Client Engagement Risks and the Auditor Search Period

Samer K. Khalil, Jeffrey R. Cohen, and Kenneth B. Schwartz

SYNOPSIS: This paper investigates whether client engagement risks lengthen the client acceptance phase for audit firms and result in a longer auditor search period for their clients. Using a sample of auditor resignations over the period 2003–2008, we document that the auditor search period is longer for firms associated with client business risk (financial distress) and audit risk (internal control weaknesses or management integrity issues), while it is shorter for firms representing reduced auditor business risk (auditor industry specialization). These findings highlight the importance of client risk assessment and explain audit firms' response to perceived client risks.

Keywords: client acceptance; auditor search period; audit risk.

INTRODUCTION

The past decade has witnessed an increased interest in the auditor's client acceptance decision and in the way audit firms evaluate potential clients (Asare et al. 2005; Johnstone and Bedard 2004).[1] The interest arises, in part, from litigation against auditors, competitive market forces, and recent advances in information technology that have affected and redefined the attestation process (Johnstone and Bedard 2003). Prior research suggests that the client acceptance decision involves risk evaluation and risk adaptation (Asare et al. 2005; Johnstone and Bedard 2003; Johnstone 2000). Audit firms assess the risks associated with a prospective client (also known as engagement risks or client acceptance risks), the profitability and billing rate, and the risk/return

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[1] Client acceptance is the term commonly used by the auditors to denote their decision about whether to issue an engagement proposal (Johnstone and Bedard 2001). When the prospective client accepts a bid, the client becomes part of the firm's subsequent-year portfolio (Simunic and Stein 1990; Johnstone and Bedard 2001).

relationship before submitting a formal engagement proposal and entering into fee negotiations (Johnstone and Bedard 2001).

Building upon Johnstone and Bedard (2001), we investigate whether risk lengthens the acceptance phase for audit firms and results in a longer auditor search period for their clients. Evidence on the audit search period can shed light on the nature of the audit market and the need for potential guidance to promote better auditor-client choices or matches. We posit that the auditor search period (ASP) following auditor resignations is significantly longer for riskier clients because of the additional time needed to collect and analyze information and to obtain required approvals within the audit firm. We focus on auditor resignations since the ASP, which is essentially unobservable, can be more accurately approximated for auditor resignations than auditor dismissals.[2] Firms whose auditors resign may know about the resignation decision at or just before the resignation date. As such, the audit search process formally starts at or a short time before the auditor resignation date reported on a registrant's Form 8-K filing. In contrast, firms planning to dismiss their auditor are aware of the dismissal decision long before the dismissal date. Hence, the auditor search period may start long before the dismissal date reported on the Form 8-K filings.

Our expectation is that the length of the ASP will be positively affected by the client business risk, the audit risk, and the auditor business risk. We test the hypotheses using a sample of 216 auditor resignations for firms listed on major U.S. stock exchanges (NYSE, AMEX, NASDAQ) with a ticker available and reporting at least one auditor resignation on the Audit Analytics database over the period 2003–2008. Findings support the client business risk hypothesis by documenting a longer ASP for firms that are in financial distress. Results also support the audit risk hypothesis, given that the ASP is longer for firms that report internal control weaknesses issues. Findings further support the auditor business risk hypothesis by showing a shorter ASP for firms hiring an industry specialist audit firm.

These findings extend the client acceptance literature by examining whether engagement risks alter the length of the auditor search period. The results also extend the client acceptance literature (Hall and Renner 1991; Ayers and Kaplan 1998) by documenting that auditors adapt to perceived client risk by taking more time to accept riskier clients. This is an important finding because of a heightened regulatory concern that large accounting firms may shun smaller higher-risk clients, the very same clients that could benefit the most from high-end professional services (Shu 2000; Rama and Read 2006; Cenker and Nagy 2008; Ethridge et al. 2007; Fargher and Jiang 2008; Landsman et al. 2009; Griffin and Lont 2010). Finally, results also contribute to the auditor independence literature (Frankel et al. 2002; Kinney et al. 2004; Asare et al. 2005) by documenting that the provision of nonaudit services does not alter the attractiveness of a prospective client or the length of the client acceptance phase.

This paper proceeds as follows. First, we discuss the theoretical framework and develop the hypotheses. Next, we discuss the sample selection process and the empirical findings to conclude with the interpretation of the results and conclusion.

THEORETICAL FRAMEWORK

We investigate the factors associated with the length of the ASP, relying on the client acceptance model developed by Johnstone and Bedard (2003). The model depicts the client

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[2] We also focused on auditor resignations because the collective research on auditor dismissals and resignations suggests that "resignations are more likely to be associated with indicators of risk than dismissals" (Catanach et al. 2011). We also confirmed that studying resignations is more appropriate after interviewing five audit partners from the Big 4 audit firms. All partners agreed that resignations occur because of high-risk factors, lack of profitability, and lack of appropriate staff, especially during the post-SOX era where the integrated audit is mandatory for all but small clients.

acceptance decision as a multi-stage process in which the audit firm initially gathers information about the risks of a prospective client (also known as engagement risks or client acceptance risks) including client business risk, audit risk, and auditor business risk.[3] The audit firm considers the risk/return trade-off and whether the prospective client meets its established criteria for bidding on the engagement. If the risk/return relationship is acceptable, the audit firm submits a proposal. Otherwise, the audit firm allocates the client into one of two groups. The first includes clients that the audit firm may bid for in case available risk management strategies (staff allocation and/ or higher billing) can bring the risk/return to an acceptable level, while the second contains clients that are substantively unattractive from a business perspective.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Prior research (Huss and Jacobs 1991; Asare et al. 1994) confirms that audit firms make significant risk assessments when making client acceptance decisions. Johnstone (2001) surveyed 113 partners at a Big 5 audit firm to identify factors affecting client acceptance decisions. Partners identified financial trends and operating performance as important client business risk measures; management integrity and, specifically, the relationship with the outgoing auditor as relevant audit risk measures; and professional expertise and timing of the engagement (fiscal year end) as significant auditor business risk measures. Ayers and Kaplan (1998) also found that auditor's assessment of management's integrity significantly affects client acceptance evaluations made by both engagement and risk review partners. Ethridge et al.'s (2007) survey of 60 audit partners extends our understanding of how audit firms measure engagement risks with management integrity ranking as the most critical factor in the audit risk component of engagement risk.

