503)	
ALTMAN_Z	-	-0.021	(0.879)		-0.024	(0.268)		-0.002	(0.480)		-0.030	(0.126)	

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TABLE 13 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH_90			SWITCH_90			SWITCH_90			SWITCH_90		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	-0.131	(0.659)		0.007	(0.504)		-0.172	(0.402)		-0.122	(0.387)	
LOSS*BUSY	+	0.078	(0.337)		0.088	(0.389)		-0.041	(0.539)		0.265	(0.184)	
LEVERAGE*BUSY	+	-0.006	(0.495)		1.255	(0.057)	*	-0.219	(0.583)		-0.939	(0.902)	
CASH*BUSY	-	0.131	(0.621)		0.298	(0.661)		1.343	(0.919)		-0.413	(0.268)	
ALTMAN_Z*BUSY	-	0.035	(0.926)		0.057	(0.862)		0.065	(0.881)		0.021	(0.729)	
Litigation Risk													
SIZE	-	-0.146	(0.000)	***	-0.189	(0.000)	***	-0.052	(0.110)		-0.147	(0.000)	***
LIT_RISK	+	0.297	(0.041)	**	0.257	(0.160)		0.391	(0.186)		0.288	(0.144)	
SIZE*BUSY	+	0.090	(0.000)	***	0.146	(0.001)	***	-0.036	(0.752)		0.105	(0.008)	***
LIT_RISK*BUSY	+	-0.008	(0.483)		0.024	(0.467)		-0.050	(0.544)		0.064	(0.415)	
Constant		-1.534	(0.006)	***	-0.445	(0.626)		-2.773	(0.003)	***	-3.87	(0.001)	***
Observations		31,730			7,728			7,684			15,650		
Number of Switches		908			345			188			375		
Area Under ROC		0.6941			0.6913			0.7135			0.6963		
Pseudo R^2		0.0598			0.0667			0.0627			0.0583		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1]. Columns 1 - 4 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH_90. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

(Continued on the next page)

TABLE 13 (continued)

Panel B: Joint Test of Coefficients

	(1)				(2)				(3)				(4)			
	(2004-2015)				(2004-2006)				(2007-2009)				(2010-2015)			
	SWITCH_90				SWITCH_90				SWITCH_90				SWITCH_90			
Joint Test	**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**	
Audit Risk																
ABS_DA + ABS_DA*BUSY	0.147	0.09	(0.766)		-0.463	0.23	(0.632)		-0.042	0	(0.970)		0.638	0.85	(0.356)	
REV_GROWTH + REV_GROWTH*BUSY	-0.119	0.31	(0.581)		-0.308	0.72	(0.396)		-0.193	0.21	(0.645)		0.005	0	(0.987)	
ICOFR + ICOFR*BUSY	0.949	66.23	(0.000)	***	0.922	25.19	(0.000)	***	0.854	10.27	(0.001)	***	0.983	29.4	(0.000)	***
NT_FILING + NT_FILING*BUSY	0.5976	18.5	(0.000)	***	0.588	8.4	(0.004)	***	0.742	5.38	(0.020)	**	0.690	7.42	(0.006)	***
M&A + M&A*BUSY	0.026	1.51	(0.470)		-0.033	2.73	(0.255)		0.208	1.31	(0.520)		-0.038	0.1	(0.954)	
INV_REC + INV_REC*BUSY	-0.436	1.86	(0.172)		-0.299	0.28	(0.595)		0.168	0.06	(0.808)		-0.870	3.31	(0.069)	*
Financial Risk																
ROA + ROA*BUSY	0.184	1.09	(0.297)		0.53	1.45	(0.229)		-0.01	0	(0.975)		0.19	0.64	(0.423)	
LOSS + LOSS*BUSY	0.3515	10.79	(0.001)	***	0.35	3.06	(0.080)	*	0.42	3.01	(0.083)	*	0.37	5.46	(0.019)	**
LEVERAGE + LEVERAGE*BUSY	0.07281	0.08	(0.784)		0.76	3.09	(0.079)	*	-0.21	0.11	(0.736)		-0.25	0.4	(0.528)	
CASH + CASH*BUSY	-0.312	1.84	(0.175)		-0.51	1.47	(0.226)		0.45	0.75	(0.386)		-0.41	1.47	(0.226)	
ALTMAN_Z + ALTMAN_Z*BUSY	0.0142	0.73	(0.394)		0.03	0.86	(0.354)		0.06	2.72	(0.099)	*	-0.01	0.17	(0.679)	
Litigation Risk																
SIZE + SIZE*BUSY	-0.0558	11.95	(0.001)		-0.043	2.2	(0.138)		-0.088	6.96	(0.008)	***	-0.042	3.1	(0.078)	*
LIT_RISK + LIT_RISK*BUSY	0.28897	5.01	(0.025)		0.281	1.8	(0.179)		0.342	1.42	(0.234)		0.352	3.23	(0.072)	*

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 14
Big Four 90 Day Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH_90			SWITCH_90			SWITCH_90			SWITCH_90		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-1.680	(0.001)	***	(2.771)	(0.000)	***	-0.524	(0.648)		-1.204	(0.167)	
Audit Risk													
ABS_DA	+	0.100	(0.458)		0.064	(0.480)		0.835	(0.339)		0.706	(0.376)	
REV_GROWTH	+	-0.263	(0.220)		0.374	(0.207)		-0.729	(0.867)		-0.953	(0.929)	
ICOFR	+	0.656	(0.002)	***	0.488	(0.061)	*	1.082	(0.017)	**	0.719	(0.030)	**
NT_FILING	+	0.670	(0.004)	***	0.777	(0.005)	***	-0.294	(0.656)		1.214	(0.002)	***
M&A	+	0.210	(0.094)	*	0.242	(0.139)		0.201	(0.298)		0.036	(0.449)	
INV_REC	+	-0.280	(0.292)		-1.447	(0.969)		0.434	(0.335)		0.544	(0.277)	
ABS_DA*BUSY	+	-0.578	(0.311)		-0.937	(0.296)		-1.923	(0.756)		-0.927	(0.648)	
REV_GROWTH*BUSY	+	0.170	(0.348)		-0.347	(0.292)		0.374	(0.319)		0.737	(0.180)	
ICOFR*BUSY	+	0.519	(0.028)	**	0.504	(0.089)	*	0.085	(0.446)		0.700	(0.059)	*
NT_FILING*BUSY	+	-0.174	(0.284)		-0.211	(0.289)		1.059	(0.111)		-0.706	(0.898)	
M&A*BUSY	+	-0.175	(0.182)		-0.290	(0.152)		0.001	(0.500)		-0.008	(0.509)	
INV_REC*BUSY	+	0.082	(0.444)		1.575	(0.040)	**	-0.820	(0.752)		-1.129	(0.866)	
Financial Risk													
ROA	-	0.159	(0.638)		0.455	(0.720)		0.028	(0.519)		-0.085	(0.447)	
LOSS	+	0.206	(0.144)		0.213	(0.232)		0.657	(0.069)	*	-0.294	(0.786)	
LEVERAGE	+	-0.537	(0.136)		-1.185	(0.056)	*	0.272	(0.400)		0.043	(0.480)	
CASH	-	-0.954	(0.022)	**	-1.514	(0.018)	**	-1.434	(0.105)		0.033	(0.517)	
ALTMAN_Z	-	-0.050	(0.017)	**	-0.051	(0.881)		-0.024	(0.319)		-0.069	(0.019)	**

