

Abnormal Audit Fees and Restatements

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SUMMARY: We investigate the relationship between audit fees and subsequent financial statement restatements in the years following the Sarbanes-Oxley Act of 2002 (SOX). After controlling for internal control quality, we find that abnormal audit fees are negatively associated with the likelihood that financial statements are subsequently restated. This result conflicts with prior work that finds that audit fees are positively associated with future restatements. Overall, our evidence is consistent with the notion that restatements reflect low audit effort or underestimated audit risk in the periods leading up to the restatement year.

Keywords: restatements; audit fees; audit quality.

INTRODUCTION

In this study, we examine the association between financial statement restatements and the audit fees charged to clients in the period before the client announces a restatement. Several factors motivate our research. First, restatements have a significant effect on the ongoing auditor-client relationship, which may be reflected in audit fees. Restatements represent both reporting failure by the client (Kinney et al. 2004; Stanley and DeZoort 2007) and audit failure by the auditor (Liu et al. 2009; Raghunandan et al. 2003; Turner 1999). Arthaud-Day et al. (2006) claim that restatements lead to impaired client organizational legitimacy. Feldmann et al. (2009) document that this loss of organizational legitimacy coupled with an increase in the auditor's perceived level of audit risk leads to fee increases. Not only does the client suffer, but the auditor also faces adverse consequences, including reputation damage, greater resistance to shareholder ratification (Liu et al. 2009), and legal liability.

Second, the relationship between audit fees and restatements is not clear. Audit fees likely have some bearing on the probability of an eventual restatement, while the likelihood of a restatement has some impact on fees. Because fees represent, in part, the expected level of service provided

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(Whisenant et al. 2003),¹ higher (lower) fees are associated with greater (lesser) levels of service or effort; thus, lower audit effort reflected in abnormally low fees could ultimately result in a restatement. At the same time, abnormally high fee levels may influence an auditor's independence or judgment through economic bonding to the client, which likewise could lead to a future restatement. It is not clear which influence, if either, predominates. Since that is ultimately an empirical question, empirical evidence can help clarify the relationship.

Third, the Sarbanes-Oxley Act of 2002 had a profound influence on the auditor-client relationship. The Act required partner rotation, prohibited many nonaudit services, and made audit committees responsible for approving fees. Recent research indicates that the shift from pre-SOX to post-SOX regulatory regimes has influenced auditors' assessment of financial reporting risk and the associated fee structures. Charles et al. (2010) find that the magnitude of the relationship between financial reporting risk and audit fees more than doubled between the pre-SOX and post-SOX regimes, suggesting a "significant shift" in the way audit firms priced risk. Prior studies investigating the relationship between audit fees and restatements have almost exclusively been conducted using pre-SOX data.

Fourth, the recent economic downturn has caused many audit committees to renegotiate the financial terms of their audits. Rick Telberg of Corporate Executive Board reports that audit committees are employing numerous strategies to minimize audit fees (Telberg 2010). If lower fees, in turn, reflect reduced audit effort in an attempt to make an engagement profitable, then there is increased potential for future financial reporting problems, including an increase in restatements and a loss of confidence in the value of the audit.² In a letter to the SEC dated April 12, 2005, Lynn Turner, former Chief Accountant at the Securities and Exchange Commission (SEC), cited the link between pressure to reduce fees and a reduction in audit effort as a contributing factor in the decline in quality audits:

Indeed, cost cutting, rather than a focus on quality financial reporting is what brought us to where we are today. Certainly throughout the 1980s and 1990s, corporations, sometimes with the assistance of their audit committees, "twisted" the arms of independent auditors to reduce their audit fees. Our experience includes corporations who competitively bid their independent audit work solely to reduce their fees well below levels that could generate a reasonable return for the auditors. In turn, the audit firms reduced the level of work they needed to perform in their role as gatekeepers for investors. Inevitably inferior audits resulted. (Turner 2005)

Finally, previous research into the relationship between restatements and audit fees is limited and inconclusive. We attribute this to two general characteristics: the time frame of the studies and a key omitted correlated variable in the models.