Johnstone (2000) developed a client acceptance model in an experimental setting using a sample of 137 audit partners. Firms in poor financial health and firms that pose greater audit and litigation risk were less likely to be accepted. In a later archival study, Johnstone and Bedard (2004) examined the extent and nature of risk avoidance in client portfolio management at a large audit firm over the period 2000–2001. The authors document that new clients had lower audit risk related to financial reporting quality than continuing clients.

Cohen and Hanno (2000) examined the link between corporate governance, management control philosophy, and client acceptance judgment. They found that both control philosophy and governance structure affected the audit pre-planning stage. Beaulieu (2001) also found that auditors' judgments of client integrity were negatively related to risk judgments, audit scope recommendations, and fee recommendations. Finally, Asare et al. (2005) examined the joint effects of the provision of nonaudit services and management integrity on auditors' client acceptance and staffing decisions. The authors found that questions about management integrity increased perceived risk, decreased the attractiveness of the client and likelihood of acceptance, and required the assignment of more experienced personnel to the subsequent engagement. They also documented that although the provision of nonaudit services increases the attractiveness of a prospective client, it does not necessarily lead to the acceptance of risky clients.

Collectively, prior behavioral, archival, and experimental research clearly documents that considerable risk assessment occurs during the client acceptance phase. However, this body of literature has not considered whether engagement risks lengthen the client acceptance phase for

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[3] Audit risk is "the risk that the auditor may unknowingly fail to appropriately modify his opinion on financial statements that are materially misstated" (Johnstone 2000). Client business risk is "the risk that the client's economic condition will deteriorate in either the short or long term" (Huss and Jacobs 1991), while auditor business risk is the risk that the audit firm will suffer a loss from the engagement (Johnstone 2000; Bell et al. 2002).

audit firms, thereby resulting in a longer auditor search period (ASP) for audit firms' clients. We posit that the ASP length is correlated with the risk profiles of prospective clients for two reasons. First, audit firms need to obtain additional data and assurance during the risk assessment process for riskier clients. Asare et al. (1994) find that the amount of information gathered prior to the client acceptance decision varies considerably across engagements. Asare and Knechel's (1995) findings reveal that individual differences exist among audit partners with regard to the amount and type of information desired in the presence of mixed signals on engagement risks while Johnstone (2000) suggests that auditors proactively adapt to engagement risks by adjusting the amount of data collected during the client acceptance process.

Second, audit firms may require additional approvals for riskier clients (Bell et al. 2002). Huss and Jacobs' findings (1991) indicate that some accounting firms routinely require regional approval, with selected national office review of prospective clients. Asare et al. (1994) document differences among accounting firms with respect to the level of approval (office managing partner or regional partner) that is required for obtaining or continuing a client relationship. Ayers and Kaplan's (1998) findings show that the decision to bid for new clients is the culmination of initial individual judgments, which are then combined to form a final decision. A risk review partner reviews the engagement partner's assessment of the prospective client and usually performs a separate risk assessment of the prospective client. Gendron (2001) similarly notes that the acceptance of certain clients may require approval by a second partner at arm's length from the original assessment process, which is consistent with Bell et al.'s (2002) finding that as the level of assessed risk increases, more decision makers are brought into the decision process.[4]

Because prior research suggests that three different risks may individually and jointly influence the ASP, we test the following three directional hypotheses:

H1: The length of the ASP is positively related to client business risk.

H2: The length of the ASP is positively related to audit risk.

H3: The length of the ASP is positively related to auditor business risk.

METHODOLOGY

Sample Selection

We test the hypotheses using a sample of auditor resignations obtained from the Audit Analytics database. We initially include 490 auditor resignations in firms (1) listed on major U.S. stock exchanges (NYSE, AMEX, NASDAQ), (2) with a ticker available, and (3) reporting at least one auditor resignation over the period 2003–2008 (Table 1, Panel A).[5] We first exclude auditor resignations related to (1) firms in the financial services industry (135 firms); (2) firms appointing the same audit group following audit firm merger or following a change in the auditor legal form of business (58 firms); in addition to those due to (3) auditor specific reasons such as PCAOB registration, lack of independence, and partner rotation (19 firms).[6] We also exclude auditor resignations pertaining to (1) the audit of saving, profit sharing, and retirement plans (32 firms); (2)

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[4] Higher risk clients may not be acceptable if they do not fit the audit firm's target portfolio or risk specifications. However, if the engagement partner prepares a persuasive business case to the appropriate reviewing partners, the auditor may accept the client (Bell et al. 2002).

[5] We obtain our initial sample after excluding firms that are traded over the counter (722 firms) and firms that do not have a ticker available on the Audit Analytics database (2,214 firms).

[6] We exclude firms in the financial services industry because of their unique operating and regulatory environment and differences in accounting classifications (Landsman et al. 2009).