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TABLE 14 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2004-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH_90			SWITCH_90			SWITCH_90			SWITCH_90		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
ROA*BUSY	-	0.189	(0.642)		0.640	(0.741)		-0.296	(0.348)		0.297	(0.659)	
LOSS*BUSY	+	0.161	(0.245)		0.295	(0.214)		-0.335	(0.732)		0.629	(0.066)	*
LEVERAGE*BUSY	+	0.780	(0.088)	*	2.182	(0.007)	***	-1.143	(0.800)		-0.020	(0.508)	
CASH*BUSY	-	0.294	(0.707)		0.821	(0.839)		1.354	(0.854)		-0.851	(0.163)	
ALTMAN_Z*BUSY	-	0.024	(0.781)		0.041	(0.764)		0.051	(0.776)		0.015	(0.638)	
Litigation Risk													
SIZE	-	-0.259	(0.000)	***	-0.281	(0.000)	***	-0.206	(0.003)	***	-0.267	(0.000)	***
LIT_RISK	+	0.141	(0.253)		0.167	(0.286)		0.495	(0.178)		-0.013	(0.513)	
SIZE*BUSY	+	0.157	(0.000)	***	0.188	(0.001)	***	0.084	(0.169)		0.177	(0.005)	***
LIT_RISK*BUSY	+	0.056	(0.406)		0.098	(0.385)		-0.111	(0.579)		0.181	(0.329)	
Constant		0.187	(0.795)		1.753	(0.073)	*	-1.144	(0.350)		-2.001	(0.023)	**
Observations		23,573			6,191			5,148			11,332		
Number of Switches		657			287			119			251		
Area Under ROC		0.7295			0.7169			0.7493			0.7285		
Pseudo R^2		0.0843			0.0888			0.0913			0.0808		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1]. Columns 1 - 4 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between the determinants of client continuance and auditor client-continuance decisions, SWITCH_90 for Big Four auditor-client relationships. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 14 (continued)

Panel B: Joint Test of Coefficients

	(1)				(2)				(3)				(4)			
	(2004-2006)				(2007-2009)				(2010-2015)				(2010-2015)			
	SWITCH_90				SWITCH_90				SWITCH_90				SWITCH_90			
Joint Test	**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**	
Audit Risk																
ABS_DA + ABS_DA*BUSY	-0.478	0.51	(0.477)		-0.873	0.53	(0.467)		-1.088	0.33	(0.563)		-0.221	0.06	(0.813)	
REV_GROWTH + REV_GROWTH*BUSY	-0.093	0.11	(0.745)		0.027	0.00	(0.952)		-0.355	0.46	(0.496)		-0.216	0.20	(0.651)	
ICOFR + ICOFR*BUSY	1.175	67.39	(0.000)	***	0.992	23.70	(0.000)	***	1.167	10.67	(0.001)	***	1.419	38.09	(0.000)	***
NT_FILING + NT_FILING*BUSY	0.496	7.86	(0.005)	***	0.566	6.32	(0.012)	**	0.765	2.93	(0.087)	*	0.508	1.91	(0.167)	
M&A + M&A*BUSY	0.035	1.81	(0.404)		-0.048	1.26	(0.533)		0.202	0.87	(0.649)		0.029	0.04	(0.979)	
INV_REC + INV_REC*BUSY	-0.198	0.25	(0.620)		0.128	0.04	(0.838)		-0.386	0.17	(0.676)		-0.585	0.86	(0.355)	
Financial Risk																
ROA + ROA*BUSY	0.348	1.62	(0.203)		1.095	2.95	(0.086)	*	-0.268	0.29	(0.593)		0.212	0.35	(0.556)	
LOSS + LOSS*BUSY	0.367	8.14	(0.004)	***	0.508	4.72	(0.030)	**	0.322	1.01	(0.314)		0.335	3.22	(0.073)	*
LEVERAGE + LEVERAGE*BUSY	0.243	0.62	(0.431)		0.997	4.27	(0.039)	**	-0.871	1.06	(0.303)		0.023	0.00	(0.959)	
CASH + CASH*BUSY	-0.660	4.82	(0.028)	**	-0.693	2.11	(0.146)		-0.080	0.01	(0.916)		-0.818	3.02	(0.082)	*
ALTMAN_Z + ALTMAN_Z*BUSY	-0.027	1.91	(0.167)	*	-0.010	0.08	(0.775)		0.027	0.35	(0.555)		-0.055	4.81	(0.028)	**
Litigation Risk																
SIZE + SIZE*BUSY	-0.102	21.71	(0.000)	***	-0.093	6.26	(0.012)	**	-0.123	6.60	(0.010)	***	-0.090	7.52	(0.006)	***
LIT_RISK + LIT_RISK*BUSY	0.197	1.70	(0.192)	*	0.265	1.21	(0.272)		0.384	1.14	(0.286)		0.168	0.48	(0.487)	