¹ A full discussion of the economic determinants of audit fees is beyond the scope of this paper. Recent literature documents other determinants, such as perceived audit risk (Feldmann et al. 2009), financial reporting risk (Charles et al. 2010), expected losses due to litigation (Simunic and Stein 1996), industry specialization (Cahan et al. 2008), type of engagement (Venkataraman et al. 2008), client technological efficiencies (Masli et al. 2010), the influence of control weaknesses (Hoitash et al. 2008; Raghunandan and Rama 2006; Hogan and Wilkins 2008), and others.

² There is also some evidence that the Public Company Accounting Oversight Board (PCAOB) uses low audit fees relative to comparative firms as a possible indicator of low audit quality. In a blog for VIBATO, an internal control consulting firm, Bockwoldt (2010) wrote: "During a recent conversation with a Managing Partner at a local CPA firm I learned that the PCAOB is starting to use forensic statistics to determine which external audit firms to review; it isn't random. The PCAOB has apparently come to the (logical) conclusion that if an audit fee is usually low relative to their comparative companies [sic] audit fees, then the quality of the audit is also probably low."

To examine the implications of audit fees on restatements, we first use an audit fee model on a broad sample of post-SOX data. We then develop a second-stage restatement model using the residuals from the audit fee model as a proxy for the unexpected audit fees as the variable of interest. Our models allow us to capture the relationship between abnormal fees and restatements. In essence, we address the question: Were the auditors of restatement firms charging their clients more or less in the period(s) before a restatement relative to the fees charged to non-restatement clients in the same period(s)? Our evidence indicates that auditors of restatement firms charge lower fees in the years prior to the restatement being announced, consistent with underestimated risk and/or lower levels of expected effort.

The rest of the paper is structured as follows: the next section discusses the prior literature and presents our hypothesis; the following section discusses the data and research methods; and the final section discusses the results and conclusions.

PRIOR RESEARCH AND HYPOTHESIS

Much of the prior research into restatements has focused either on examining causal influences or identifying consequences attributable to restatements. For example, various empirical studies have investigated the influence of earnings management (Ettredge et al. 2010; Callan et al. 2008; Choi et al. 2010), CEO compensation (Efendi et al. 2007), CFO characteristics (Aier et al. 2005), audit committee characteristics (Abbott et al. 2004), internal errors or ambiguous accounting standards (Plumlee and Yohn 2010), auditor industry expertise (Romanus et al. 2008), and nonaudit-fees (Bloomfield and Shackman 2008; Kinney et al. 2004; Raghunandan et al. 2003) on the likelihood of a restatement. Research into the consequences of restatements has largely focused on evaluating the market or analyst responses (Barniv and Cao 2009; Akhigbe and Madura 2008; Palmrose et al. 2004; Griffin et al. 2004; Hribar and Jenkins 2004; Griffin 2003), the effect on executive turnover or reputation (Leone and Liu 2010; Feldmann et al. 2009; Collins et al. 2009; Cheng and Farber 2008; Hennes et al. 2008; Desai et al. 2006), the likelihood of future litigation (Palmrose and Scholz 2004), or other effects on corporate governance (Srinivasan 2005). Considering audit fees in the context of restatement research creates a unique intersection of these two research streams: audit fees both influence the likelihood of a restatement (i.e., have a causal influence) and are potentially affected by restatements (i.e., represent a consequence).

For a restatement to occur, the auditor must have failed to detect and prevent all material errors during a prior audit. This failure has been attributed to impaired auditor independence because the auditor is economically bound to the client (Beck et al. 1988; Magee and Tseng 1990; Stanley and DeZoort 2007; Choi et al. 2010). In this view, the economic bonding between auditors and clients creates an environment in which the auditor fails to exercise sufficient professional skepticism to interpret audit evidence correctly or judge the evidence impartially (Bazerman et al. 1997).

This view suggests the possibility of a positive association between audit fees in the years prior to the restatement and the likelihood of future restatements. If auditors have their independence compromised, then there is a distinct possibility that the audit firm could fail to detect a material misstatement and still receive its fees for the audit. In other words, the auditor may fail to detect the misstatement not through lack of effort but through compromised judgment.