TABLE 1

Sample Selection, Distribution by Year, and Industry
Sample of 216 Firms Whose Auditor Resigned at Least Once over the Period 2003–2008

Panel A: Sample Selection

Initial Sample	490	100.00%
Less: Auditor resignations related to:		
Firms operating in the financial services industry	(135)	(27.55%)
Firms appointing the same audit group following audit firm merger or following a change in the audit firm legal status	(58)	(11.84%)
Auditor specific reasons including PCAOB registration, lack of independence, and partner rotation, among others	(19)	(3.88%)
Audit of saving, profit sharing, and retirement plans	(32)	(6.53%)
Firms with missing Compustat data	(29)	(5.92%)
Firm with a subsidiary emerging from Chapter 11 re-organization	(1)	(0.20%)
Final Sample	216	44.08%

Panel B: Distribution by Year

2003	31	14.35%
2004	51	23.61%
2005	49	22.69%
2006	36	16.67%
2007	30	13.89%
2008	19	8.80%
Final Sample	216	100%

Panel C: Distribution by Industry

Agriculture, Mining and Construction (1000–1999)	27	12.50%
Manufacturing (2000–3999)	98	45.37%
Transportation and Utilities (4000–4999)	19	8.80%
Wholesale and Retail (5000–5999)	22	10.19%
Services (7000–9999)	50	23.15%
Final Sample	216	100%

firms with missing Compustat data (29 firms); in addition to an auditor resignation that pertains to a firm with a subsidiary emerging from Chapter 11 re-organization (1 firm). The final sample includes 216 auditor resignations distributed fairly uniformly across the time period under investigation (Panel B) with greater concentration in the manufacturing industry (Panel C).

We focus on auditor resignations because the auditor search period, which is essentially unobservable, may be more accurately inferred in the case of auditor resignations compared to auditor dismissals. Firms whose auditors resign may know about the resignation decision at or just before the resignation of the incumbent auditor. As such, the auditor search period associated with auditor resignations starts at or a short time before the resignation date reported on Form 8-K filing. In contrast, firms planning to dismiss their auditors are potentially aware of the dismissal decision long before the dismissal date. Hence, the auditor search process is more likely to start long before the dismissal date reported on Form 8-K. Given the lack of prior empirical evidence, we test the validity of our assumption by comparing the distribution of the auditor search period for the

resignation sample (216 auditor resignations) to that of a sample of auditor dismissals (1,077 auditor dismissals) over the period 2003–2008.[7]

Table 2 presents the distribution of the auditor search period for both samples. Data show that 24 (11.10 percent) out of the 216 auditor resignations are accompanied with the appointment of a new auditor (ASP = 0). Form 8-K filings pertaining to 20 of the 24 cases do not provide any information that may explain this relatively short auditor search period. They only report the same date for the resignation of the incumbent auditor and for the appointment of the new auditor. Form 8-K filings pertaining to the remaining four cases, however, provide a clear explanation.[8] In the first case, the audit committee knew about the auditor resignation ahead of time because the incumbent auditor was appointed for a limited term. As for the second, the audit committee hired the auditor providing tax review services to the firm following the resignation of the audit firm performing assurance services. Regarding the two other cases, the audit committee appointed an audit firm that acts as a sub-contractor for the incumbent auditor. For the remaining auditor resignations (192 auditor resignations), the auditor search period ranges from 1 to 262 days with 75 percent of the auditor resignations having an auditor search period that is less than 52 days.

Table 2 also presents the distribution of the ASP for the dismissal sample. Data show that the majority of the firms that dismissed their auditor (approximately 81 percent) simultaneously appointed a new auditor following auditor dismissal. Nearly all of the firms that dismissed their auditor appointed a new auditor in a relatively short period of time, under 45 days. Finally, the mean ASP for the dismissal firms is 1.88 days, in comparison to 38 days for the resignation sample (t = 27.70, p < 0.001). These findings lend support to the contention that auditor dismissals are more likely to be expected and planned for than auditor resignations.

Model

We test our hypotheses using OLS regression analysis. The dependent variable, the square root of the length of the auditor search period in calendar days (*SQRTASP*), represents the square root of the difference between the appointment date of the new auditor and the resignation date of the incumbent auditor as reported on the relevant Form 8-K filing.[9] As for the independent variables, they proxy for client business risk, audit risk, and auditor business risk as follows:

$$SQRTASP = \beta_0 INTERCEPT + \beta_1 FINDIST + \beta_2 LOSS + \beta_3 SALGR + \beta_4 SIZE + \beta_5 VAR$$
$$+ \beta_6 RECINV + \beta_7 INTCTR + \beta_8 INTEGR + \beta_9 YREND + \beta_{10} NAF + \beta_{11} SPECIAL$$
$$+ CONTROL VARIABLES.$$

We assess client business risk using client's financial position, sales growth, size, and stock price volatility. Financial position, proxied by Zmijewski's (1984) distress measure (*FINDIST*) and operating performance (*LOSS*), affects client business risk because financially stressed firms may have greater incentives to manage earnings and may at times misrepresent the firm's financial condition (Krishnan and Krishnan 1997; Lys and Watts 1994; Schwartz and Menon 1985). Sales growth (*SALGR*) may also increase client business risk because rapid growth may be accompanied by ineffective or outdated internal control and financial reporting systems (Johnstone and Bedard

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[7] The selection criteria used for auditor dismissals are comparable to those used for auditor resignations (Table 1).

[8] Multivariate results (Table 5, model 1) hold after excluding the four cases from the analysis.

[9] The use of the square root function transforms the auditor search period and reduces its skewness. Results are comparable using the number of days (un-transformed) as a measure of Auditor Search Period. For instance, the auditor search period is longer for firms that are in financial distress (3.65, p < 0.01), firms that report weaknesses in internal controls (1.75, p < 0.001), and in firms that report management integrity related issues (2.16, p < 0.01), while it is shorter for firms that hire an industry specialist (−2.01, p < 0.001).