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 15
Client-Continuance Decisions – Change in Risk Factors Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.075	(0.404)		-0.338	(0.036)	**	-0.065	(0.727)		0.0751	(0.594)	
Audit Risk													
Δ_ABS_DA	+	-0.135	(0.790)		0.427	(0.560)		-0.128	(0.904)		-0.692	(0.464)	
Δ_REV_GROWTH	+	-0.068	(0.717)		-0.346	(0.253)		0.275	(0.480)		0.135	(0.676)	
Δ_ICOFR_1_0	?	0.267	(0.201)		0.240	(0.369)		0.541	(0.115)		-0.127	(0.781)	
Δ_ICOFR_0_1	+	0.988	(0.000)	***	0.511	(0.078)	*	1.354	(0.000)	***	1.026	(0.002)	***
Δ_NT_FILING_1_0	?	0.018	(0.935)		-0.705	(0.006)	***	0.189	(0.599)		1.426	(0.000)	***
Δ_NT_FILING_0_1	+	0.539	(0.012)	**	0.415	(0.150)		-0.090	(0.838)		1.076	(0.004)	***
Δ_M&A_1_0	?	-0.223	(0.191)		-1.129	(0.019)	**	-0.054	(0.862)		0.066	(0.770)	
Δ_M&A_0_1	+	-0.088	(0.599)		-0.204	(0.520)		0.395	(0.173)		-0.387	(0.176)	
Δ_INV_REC	+	1.214	(0.236)		-5.774	(0.005)	***	3.311	(0.205)		2.275	(0.318)	
Δ_ABS_DA*BUSY	+	-0.314	(0.610)		-0.845	(0.369)		-2.096	(0.102)		1.267	(0.244)	
Δ_REV_GROWTH*BUSY	+	-0.081	(0.735)		0.356	(0.373)		-0.702	(0.147)		-0.221	(0.573)	
Δ_ICOFR_1_0*BUSY	?	-0.544	(0.033)	**	-0.605	(0.064)	*	-0.324	(0.473)		0.083	(0.877)	
Δ_ICOFR_0_1*BUSY	+	0.009	(0.971)		0.558	(0.143)		-0.176	(0.692)		-0.127	(0.750)	
Δ_NT_FILING_1_0*BUSY	?	0.298	(0.253)		0.657	(0.044)	**	0.324	(0.482)		-0.305	(0.492)	
Δ_NT_FILING_0_1*BUSY	+	0.399	(0.066)	*	0.009	(0.983)		1.010	(0.069)	*	0.362	(0.402)	
Δ_M&A_1_0*BUSY	?	0.292	(0.151)		1.061	(0.047)	**	0.177	(0.646)		0.037	(0.894)	
Δ_M&A_0_1*BUSY	+	0.075	(0.715)		-0.110	(0.785)		-0.289	(0.443)		0.470	(0.076)	*
Δ_INV_REC*BUSY	+	-0.867	(0.517)		3.190	(0.049)	**	0.854	(0.676)		-1.173	(0.532)	

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TABLE 15 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Financial Risk													
Δ_ROA	-	-0.183	(0.615)		-0.948	(0.037)	**	1.028	(0.008)	***	-1.226	(0.053)	*
Δ_LOSS_1_0	?	0.348	(0.059)	*	0.313	(0.346)		0.633	(0.078)	*	0.313	(0.283)	
Δ_LOSS_0_1	+	0.446	(0.005)	***	0.421	(0.171)	*	0.752	(0.005)	***	0.216	(0.448)	
Δ_LEVERAGE	+	0.094	(0.877)		0.642	(0.458)		0.783	(0.505)		-1.318	(0.321)	
Δ_CASH	-	0.440	(0.465)		0.288	(0.739)		1.100	(0.342)		-0.353	(0.755)	
Δ_ALTMAN_Z	-	-0.140	(0.003)	***	-0.111	(0.084)	*	-0.226	(0.012)	**	-0.045	(0.530)	
Δ_ROA*BUSY	-	0.179	(0.651)		0.287	(0.612)		-1.215	(0.018)	**	1.642	(0.007)	
Δ_LOSS_1_0*BUSY	?	-0.157	(0.488)		-0.507	(0.271)		-0.118	(0.791)		-0.186	(0.585)	
Δ_LOSS_0_1*BUSY	+	-0.198	(0.315)		-0.629	(0.119)		-0.402	(0.236)		0.152	(0.644)	
Δ_LEVERAGE*BUSY	+	-0.476	(0.535)		-1.067	(0.357)		-0.741	(0.624)		0.543	(0.717)	
Δ_CASH*BUSY	-	-0.668	(0.323)		-0.750	(0.449)		-1.991	(0.128)		0.845	(0.488)	
Δ_ALTMAN_Z*BUSY	-	0.081	(0.144)		0.119	(0.149)		0.226	(0.962)		-0.086	(0.301)	

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TABLE 15 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Litigation Risk													
Δ_SIZE	?	0.051	(0.677)		0.231	(0.131)		-0.030	(0.915)		-0.292	(0.199)	
LIT_RISK	?	0.035	(0.798)		-0.037	(0.852)		0.174	(0.525)		0.145	(0.534)	
Δ_SIZE*BUSY	?	-0.057	(0.691)		-0.379	(0.059)	*	0.200	(0.532)		0.306	(0.237)	
LIT_RISK*BUSY	?	0.086	(0.577)		0.092	(0.691)		-0.083	(0.789)		0.055	(0.823)	
Constant		-2.315	(0.001)	***	-1.158	(0.063)	*	-3.983	(0.000)	***	-3.759	(0.000)	***
Observations		28,799			7,151			7,157			14,048		
Number of Switches		1,548			419			394			735		
Area Under ROC		0.6646			0.6573			0.7009			0.6588		
Pseudo R^2		0.0451			0.0484			0.0617			0.0516		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1].Columns 1 - 4 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between changes in the determinants of client continuance and auditor client-continuance decisions, SWITCH. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 15 (continued)