TABLE 2

Distribution of the Auditor Search Period in Calendar Days
Sample of 216 (1,077) Firms Whose Auditor Resigned (Dismissed) at Least Once over the Period 2003–2008

ASP (Days)	Resignations		Dismissals		ASP (Days)	Resignations		Dismissals	
	n	Percent	n	Percent		n	Percent	n	Percent
0	24	11.11	872	80.97	46	3	1.39	0.00	0.00
1	6	2.78	44	4.09	47	2	0.93	1.00	0.09
2	3	1.39	20	1.86	48	3	1.39	0.00	0.00
3	1	0.46	21	1.95	49	5	2.31	1.00	0.09
4	2	0.93	16	1.49	50	3	1.39	0.00	0.00
5	4	1.85	19	1.76	52	3	1.39	0.00	0.00
6	7	3.24	17	1.58	54	1	0.46	0.00	0.00
7	7	3.24	8	0.74	55	2	0.93	2.00	0.19
8	1	0.46	5	0.46	56	2	0.93	0.00	0.00
9	1	0.46	2	0.19	58	1	0.46	0.00	0.00
10	1	0.46	4	0.37	59	2	0.93	0.00	0.00
11	3	1.39	3	0.28	60	1	0.46	0.00	0.00
12	1	0.46	1	0.09	61	2	0.93	0.00	0.00
13	2	0.93	3	0.28	62	3	1.39	1.00	0.09
14	3	1.39	2	0.19	63	2	0.93	0.00	0.00
15	2	0.93	4	0.37	64	1	0.46	0.00	0.00
16	5	2.31	5	0.46	65	1	0.46	0.00	0.00
17	3	1.39	1	0.09	67	3	1.39	0.00	0.00
18	0	0.00	1	0.09	68	1	0.46	0.00	0.00
19	1	0.46	1	0.09	70	1	0.46	0.00	0.00
20	2	0.93	3	0.28	71	2	0.93	0.00	0.00
21	5	2.31	1	0.09	72	1	0.46	0.00	0.00
22	1	0.46	1	0.09	73	1	0.46	0.00	0.00
23	4	1.85	1	0.09	74	2	0.93	0.00	0.00
24	2	0.93	1	0.09	76	1	0.46	0.00	0.00
25	1	0.46	1	0.09	79	1	0.46	0.00	0.00
26	3	1.39	1	0.09	80	2	0.93	0.00	0.00
27	2	0.93	0	0.00	82	0	0.00	1.00	0.09
28	2	0.93	0	0.00	83	2	0.93	0.00	0.00
29	4	1.85	0	0.00	90	1	0.46	0.00	0.00
30	2	0.93	0	0.00	91	2	0.93	0.00	0.00
31	1	0.46	1	0.09	92	1	0.46	0.00	0.00
32	3	1.39	0	0.00	95	1	0.46	0.00	0.00
33	4	1.85	0	0.00	97	1	0.46	0.00	0.00
34	6	2.78	2	0.19	98	1	0.46	0.00	0.00
35	2	0.93	1	0.09	99	1	0.46	0.00	0.00
36	0	0.00	1	0.09	105	1	0.46	0.00	0.00
37	1	0.46	0	0.00	106	1	0.46	0.00	0.00
38	2	0.93	1	0.09	111	1	0.46	0.00	0.00
39	4	1.85	0	0.00	113	2	0.93	0.00	0.00
40	4	1.85	2	0.19	136	1	0.46	0.00	0.00
41	2	0.93	0	0.00	149	0	0.00	1.00	0.09
42	4	1.85	1	0.09	155	1	0.46	0.00	0.00

(continued on next page)

TABLE 2 (continued)

	Resignations		Dismissals			Resignations		Dismissals	
ASP (Days)	n	Percent	n	Percent	ASP (Days)	n	Percent	n	Percent
43	4	1.85	2	0.19	215	1	0.46	0.00	0.00
44	1	0.46	0	0.00	258	1	0.46	0.00	0.00
45	1	0.46	1	0.09	262	1	0.46	0.00	0.00

ASP: The difference between the appointment date of the new auditor and the resignation or dismissal date of the incumbent auditor in calendar days; n: Number of auditor resignations (dismissals) associated with a certain ASP; Percent: Number of auditor resignations (dismissals) associated with a certain ASP divided by the total number of auditor resignations (dismissals) in Percent.

2004; Krishnan and Krishnan 1997; Stice 1991). Finally, firm size (*SIZE*) and stock price volatility (*VAR*) increase client business risk because each is positively associated with the probability of claims arising from litigation brought against auditors (Lys and Watts 1994; Stice 1991).

We assess audit risk using three measures: accounts receivable and inventory as a percentage of total assets (*RECINV*), weaknesses in internal controls (*INTCTR*), and management integrity issues (*INTEG*). Firms having a greater percentage of assets held in receivables and inventory are inherently more risky to audit because of the potential measurement error (Pratt and Stice 1994). Firms with internal controls issues are also associated with greater audit risk because they are more likely to be susceptible to financial fraud and may have lower financial reporting quality (Bedard and Johnstone 2004; Cohen and Hanno 2000). Finally, firms reporting the presence of management integrity issues represent a greater audit risk because of potential fraud risk and source credibility issues (Ethridge et al. 2007; Asare et al. 2005; Cohen and Hanno 2000).

We measure auditor business risk using three proxies: timing of the engagement (*YREND*), potential for additional billing opportunities (*NAF*), and audit firm expertise in a certain industry (*SPECIAL*). Auditor business risk is higher for firms with fiscal year ends occurring during the busy audit season, either at the end of June or December (Johnstone 2000). In contrast, the potential to earn nonaudit-related fees reduces auditor business risk because it increases the profitability of the engagement (Asare et al. 2005; Johnstone 2000). Auditors' expertise in the potential client's industry (*SPECIAL*) also reduces auditors' business risk because specialists have the requisite resources and knowledge to detect errors (Cenker and Nagy 2008; Carcello and Nagy 2002; Johnstone 2001).

We control for a set of variables that could alter the ASP including whether a firm has foreign operations or not (*FORG*). Firms with foreign operations can be more complex to audit because of their scope of operations and greater demands on implementing internal controls, regulatory compliance, consolidating information for financial statements, and performing closing and roll up procedures at year end (Ashbaugh-Skaife et al. 2007; Doyle et al. 2007). We also control for inconsistencies (*INCONS*) with respect to reporting disagreements identified in the auditor's exhibit letter and client explanations given in the Form 8-K filing because such inconsistencies cast doubt about management's intentions and integrity (Ethridge et al. 2007; Asare et al. 2005). We further control for the time interval (number of days) from the auditor's termination date to the annual 10-K filing date or deadline (*DFILE*), since firms experiencing an auditor change near the end of their reporting year may feel compelled to identify a replacement auditor in order to file timely reports and maintain investor confidence (Schwartz and Soo 1996).[10]

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[10] Multivariate results do not change when replacing the *DFILE* variable with a dummy variable that is equal to 1 in case auditor resignation occurred in the last quarter of the fiscal year, and 0 otherwise.

We also control for whether the auditor switch is from a Big 4 (non-Big 4) to a Big 4 (non-Big 4) audit firm and vice versa (*B4NB4*, *NB4NB4*, *NB4B4*) because risk tolerance levels may vary across audit firms (Choi et al. 2004; Francis and Krishnan 2002; Jones and Raghunandan 1998). Furthermore, we control for whether the client is a high tech firm or not (*TECH*) because of the frequency of lawsuits brought against these firms (Shu 2000; Beasley et al. 2000; Mednick and Peck 1994; Dunbar and Juneja 1993) and the possibility that these firms are rejected by large audit firms (Behrendt et al. 1994; Yodowitz and Kolleeny 1994). Finally, we control for whether the incumbent auditor issued a qualified opinion for scope limitation or going concern reasons in the year preceding the auditor change (*QUALGC*) since this potentially conveys information about the auditor-client relationship and the client's future financial outlook (Krishnan et al. 1996; Schwartz and Menon 1985).

Descriptive Statistics and Univariate Tests

Table 3 presents descriptive statistics for the ASP (in calendar days) and for all of the independent variables included in our model. The ASP has an average of 38 days, and 75 percent of the auditor resignations are accompanied with an ASP of 52 days or less. Fifty-four percent of the sample firms reported a loss in the year preceding the auditor resignation. Annual sales growth prior to auditor resignation is close to 36 percent, while receivables and inventory constitute 27 percent of total assets, on average. Firms reporting a weakness in internal control following auditor resignations constitute 31 percent of the sample firms, while those disclosing issues related to management integrity represent 5 percent of the sample. Nonaudit fees represent 13 percent of total fees paid to the audit firm. Two-thirds of the sample firms had fiscal years ending on either December 31 or June 30, while 15 percent of the firms hired a specialist auditor following the resignation of the incumbent auditor.

Table 4 presents univariate tests for the length of the auditor search period in calendar days (ASP). The ASP is not significantly associated with client profitability. Firms reporting a loss in the year preceding auditor resignations have, on average, an ASP of 40.45 days, in comparison to an ASP of 35.09 days for firms reporting positive earnings. The ASP, however, is positively associated to audit risk proxies. The ASP for firms reporting internal control or management integrity related issues (51.82 days, 50.45 days, respectively) is significantly longer than that for firms not reporting such issues (31.91 days, 37.33 days, respectively). The ASP is also associated with auditor business risk proxies with a shorter search period for firms hiring an industry specialist following the resignation of the incumbent auditor (18.06 days versus 41.59 days).

Table 4 further documents a longer ASP for firms reporting foreign income (49.02 days versus 33.46 days) and for firms with a qualified audit opinion for scope limitation or going concern reasons (52.85 days versus 35.32 days). In contrast, the ASP for firms switching from a non-Big 4 to another non-Big 4 audit firm (28.97 days) is shorter than that for firms switching from a Big 4 to a non-Big 4 audit firm (45.20 days).

Multivariate Regression Results

Table 5 presents OLS regression analysis (Robust) investigating whether the ASP varies with client business risk, audit risk, and auditor business risk proxies.[11] The model is significant (F = 10.13, p < 0.001) explaining approximately 33 percent of the variation in the length of the ASP. Results provide some support for the client business risk hypothesis (H1) by documenting a

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[11] The robust option in STATA OLS regression analysis deals with cases that have very high leverage and outlying observations. Results are comparable using regular STATA OLS regression analysis and excluding outlying observations identified using two alternative approaches: Cook's D and "hadimvo" STATA function.