Panel B: Joint Test of Coefficients

	(1) (2004-2015) SWITCH				(2) (2004-2006) SWITCH				(3) (2007-2009) SWITCH				(4) (2010-2015) SWITCH			
Joint Test	**Sum**	χ^2	**p-val**		**Sum**	χ^2	**p-val**		**Sum**	χ^2	**p-val**		**Sum**	χ^2	**p-val**	
Audit Risk																
Δ_ABS_DA+Δ_ABS_DA*BUSY	-0.449	0.52	(0.470)		-0.418	0.11	(0.742)		-2.224	7.42	(0.007)	***	0.575	0.97	(0.324)	
Δ_REV_GROWTH+Δ_REV_GROWTH*BUSY	-0.150	1.06	(0.303)		0.010	0.36	(0.551)		-0.427	0.84	(0.360)		-0.086	0.11	(0.738)	
Δ_ICOFR_1_0+Δ_ICOFR_1_0*BUSY	-0.277	1.22	(0.269)		-0.365	0.47	(0.492)		0.217	0.21	(0.648)		-0.044	0.70	(0.402)	
Δ_ICOFR_0_1+Δ_ICOFR_0_1*BUSY	0.997	0.00	(0.952)		1.069	1.82	(0.178)		1.178	0.12	(0.726)		0.899	0.09	(0.758)	
Δ_NT_FILING_1_0+Δ_NT_FILING_1_0*BUSY	0.316	23.14	(0.000)	***	-0.048	3.66	(0.056)	*	0.513	0.55	(0.459)		1.121	30.69	(0.000)	***
Δ_NT_FILING_0_1+Δ_NT_FILING_0_1*BUSY	0.938	38.93	(0.000)	***	0.424	4.66	(0.031)	**	0.920	6.70	(0.010)	***	1.438	41.40	(0.000)	***
Δ_M&A_1_0+Δ_M&A_1_0*BUSY	0.069	1.74	(0.418)		-0.068	4.58	(0.101)		0.123	0.41	(0.813)		0.103	0.10	(0.951)	
Δ_M&A_0_1+Δ_M&A_0_1*BUSY	-0.013	0.26	(0.879)		-0.314	0.68	(0.711)		0.106	1.65	(0.438)		0.083	2.14	(0.344)	
Δ_INV_REC+Δ_INV_REC*BUSY	0.347	0.68	(0.409)		-2.584	6.34	(0.012)	**	4.165	9.76	(0.002)	***	1.102	0.68	(0.409)	
Financial Risk																
Δ_ROA+Δ_ROA*BUSY	-0.004	1.32	(0.251)		-0.661	0.05	(0.827)		-0.187	0.50	(0.481)		0.416	4.44	(0.035)	**
Δ_LOSS_1_0+Δ_LOSS_1_0*BUSY	0.191	1.41	(0.235)		-0.194	0.58	(0.446)		0.515	4.49	(0.034)	**	0.127	0.26	(0.608)	
Δ_LOSS_0_1+Δ_LOSS_0_1*BUSY	0.248	4.95	(0.026)	**	-0.208	0.04	(0.834)		0.350	2.63	(0.105)		0.368	3.72	(0.054)	*
Δ_LEVERAGE+Δ_LEVERAGE*BUSY	-0.382	0.72	(0.395)		-0.425	0.59	(0.441)		0.042	0.00	(0.979)		-0.775	0.94	(0.332)	
Δ_CASH+Δ_CASH*BUSY	-0.228	0.33	(0.565)		-0.462	3.04	(0.081)	*	-0.891	0.29	(0.587)		0.492	0.45	(0.502)	
Δ_ALTMAN_Z+Δ_ALTMAN_Z*BUSY	-0.059	2.33	(0.127)		0.008	3.43	(0.064)	*	0.000	0.03	(0.867)		-0.131	9.63	(0.002)	***
Litigation Risk																
Δ_SIZE+Δ_SIZE*BUSY	0.086	0.22	(0.643)		0.194	3.18	(0.075)	*	0.145	0.24	(0.621)		-0.147	0.06	(0.811)	
LIT_RISK+LIT_RISK*BUSY	-0.022	0.42	(0.518)		-0.416	0.45	(0.501)		0.374	0.07	(0.798)		0.451	1.74	(0.188)	

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 16
Client-Continuance Decisions – Change in Risk Factor Big Four Analysis

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY													
Audit Risk													
Δ_ABS_DA	+	-0.510	(0.801)		0.258	(0.377)		-1.204	(0.769)		-1.696	(0.937)	
Δ_REV_GROWTH	+	-0.115	(0.660)		-0.587	(0.933)		0.252	(0.333)		0.459	(0.194)	
Δ_ICOFR_1_0	?	0.947	(1.000)		1.008	(0.980)		1.306	(0.999)		0.499	(0.806)	
Δ_ICOFR_0_1	+	1.222	(0.000)	***	0.834	(0.011)	**	1.704	(0.000)	***	1.478	(0.000)	***
Δ_NT_FILING_1_0	?	0.269	(0.798)		-1.396	(0.047)	**	-0.011	(0.492)		1.891	(1.000)	
Δ_NT_FILING_0_1	+	0.376	(0.091)	*	0.156	(0.347)		-0.534	(0.807)		1.479	(0.001)	***
Δ_M&A_1_0	?	-0.403	(0.033)	**	-0.774	(0.060)	*	-0.211	(0.309)		-0.260	(0.191)	
Δ_M&A_0_1	+	-0.184	(0.818)		-0.120	(0.623)		-0.121	(0.610)		-0.328	(0.839)	
Δ_INV_REC	+	2.075	(0.079)	*	2.678	(0.089)	*	4.056	(0.094)	*	-0.885	(0.604)	
Δ_ABS_DA*BUSY	+	0.304	(0.343)		-0.315	(0.613)		-1.054	(0.708)		2.183	(0.047)	**
Δ_REV_GROWTH*BUSY	+	0.143	(0.335)		0.796	(0.054)	*	-0.736	(0.852)		-0.376	(0.736)	
Δ_ICOFR_1_0*BUSY	?	-0.478	(0.076)	*	-0.513	(0.189)		-0.932	(0.067)	*	0.049	(0.531)	
Δ_ICOFR_0_1*BUSY	+	0.080	(0.394)		0.559	(0.119)		-0.157	(0.598)		-0.304	(0.742)	
Δ_NT_FILING_1_0*BUSY	?	0.202	(0.699)		1.707	(0.971)		-0.391	(0.311)		-0.635	(0.153)	
Δ_NT_FILING_0_1*BUSY	+	0.389	(0.137)		0.178	(0.374)		1.355	(0.038)	**	-0.188	(0.630)	
Δ_M&A_1_0*BUSY	?	0.493	(0.972)		0.922	(0.950)		0.142	(0.605)		0.358	(0.843)	
Δ_M&A_0_1*BUSY	+	0.252	(0.150)		-0.022	(0.519)		0.115	(0.416)		0.455	(0.115)	
Δ_INV_REC*BUSY	+	-2.183	(0.883)		-5.278	(0.981)		-2.283	(0.723)		2.918	(0.220)	