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TABLE 3

Descriptive Statistics

Sample of 216 Firms Whose Auditor Resigned at Least Once over the Period 2003–2008

	Mean	Median	Std. Dev.	25th Percentile	50th Percentile	75th Percentile
ASP	38.00	32.00	38.90	7.25	32.00	52.00
FINDIST	2.89	3.11	1.81	1.44	3.11	4.21
LOSS	0.54	1.00	0.50	0.00	1.00	1.00
SALGR	0.36	0.16	0.85	0.06	0.16	0.33
SIZE	4.88	4.96	1.67	3.76	4.96	5.84
VAR	0.08	0.08	0.04	0.06	0.08	0.11
RECINV	0.27	0.22	0.23	0.07	0.22	0.43
INTCTR	0.31	0.00	0.46	0.00	0.00	1.00
INTEG	0.05	0.00	0.22	0.00	0.00	0.00
YREND	0.67	1.00	0.47	0.00	1.00	1.00
NAF	0.13	0.06	0.17	0.00	0.06	0.22
SPECIAL	0.15	0.00	0.36	0.00	0.00	0.00
FORG	0.29	0.00	0.46	0.00	0.00	1.00
INCONS	0.02	0.00	0.15	0.00	0.00	0.00
DFILE	255.63	256.50	93.31	186.00	256.50	324.75
B4B4	0.19	0.00	0.39	0.00	0.00	0.00
B4NB4	0.44	0.00	0.50	0.00	0.00	1.00
NB4NB4	0.32	0.00	0.47	0.00	0.00	1.00
NB4B4	0.04	0.00	0.20	0.00	0.00	0.00
TECH	0.34	0.00	0.47	0.00	0.00	1.00
QUALGC	0.15	0.00	0.36	0.00	0.00	0.00

For variable definitions, please refer to Appendix A.

significantly longer ASP for clients in financial distress (0.32, p < 0.01). This finding is consistent with Asare et al. (1994) and Johnstone (2001) and provides further evidence that a client's financial condition affects the auditors' evaluation of client business risk prior to client acceptance. It is also consistent with Schwartz and Soo's (1996) findings on reporting delays following auditor changes.

Regression results also support the audit risk hypothesis (H2) by documenting a longer ASP for firms with identified weaknesses in internal controls over financial reporting (1.71, p < 0.01) and for firms reporting issues related to management integrity (1.54, p < 0.05). These findings highlight the importance of audit risk proxies and confirm prior research documenting that audit risk can significantly influence audit firm portfolio management decisions (Ethridge et al. 2007; Asare et al. 2005; Johnstone and Bedard 2003; Beaulieu 2001).

Regression analysis results also support the auditor business risk hypothesis (H3), revealing a shorter ASP for clients employing an industry specialist (−1.90, p < 0.01). Additionally, the ASP is longer for clients operating in a high tech industry (0.79, p < 0.05). The ASP is also longer for clients with foreign operations (0.82, p < 0.05), given that these firms must deal with regulatory and legal complexities across borders and with different reporting requirements and timetables (Ashbaugh-Skaife et al. 2007; Doyle et al. 2007), and for firms that received a qualified audit opinion for scope limitation or going concern related reasons (1.00, p < 0.10). In contrast, firms switching from a non-Big 4 audit firm to a Big 4 audit firm (−2.08, p < 0.10) have a significantly shorter ASP compared to firms switching from a Big 4 to a Big 4 audit firm.

TABLE 4

Univariate Tests
Sample of 216 Firms Whose Auditor Resigned at Least Once over the Period 2003–2008

Panel A: Mean Auditor Search Period (ASP) in Calendar Days

	n Yes/No	Yes	No	Diff. (t-stat)
LOSS	(117/99)	40.45	35.09	5.36
				(1.01)
INTCTR	(66/150)	51.82	31.91	19.91***
				(3.56)
INTEG	(11/205)	50.45	37.33	13.13*
				(1.83)
YREND	(145/71)	38.99	35.96	3.03
				(0.54)
SPECIAL	(33/183)	18.06	41.59	−23.53***
				(−3.27)
FORG	(63/153)	49.02	33.46	15.56***
				(2.71)
INCONS	(5/213)	32.80	38.12	−5.32
				(0.30)
TECH	(73/143)	43.05	35.41	7.64
				(1.37)
QUALGC	(33/183)	52.85	35.32	17.53**
				(2.41)

Panel B: Mean Auditor Search Period (ASP) in Calendar Days by Auditor Switch Category

	n	ASP (days)			Diff. t-stat (p-value)
B4B4/NB4NB4	(40/70)	36.70	28.97		7.73
					(0.98)
B4B4/B4NB4	(40/96)	36.70		45.20	−8.50
					(−1.31)
B4B4/NB4B4	(40/9)	36.70			29.00	7.70
					(0.69)
NB4NB4/B4NB4	(70/96)		28.97	45.20	−16.23**
					(−2.56)
NB4NB4/NB4B4	(70/9)		28.97		29.00	−0.03
					(−0.00)
B4NB4/NB4B4	(96/9)			45.20	29.00	16.20
					(1.27)

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent significance level, respectively (two-tailed test).
For variable definitions, please refer to Appendix A.

TABLE 5

OLS Regression (Robust)[a]
Sample of Auditor Resignation Once over the Period 2003–2008

$$SQRTASP = \beta_0 INTERCEPT + \beta_1 FINDIST + \beta_2 LOSS + \beta_3 SALGR + \beta_4 SIZE + \beta_5 VAR \\ + \beta_6 RECINV + \beta_7 INTCTR + \beta_8 INTEGR + \beta_9 YREND + \beta_{10} NAF \\ + \beta_{11} SPECIAL + CONTROL\ VARIABLES$$

	Predicted Sign	**Model 1** Coeff. (t-stat)	**Model 2[b]** Coeff. (t-stat)
Intercept	?	3.49*	4.58**
		(1.87)	(2.47)
Client Business Risk Factors			
FINDIST	+	0.32***	0.23**
		(2.72)	(2.03)
LOSS	+	0.08	0.14
		(0.20)	(0.40)
SALGR	+	0.03	−0.09
		(0.17)	(−0.77)
SIZE	+	−0.06	−0.08
		(−0.28)	(−0.38)
VAR	+	1.71	0.39
		(0.33)	(0.08)
Audit Risk Factors			
RECINV	+	0.47	−0.46
		(0.48)	(−0.52)
INTCTR	+	1.71***	0.85**
		(3.99)	(2.09)
INTEGR	+	1.54**	0.83
		(2.16)	(1.17)
YREND	+	0.30	0.29
		(0.67)	(0.65)
Auditor Business Risk Factors			
NAF	−	−0.29	−0.64
		(−0.28)	(−0.70)
SPECIAL	−	−1.90***	−2.20***
		(−4.14)	(−4.57)
Control Variables			
FORG	+	0.82**	1.08***
		(1.78)	(2.41)
INCONS	+	0.36	0.25
		(0.22)	(0.18)
DFILE	+	0.00	0.00
		(0.04)	(0.87)
B4NB4	?	0.54	0.34
		(0.97)	(0.63)
NB4NB4	?	−1.25	−0.69
		(−1.56)	(−0.88)

TABLE 5 (continued)

	Predicted Sign	Model 1 Coeff. (t-stat)	Model 2[b] Coeff. (t-stat)
NB4B4	?	−2.08* (−1.87)	0.06 (0.07)
TECH	+	0.79** (2.02)	0.33 (0.88)
QUALGC	+	1.00* (1.42)	1.37** (1.99)
n		216	192
F (p < 0.001)		10.13	6.59
R^2 (%)		33.02	28.58

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent significance level, respectively (one-tailed test for signed prediction, two-tailed test otherwise).

[a] The robust option in STATA OLS regression analysis deals with cases that have very high leverage and outlying observations. Results are comparable using regular STATA OLS regression analysis and excluding outlying observations identified using two alternative approaches: Cook's D and "hadimvo" STATA function.

[b] Model 2 excludes firms having an auditor search period of zero days.

For variable definitions, please refer to Appendix A.

Model 2 replicates our analysis excluding observations having an auditor search period of zero days on the basis that such observations may be subject to a significant measurement error. Results consistently document a positive association between client business risk, audit risk, and to auditor business risk proxies and the length of the ASP. In support of the client business risk hypothesis, results demonstrate a positive association between the auditor search period and financial distress (0.23, p < 0.05). In line with the audit risk hypothesis, findings document a longer auditor search period in firms reporting the presence of weaknesses in internal controls over financial reporting (0.85, p < 0.05). In contrast, the parameter for management integrity related issues is not significant any more (p > 0.10). This lack of significance may be due to the limited number of firms reporting the presence of such issues. Findings also provide support for the auditor business risk by documenting a shorter auditor search period for firms hiring an industry specialist (−2.20, p < 0.01). Additionally, the length of the ASP is longer for firms having foreign operations (1.08, p < 0.01) and in firms reporting a qualified audit opinion for scope limitation or going concern reasons in the year preceding the auditor resignation (1.37, p < 0.05).

ADDITIONAL ANALYSIS AND RESULTS

We replicate our analysis by including 96 out of the 135 firms operating in the financial services industry into our auditor resignation sample (216 observations).[12] We eliminate one variable, receivables and inventory from the analysis, from our regression model and use Sinkey et al.'s (1987) financial distress measure to proxy for firms operating in the financial services industry. Ordinary Least Square regression analysis (Robust) shows that the model is significant (F = 10.13, p < 0.001) and explains 33 percent of the variation in the ASP. Previously reported findings remain essentially unchanged.[13] The parameter estimate for financial distress is positive and significant

[12] The selection criteria used for the financial services sub-sample are comparable to those used for the auditor resignations sample (Table 1).

[13] Results are comparable after excluding firms having an auditor search period that is equal to zero days. The only exception is the loss of significance for the parameter estimate related to management integrity (p > 0.10).

(0.32, p < 0.01), documenting a longer ASP for firms that are in financial distress. The ASP is also longer for firms reporting weaknesses in internal controls (1.71, p < 0.01) and in firms reporting issues related to management integrity (1.54, p < 0.05). In contrast, the ASP is shorter for firms hiring an audit firm industry specialist (−1.90, p < 0.01). Finally, the ASP is longer for firms having foreign operations (0.82, p < 0.10), firms that operate in a high tech industry (0.79, p < 0.05), in addition to firms that report a qualified audit opinion in the year preceding the auditor resignation (1.00, p < 0.10).

DISCUSSION AND CONCLUSION

In this paper, we investigate whether client business risk, audit risk, and auditor business risk are associated with the length of the auditor search period (ASP) following auditor resignations. We examine auditor resignations because indicators of risk are more prominent for resignations than dismissals (Catanach et al. 2010). Relying on the client acceptance model developed in Johnstone and Bedard (2003), we posit that audit firms may require a longer period of time to submit their proposals to audit riskier clients because they need to (1) collect and analyze more data, (2) get additional assurances, (3) obtain approvals from within the organization, and/or (4) communicate with the predecessor auditor and, perhaps, regulatory bodies. Our findings consistently indicate that the length of the ASP is associated with proxies for client business risk (financial distress), audit risk (weaknesses in internal controls), and auditor business risk (auditor specialization).

These findings are consistent with Johnstone's (2000) claim that auditors proactively adapt to engagement risks by adjusting the amount of data collected and requesting more approvals during the client acceptance process. They complement prior research related to audit firms' information gathering and analysis for clients having higher risk profile, documenting that audit firms commonly rely on a wide variety of sources to assess the riskiness of a prospective client, including firms' financial statements; Dun and Bradstreet reports; communication with the predecessor auditor; in-house and external investigative agencies; and the prospective client's legal counsel, bankers, former employees, among others (Gendron 2001; Asare and Knechel 1995; Asare et al. 1994; Huss and Jacobs 1991). They are also consistent with the auditor-client pairings argument that the alignment between industry and audit firms' expertise increases the attractiveness of a prospective new client.