(Continue on the next page)

TABLE 16 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Financial Risk													
Δ_ROA	-	-0.720	(0.129)		-1.644	(0.006)	***	0.438	(0.731)		-1.022	(0.237)	
Δ_LOSS_1_0	?	0.137	(0.698)		0.269	(0.737)		0.330	(0.722)		0.148	(0.641)	
Δ_LOSS_0_1	+	0.365	(0.041)	**	0.658	(0.029)	**	0.491	(0.086)	*	0.214	(0.304)	
Δ_LEVERAGE	+	-0.435	(0.712)		0.429	(0.338)		-0.837	(0.689)		-1.123	(0.744)	
Δ_CASH	-	0.716	(0.807)		-0.393	(0.349)		2.944	(0.959)		1.011	(0.712)	
Δ_ALTMAN_Z	-	-0.145	(0.021)	**	-0.159	(0.053)	*	-0.294	(0.010)	**	0.0715	(0.740)	
Δ_ROA*BUSY	-	0.589	(0.806)		0.542	(0.752)		-0.534	(0.272)		1.477	(0.846)	
Δ_LOSS_1_0*BUSY	?	0.186	(0.726)		-0.24	(0.331)		0.559	(0.799)		0.0616	(0.552)	
Δ_LOSS_0_1*BUSY	+	-0.170	(0.748)		-1.107	(0.988)		-0.180	(0.655)		0.13	(0.391)	
Δ_LEVERAGE*BUSY	+	0.207	(0.416)		-0.773	(0.714)		0.273	(0.448)		0.794	(0.342)	
Δ_CASH*BUSY	-	-1.104	(0.133)		0.414	(0.627)		-4.951	(0.011)	**	-1.125	(0.290)	
Δ_ALTMAN_Z*BUSY	-	0.036	(0.668)		0.205	(0.959)		0.099	(0.751)		-0.277	(0.015)	**

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TABLE 16 (continued)

Panel A: Logistic Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2004-2006)			(2007-2009)			(2010-2015)		
		SWITCH			SWITCH			SWITCH			SWITCH		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Litigation Risk													
Δ_SIZE	?	-0.002	(0.991)		0.114	(0.556)		-0.019	(0.958)		-0.368	(0.171)	
LIT_RISK	?	-0.092	(0.991)		-0.173	(0.456)		0.297	(0.443)		-0.171	(0.599)	
Δ_SIZE*BUSY	?	-0.236	(0.182)		-0.442	(0.068)	*	-0.106	(0.800)		0.115	(0.711)	
LIT_RISK*BUSY	?	0.117	(0.182)		0.231	(0.393)		-0.468	(0.272)		0.201	(0.555)	
Constant		-1.24	(0.007)	***	-1.106	(0.060)	*	-3.641	(0.000)	***	-3.986	(0.000)	***
Observations		21,831			5,848			5,160			10,398		
Number of Switches		952			299			216			437		
Area Under ROC		0.6917			0.6968			0.7343			0.6819		
Pseudo R^2		0.0609			0.0789			0.0975			0.0678		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [1]. Columns 1 - 4 represent logistic regression models examining whether auditors' resource constraints (BUSY) effect the relation between changes in the determinants of client continuance and auditor client-continuance decisions, SWITCH for Big Four auditor-client relationships. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 16 (continued)

Panel B: Joint Test of Coefficients

	(1) (2005-2015) SWITCH				(2) (2005-2006) SWITCH				(3) (2007-2009) SWITCH				(4) (2010-2015) SWITCH			
Joint Test	**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**		**Sum**	**χ^2**	**p-val**	
Audit Risk																
Δ_ABS_DA+Δ_ABS_DA*BUSY	-0.206	0.03	(0.864)		-0.057	0.00	(0.979)		-2.258	4.07	(0.044)	**	0.487	0.48	(0.489)	
Δ_REV_GROWTH+Δ_REV_GROWTH*BUSY	0.028	0.01	(0.941)		0.209	0.00	(0.948)		-0.484	0.78	(0.376)		0.083	0.16	(0.692)	
Δ_ICOFR_1_0+Δ_ICOFR_1_0*BUSY	0.469	6.05	(0.014)	**	0.495	2.03	(0.154)		0.374	0.77	(0.379)		0.548	3.89	(0.048)	**
Δ_NT_FILING_1_0+Δ_NT_FILING_1_0*BUSY	0.471	5.78	(0.016)	**	0.311	1.37	(0.242)		-0.402	0.40	(0.528)		1.256	14.58	(0.000)	***
Δ_NT_FILING_0_1+Δ_NT_FILING_0_1*BUSY	0.765	11.85	(0.001)	***	0.334	0.95	(0.330)		0.821	2.90	(0.089)	*	1.291	17.70	(0.000)	***
Δ_M&A_1_0+Δ_M&A_1_0*BUSY	0.090	3.27	(0.195)		0.148	4.51	(0.105)		-0.069	0.21	(0.899)		0.098	0.90	(0.638)	
Δ_M&A_0_1+Δ_M&A_0_1*BUSY	0.068	1.04	(0.595)		-0.142	0.42	(0.810)		-0.006	0.09	(0.956)		0.127	1.62	(0.445)	
Δ_INV_REC+Δ_INV_REC*BUSY	-0.108	0.14	(0.710)		-2.600	3.82	(0.051)	*	1.773	1.74	(0.187)		2.033	1.36	(0.243)	
Financial Risk																
Δ_ROA+Δ_ROA*BUSY	-0.131	0.57	(0.449)		-1.102	0.10	(0.752)		-0.096	0.00	(0.949)		0.455	3.23	(0.072)	*
Δ_LOSS_1_0+Δ_LOSS_1_0*BUSY	0.323	2.39	(0.122)		0.029	0.12	(0.730)		0.889	5.42	(0.020)	**	0.210	0.40	(0.529)	
Δ_LOSS_0_1+Δ_LOSS_0_1*BUSY	0.195	2.01	(0.156)		-0.449	0.47	(0.495)		0.311	1.65	(0.200)		0.344	2.25	(0.134)	
Δ_LEVERAGE+Δ_LEVERAGE*BUSY	-0.228	0.41	(0.520)		-0.344	0.76	(0.382)		-0.564	0.01	(0.904)		-0.329	0.10	(0.757)	
Δ_CASH+Δ_CASH*BUSY	-0.388	0.68	(0.410)		0.021	0.22	(0.636)		-2.007	2.17	(0.141)		-0.114	0.00	(0.951)	
Δ_ALTMAN_Z+Δ_ALTMAN_Z*BUSY	-0.109	6.13	(0.013)	**	0.046	2.40	(0.121)		-0.195	4.82	(0.028)	**	-0.206	11.09	(0.001)	***
Litigation Risk																
Δ_SIZE+Δ_SIZE*BUSY	-0.094	6.39	(0.012)	**	-0.059	5.54	(0.019)	**	0.278	0.27	(0.602)		-0.539	2.67	(0.103)	
LIT_RISK+LIT_RISK*BUSY	-0.328	0.38	(0.537)		-0.615	0.86	(0.355)		0.191	0.26	(0.608)		-0.056	0.05	(0.831)	