This paper contributes to the auditing literature in three ways. First, it sheds light on whether or not perceived engagement risks affect the ASP, a previously unaddressed question. Second, it provides greater insight into the client acceptance decision. This decision has become increasingly important because of auditor litigation, insurance costs, reputational damage, and regulatory review of the auditing profession in the post-SOX era. Third, it contributes to our understanding of whether the provision of nonaudit services alters auditor decision making by documenting that the potential to provide nonaudit services does not necessarily alter the attractiveness of a prospective client or shorten the search period.

We interpret our results with some caution for two reasons. First, our model does not account for client-based considerations, which may be important because the acquisition of a new client is the product of a joint decision made by the audit firm and a prospective new client (Johnstone and Bedard 2004). A low-risk profile firm may get several competing bids over a short interval of time, while a high-risk profile firm may encounter difficulty identifying and engaging a new auditor. Second, the ASP may still be subject to measurement error because firms may begin the search for a new auditor prior to the auditor resignation date. This concern is partially mitigated for three main reasons. First, although the distribution of the auditor search period (Table 2) does not negate the presence of a measurement error in the case of auditor resignations, it clearly documents that the measurement error associated with auditor resignations is significantly lower than that for auditor

dismissals. Second, if one assumes that riskier clients may be compelled to begin the search long before the auditor change is formally announced, then the potential for measurement error works against finding significant results. Finally, the results obtained following the exclusion of firms having a search period of zero days (firms that are most likely to be subject to measurement error) in Model 2 provide further support for our findings and conclusions.

These limitations can be addressed in future studies by exploring the black box of the decision process (Gendron et al. 2004). Future studies may also examine if financial reporting quality is compromised when firms delay engaging a new auditor or voluntarily or involuntarily delay regulatory filings (Schwartz and Soo 1996). Future research may also explore the auditor choice in different legal, regulatory, and political regimes that are less litigious than the U.S., such as Canada or Australia. Moreover, future studies may examine if financial reporting quality is compromised when firms delay engaging a new auditor or voluntarily or involuntarily delay regulatory filings. Finally, future research may investigate the role of corporate governance in the decision process, as the audit committee is ultimately responsible for approving or making the auditor appointment decision (Cohen et al. 2010; Cohen et al. 2008).

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APPENDIX A

Variable Definitions

Variable	Definition
ASP	The difference between the appointment date of the new auditor and the resignation date of the incumbent auditor in calendar days.
SQRTASP	The square root of the difference between the appointment date of the new auditor and the resignation date of the incumbent auditor in calendar days.
FINDIST	Zmijewski's (1984) financial condition index.
LOSS	Dummy variable that is equal to 1 in case a firm reported a loss in the year preceding the year of auditor change, 0 otherwise (Carcello and Palmrose 1994).
SALGR	Growth in sales scaled by prior year sales (Stice 1991).
SIZE	Natural log of the market value of equity (Stice 1991).
VAR	Variance in daily abnormal returns over the year (365 days) preceding auditor resignation (Stice 1991).
RECINV	Sum of receivables and inventory scaled by total assets (Pratt and Stice 1994).
INTCTR	Dummy variable that is equal to 1 in case the incumbent auditor or the firm reported the presence of internal control weaknesses as per the Audit Analytics database, 0 otherwise.
INTEG	Dummy variable that is equal to 1 in case the incumbent auditor or the firm reported issues related to management representation and/or the presence of illegal acts by top management as per the Audit Analytics database, 0 otherwise.
YREND	Dummy variable that is equal to 1 in case a firm did not have a June 30 or December 31 year end, 0 otherwise (Johnstone 2000).
NAF	Nonaudit fees scaled by total fees as per the Audit Analytics database (Asare et al. 2005).
SPECIAL	A Big 4 (non-Big 4) audit firm is coded as a specialist in case it consistently audited 25 percent or more of the clients audited by Big 4 (non-Big 4) audit firms in the industry over the period 2003–2008 as per the Audit Analytics Database (Johnstone 2001).
FORG	Dummy variable that is equal to 1 in case a firm reported foreign income, 0 otherwise (Ashbaugh-Skaife et al. 2007; Doyle et al. 2007).
INCONS	Dummy variable that is equal to 1 in case the exhibit letter filed by the incumbent auditor following auditor resignation disagrees with the Form 8-K filed by the firm, 0 otherwise.
DFILE	The fiscal year end plus 60 days minus the auditor resignation date for accelerated filers, or the fiscal year end plus 90 days for non-accelerated filers.
B4B4	Dummy variable that is equal to 1 in case a firm switched from a Big 4 to a Big 4 auditor, 0 otherwise.
B4NB4	Dummy variable that is equal to 1 in case a firm switched from a Big 4 to a non-Big 4 auditor, 0 otherwise.
NB4NB4	Dummy variable that is equal to 1 in case a firm switched from a non-Big 4 to a non-Big 4 auditor, 0 otherwise.
NB4B4	Dummy variable that is equal to 1 in case a firm switched from a non-Big 4 to a Big 4 auditor, 0 otherwise.
TECH	Firms with the following SIC codes: 2833–2836, 3570–3577, 3600–3674, 7371–7379, and 8731–8734 (Huang et al. 2007).
QUALGC	Dummy variable that is equal to 1 in case the audit firm qualified its opinion for scope limitation or going concern reasons in the year preceding the auditor change, 0 otherwise.