Notes: Panel B presents the results from the Wald chi-squared tests for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 17
Audit Effort – Change in Risk Factor Analysis

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		Δ_LN_AUDFEE			Δ_LN_AUDFEE			Δ_LN_AUDFEE			Δ_LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.027	(0.000)	***	-0.189	(0.000)	***	-0.015	(0.128)		0.009	(0.125)	
Audit Risk													
Δ_ABS_DA	-	0.065	(0.920)		0.222	(0.913)		-0.039	(0.698)		0.071	(0.912)	
Δ_REV_GROWTH	-	0.021	(0.933)		0.039	(0.759)		0.035	(0.923)		0.011	(0.766)	
Δ_ICOFR_1_0	?	-0.140	(0.000)	***	-0.284	(0.000)	***	-0.122	(0.001)	***	-0.094	(0.015)	**
Δ_ICOFR_0_1	+	0.243	(0.000)	***	0.271	(0.000)	***	0.209	(0.000)	***	0.198	(0.000)	***
Δ_NT_FILING_1_0	-	-0.037	(0.057)	*	-0.089	(0.046)	**	-0.010	(0.619)		-0.071	(0.043)	**
Δ_NT_FILING_0_1	+	0.247	(0.000)	***	0.270	(0.000)	***	0.192	(0.000)	***	0.204	(0.000)	***
Δ_M&A_1_0	?	-0.021	(0.057)	*	-0.069	(0.086)	*	-0.011	(0.615)		-0.011	(0.327)	
Δ_M&A_0_1	+	0.042	(0.000)	***	0.029	(0.264)		0.000	(0.500)		0.067	(0.000)	***
Δ_INV_REC	+	-0.138	(0.934)		0.125	(0.354)		-0.265	(0.967)		-0.129	(0.123)	
Δ_ABS_DA*BUSY	-	-0.047	(0.191)		-0.245	(0.918)		0.000	(0.502)		-0.006	(0.536)	
Δ_REV_GROWTH*BUSY	-	0.030	(0.955)		0.018	(0.612)		0.031	(0.842)		0.027	(0.894)	
Δ_ICOFR_1_0*BUSY	?	0.091	(0.001)	***	0.214	(0.000)	***	0.117	(0.013)	**	0.042	(0.355)	
Δ_ICOFR_0_1*BUSY	+	-0.078	(0.990)		-0.065	(0.822)		-0.025	(0.330)		-0.057	(0.104)	
Δ_NT_FILING_1_0*BUSY	?	-0.048	(0.119)		0.021	(0.749)		-0.119	(0.013)	**	0.046	(0.390)	
Δ_NT_FILING_0_1*BUSY	+	-0.066	(0.951)		-0.075	(0.148)		-0.016	(0.408)		-0.024	(0.346)	
Δ_M&A_1_0*BUSY	?	0.015	(0.261)		0.062	(0.179)		0.013	(0.621)		-0.001	(0.928)	
Δ_M&A_0_1*BUSY	+	-0.005	(0.647)		0.011	(0.411)		0.023	(0.195)		-0.025	(0.060)	*
Δ_INV_REC*BUSY	+	-0.023	(0.580)		-0.405	(0.140)		0.100	(0.288)		0.045	(0.384)	

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TABLE 17 (continued)

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Financial Risk													
Δ_ROA	-	-0.079	(0.013)	**	-0.168	(0.050)	**	-0.056	(0.168)		-0.038	(0.201)	
Δ_LOSS_1_0	?	-0.029	(0.052)	*	-0.057	(0.258)		-0.037	(0.240)		-0.021	(0.188)	
Δ_LOSS_0_1	+	0.019	(0.077)	*	0.020	(0.373)		0.037	(0.030)	**	0.017	(0.152)	
Δ_LEVERAGE	+	0.405	(0.000)	***	0.216	(0.157)		0.490	(0.000)	***	0.432	(0.000)	***
Δ_CASH	-	-0.323	(0.000)	***	-0.332	(0.041)	**	-0.376	(0.000)	***	-0.253	(0.000)	***
Δ_ALTMAN_Z	-	0.010	(0.982)		0.024	(0.942)		0.012	(0.931)		0.003	(0.697)	
Δ_ROA*BUSY	-	-0.045	(0.124)		0.029	(0.603)		-0.057	(0.199)		-0.086	(0.042)	**
Δ_LOSS_1_0*BUSY	?	0.016	(0.356)		0.067	(0.238)		0.021	(0.568)		0.004	(0.845)	
Δ_LOSS_0_1*BUSY	+	0.015	(0.180)		0.047	(0.249)		-0.004	(0.557)		0.007	(0.365)	
Δ_LEVERAGE*BUSY	+	0.032	(0.331)		0.232	(0.164)		-0.173	(0.931)		0.056	(0.277)	
Δ_CASH*BUSY	-	0.019	(0.612)		-0.043	(0.414)		0.007	(0.527)		0.030	(0.651)	
Δ_ALTMAN_Z*BUSY	-	-0.008	(0.084)	*	-0.031	(0.042)	**	-0.005	(0.307)		-0.001	(0.455)	

(Continue on the next page)

TABLE 17 (continued)

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Litigation Risk													
Δ_SIZE	+	0.112	(0.000)	***	0.141	(0.000)	***	0.108	(0.000)	***	0.091	(0.000)	***
LIT_RISK	?	0.017	(0.247)		0.019	(0.641)		0.006	(0.797)		0.037	(0.058)	*
Δ_SIZE*BUSY	+	0.004	(0.332)		0.012	(0.359)		0.016	(0.169)		-0.007	(0.208)	
LIT_RISK*BUSY	?	0.003	(0.719)		0.021	(0.543)		-0.019	(0.300)		0.010	(0.337)	
Constant		-0.289	(0.290)		0.064	(0.835)		0.177	(0.000)	***	-0.131	(0.000)	***
Observations		25,463			4,197			7,244			14,022		
R^2		0.145			0.188			0.137			0.118		
Year FE													
Industry FE													

Notes: Panel A presents the results from estimating Equation [1].Columns 1 - 4 represent ordinary least square regression models examining whether auditors' resource constraints (BUSY) effect changes in the determinants of client continuance on auditor effort allocation, LN_AUDFEE. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

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TABLE 17 (continued)

Panel B: Joint Test of Coefficients

	(1) (2005-2015) Δ_LN_AUDFEE				(2) (2005-2006) Δ_LN_AUDFEE				(3) (2007-2009) Δ_LN_AUDFEE				(4) (2010-2015) Δ_LN_AUDFEE			
Joint Test	**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**		**Sum**	***F*-test**	**p-val**	
Audit Risk																
Δ_ABS_DA+Δ_ABS_DA*BUSY	-0.138	0.20	(0.652)		0.125	0.72	(0.396)		-0.265	0.39	(0.534)		-0.129	4.16	(0.041)	**
Δ_REV_GROWTH+Δ_REV_GROWTH*BUSY	0.018	18.14	(0.000)	***	-0.023	2.77	(0.096)	*	-0.038	10.13	(0.002)	***	0.065	5.82	(0.016)	**
Δ_ICOFR_1_0+Δ_ICOFR_1_0*BUSY	0.051	9.62	(0.002)	***	0.057	5.16	(0.023)	**	0.066	0.09	(0.764)		0.038	4.07	(0.044)	**
Δ_ICOFR_0_1+Δ_ICOFR_0_1*BUSY	-0.050	5.65	(0.017)	**	-0.070	1.15	(0.283)		-0.005	0.19	(0.661)		-0.051	1.53	(0.216)	
Δ_NT_FILING_1_0+Δ_NT_FILING_1_0*BUSY	0.165	18.74	(0.000)	***	0.206	3.84	(0.050)	*	0.184	14.04	(0.000)	***	0.141	0.75	(0.385)	
Δ_NT_FILING_0_1+Δ_NT_FILING_0_1*BUSY	-0.085	53.28	(0.000)	***	-0.069	20.42	(0.000)	***	-0.129	12.43	(0.000)	***	-0.025	21.75	(0.000)	***
Δ_M&A_1_0+Δ_M&A_1_0*BUSY	0.181	3.97	(0.138)		0.195	3.69	(0.158)		0.176	0.13	(0.877)		0.180	1.31	(0.271)	
Δ_M&A_0_1+Δ_M&A_0_1*BUSY	-0.006	32.38	(0.000)	***	-0.007	2.78	(0.249)		0.002	1.25	(0.288)		-0.013	24.18	(0.000)	***
Δ_INV_REC+Δ_INV_REC*BUSY	0.036	5.08	(0.024)	**	0.040	3.13	(0.077)	*	0.023	2.03	(0.155)		0.042	0.50	(0.482)	
Financial Risk																
Δ_ROA+Δ_ROA*BUSY	0.010	62.61	(0.000)	***	0.024	8.52	(0.004)	***	0.012	11.43	(0.001)	***	0.003	43.53	(0.000)	***
Δ_LOSS_1_0+Δ_LOSS_1_0*BUSY	-0.124	2.22	(0.136)		-0.139	0.31	(0.578)		-0.114	0.87	(0.351)		-0.124	3.09	(0.079)	*
Δ_LOSS_0_1+Δ_LOSS_0_1*BUSY	-0.013	13.48	(0.000)	***	0.009	3.91	(0.048)	**	-0.017	5.01	(0.025)	**	-0.017	4.05	(0.044)	**
Δ_LEVERAGE+Δ_LEVERAGE*BUSY	0.034	135.37	(0.000)	***	0.067	20.74	(0.000)	***	0.033	22.55	(0.000)	***	0.023	89.45	(0.000)	***
Δ_CASH+Δ_CASH*BUSY	0.437	51.13	(0.000)	***	0.448	15.35	(0.000)	***	0.317	23.55	(0.000)	***	0.488	14.91	(0.000)	***
Δ_ALTMAN_Z+Δ_ALTMAN_Z*BUSY	-0.304	0.61	(0.437)		-0.375	0.57	(0.451)		-0.369	1.70	(0.193)		-0.223	0.38	(0.538)	
Litigation Risk																
Δ_SIZE+Δ_SIZE*BUSY	0.112	276.16	(0.000)	***	0.141	71.47	(0.000)	***	0.108	71.47	(0.000)	***	0.091	143.37	(0.000)	***
LIT_RISK+LIT_RISK*BUSY	0.129	0.94	(0.333)		0.160	2.37	(0.124)		0.114	0.10	(0.751)		0.128	0.08	(0.779)	

Notes: Panel B presents the results from the *F*-test for all determinants and interaction terms. It examines whether the sum of the coefficients on the determinant and interaction term are different from zero. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

TABLE 18
Audit Effort and Resource Constraints on the Change in Determinants of Auditor Client-Continuance
Big Four Analysis

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		Δ_LN_AUDFEE			Δ_LN_AUDFEE			Δ_LN_AUDFEE			Δ_LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
BUSY		-0.033	(0.000)	***	-0.219	(0.000)	***	-0.015	0.184		0.0112	(0.101)	
Audit Risk													
Δ_ABS_DA	-	0.094	(0.938)		0.299	(0.944)		-0.057	(0.269)		0.068	(0.858)	
Δ_REV_GROWTH	-	0.027	(0.928)		0.097	(0.913)		0.051	(0.935)		0.002	(0.546)	
Δ_ICOFR_1_0	?	-0.131	(0.000)	***	-0.203	(0.000)	***	-0.105	(0.018)	**	-0.152	(0.013)	**
Δ_ICOFR_0_1	+	0.254	(0.000)	***	0.259	(0.000)	***	0.208	(0.000)	***	0.201	(0.000)	***
Δ_NT_FILING_1_0	-	-0.031	(0.156)		-0.104	(0.043)	**	-0.027	(0.262)		-0.051	(0.202)	
Δ_NT_FILING_0_1	+	0.313	(0.000)	***	0.293	(0.000)	***	0.272	(0.000)	***	0.271	(0.000)	***
Δ_M&A_1_0	?	-0.029	(0.022)	**	-0.101	(0.026)	**	-0.026	(0.322)		-0.002	(0.880)	
Δ_M&A_0_1	+	0.033	(0.012)	**	0.031	(0.275)		-0.007	(0.616)		0.058	(0.000)	***
Δ_INV_REC	+	-0.058	(0.669)		0.293	(0.226)		-0.242	(0.883)		-0.052	(0.628)	
Δ_ABS_DA*BUSY	-	0.005	(0.527)		-0.317	(0.058)	*	0.209	(0.968)		0.048	(0.745)	
Δ_REV_GROWTH*BUSY	-	0.031	(0.918)		-0.008	(0.458)		0.002	(0.521)		0.047	(0.962)	
Δ_ICOFR_1_0*BUSY	?	0.108	(0.002)	***	0.158	(0.009)	***	0.102	(0.067)	*	0.152	(0.023)	**
Δ_ICOFR_0_1*BUSY	+	-0.122	(0.998)		-0.115	(0.919)		-0.022	(0.612)		-0.091	(0.939)	
Δ_NT_FILING_1_0*BUSY	?	-0.104	(0.006)	***	-0.012	(0.861)		-0.120	(0.043)	**	-0.049	(0.517)	
Δ_NT_FILING_0_1*BUSY	+	-0.101	(0.974)		-0.052	(0.727)		-0.148	(0.961)		-0.015	(0.566)	
Δ_M&A_1_0*BUSY	?	0.019	(0.190)		0.090	(0.077)	*	0.024	(0.417)		-0.016	(0.308)	
Δ_M&A_0_1*BUSY	+	0.001	(0.470)		0.002	(0.485)		0.031	(0.143)		-0.017	(0.825)	
Δ_INV_REC*BUSY	+	-0.104	(0.745)		-0.608	(0.922)		0.035	(0.442)		0.035	(0.433)	

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TABLE 18 (continued)

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Financial Risk													
Δ_ROA	-	-0.120	(0.033)	**	-0.248	(0.066)	*	-0.141	(0.098)	*	0.016	(0.575)	
Δ_LOSS_1_0	?	-0.018	(0.316)		-0.032	(0.575)		-0.051	(0.168)		-0.008	(0.714)	
Δ_LOSS_0_1	+	0.051	(0.003)	***	0.082	(0.133)		0.040	(0.059)	*	0.064	(0.002)	***
Δ_LEVERAGE	+	0.406	(0.000)	***	-0.110	(0.674)		0.539	(0.000)	***	0.508	(0.000)	***
Δ_CASH	-	-0.374	(0.000)	***	-0.227	(0.148)		-0.466	(0.000)	***	-0.325	(0.000)	***
Δ_ALTMAN_Z	-	0.010	(0.920)		0.025	(0.876)		0.008	(0.739)		-0.002	(0.402)	
Δ_ROA*BUSY	-	-0.036	(0.300)		0.094	(0.708)		-0.001	(0.498)		-0.186	(0.018)	**
Δ_LOSS_1_0*BUSY	?	0.013	(0.542)		0.058	(0.362)		0.036	(0.395)		-0.006	(0.807)	
Δ_LOSS_0_1*BUSY	+	-0.024	(0.874)		-0.053	(0.748)		-0.006	(0.574)		-0.045	(0.957)	
Δ_LEVERAGE*BUSY	+	0.111	(0.099)	*	0.590	(0.014)	**	-0.112	(0.806)		0.070	(0.265)	
Δ_CASH*BUSY	-	0.082	(0.832)		-0.131	(0.290)		0.127	(0.821)		0.100	(0.849)	
Δ_ALTMAN_Z*BUSY	-	-0.006	(0.211)		-0.045	(0.027)	**	0.001	(0.534)		0.009	(0.879)	

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TABLE 18 (continued)

Panel A: Regression Results

		(1)			(2)			(3)			(4)		
		(2005-2015)			(2005-2006)			(2007-2009)			(2010-2015)		
		LN_AUDFEE			LN_AUDFEE			LN_AUDFEE			LN_AUDFEE		
Variables	**Pred**	**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**		**coef**	**p-val**	
Litigation Risk													
Δ_SIZE	+	0.116	(0.000)	***	0.086	(0.014)	**	0.112	(0.000)	***	0.105	(0.000)	***
LIT_RISK	?	0.012	(0.220)		0.034	(0.339)		0.018	(0.344)		-0.001	(0.928)	
Δ_SIZE*BUSY	+	0.008	(0.333)		0.052	(0.114)		0.002	(0.480)		0.024	(0.171)	
LIT_RISK*BUSY	?	0.001	(0.934)		0.016	(0.684)		-0.026	(0.203)		0.010	(0.375)	
Constant		0.298	(0.310)		0.731	(0.029)	**	0.183	(0.000)	***	-0.143	(0.003)	***
Observations		19,225			3,438			5,372			10,415		
R^2		0.167			0.211			0.156			0.142		
Year FE		Yes			Yes			Yes			Yes		
Industry FE		Yes			Yes			Yes			Yes		

Notes: Panel A presents the results from estimating Equation [3] using an ordinary least square regression model. It examines the effect of auditor's resource constraints on the determinants of client-continuance on Δ_LN_AUDFEE. P-values reported in parentheses are based on robust standard errors clustered by client. *, **, *** Indicates a significant difference at one- (two)-tailed p-values <0.10, <0.05, <0.01, respectively, when a direction prediction is (is not) made. All variables are defined in Appendix A.

VITA

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