Several papers have documented a positive association between audit fees and future restatements. Kinney et al. (2004), Stanley and DeZoort (2007), and Li and Lin (2007)³ find that

³ There is an additional paper, Lin et al. (2006), that also finds a positive relationship between audit fees and future restatements. However, the Li and Lin (2007) and Li et al. (2006) papers both employ the same dataset, with variations in independent variables. Li and Lin's (2007) independent variables include several proxies for earnings management. Li et al.'s (2006) independent variables include several proxies for governance quality.

high audit fees are associated with earnings that will subsequently be restated.⁴ However, there are two issues associated with these studies that may make their results not generalizable to the post-SOX era. First, since the papers analyzed pre-SOX data, there is no proxy for internal control quality. Several studies have found that higher audit fees are positively associated with firms having weak controls (Raghunandan and Rama 2006; Hoitash et al. 2008; Hogan and Wilkins 2008). Feldmann et al. (2009) note that weak controls are often associated with restatements. It thus seems plausible that firms with restatements had weaker controls that, in turn, caused the auditor to increase substantive testing and increase fees. The higher fees may indicate that, for these clients, the auditor is doing more audit work than required for the average firm, but still not enough work to detect the material error. The results of these studies may be reflecting an omitted, correlated variable.

Second, even if the positive association between audit fees and restatements existed before 2002, there is reason to believe that in the SOX era, the relationship will reverse. Since SOX made audit committees responsible for approving audit fees and prohibited many nonaudit services to strengthen auditor independence, the ability of managers to pressure auditors to accept questionable accounting treatment has been reduced. By strengthening auditor independence, SOX reduced the potential economic bonding between auditor and client. In addition, audit firms are more acutely aware of the risk associated with audit failure after the demise of Arthur Andersen. At least two recent studies have documented the influence of the changed regulatory regime on audit pricing and restatements. Huang et al. (2009) find that the Big N firms' pricing strategies for new clients changed dramatically after the passage of SOX. In a study of restatement activity done for the Department of the Treasury, Scholz (2008) documents that while restatement activity began to accelerate prior to passage of SOX, the shift in regulatory climate after passage represented an important contributing factor to the dramatic rise in restatements since 2002.

Moreover, from an economic perspective, it seems reasonable that audit fees should be negatively associated with future restatements. When the client pays low audit fees, the auditor is under greater pressure to complete the audit in an efficient manner to ensure it is a profitable engagement. Profitability concerns may cause the auditor to over-rely on client controls and incorrectly reduce substantive testing. Conversely, to the extent that the auditor bills for effort incurred and/or correctly identifies the nature of the audit risk and adjusts substantive testing accordingly, then we would expect increased fees and a lower likelihood of an eventual restatement since the auditor would be more likely to detect material misstatements. Stanley and DeZoort (2007) provide some evidence consistent with this expectation. They found that restatements are negatively associated with audit fees, but only for short-tenure auditors. They attribute this finding to lowball fees in the early years of an auditor's tenure, which reverse as the auditor gains tenure and increases fees accordingly. We note, however, that the authors also report that a relatively large number of misstatements occur in the first year of an auditor's tenure, which may also be consistent with incorrect risk assessment of an unfamiliar client leading to over-reliance on controls, less audit effort, and, consequently, lower fees. Since the majority of observations in their sample are pre-SOX observations, and they do not control for quality of internal control, we cannot rule out this alternative explanation.

The results of prior studies finding a positive association between audit fees and future restatements have two broad limitations. They generally cover the pre-SOX time frame, and because they do, they lack a control for internal control quality. Given Huang et al.'s (2009) recent finding of more conservative audit pricing in the post-SOX period, we argue that there should be a negative association between audit work/audit fees and reporting quality. In the post-SOX

⁴ Stanley and DeZoort (2007) find a negative relationship between fees and earnings being restated only during the initial years of the engagement; after the initial years, they find a positive relationship.

environment, audit firms are more likely to make conservative risk assessments, place more appropriate reliance on internal controls, and assess fees reflecting greater audit effort, which would lead to higher reporting quality. For firms where fees are lower, we expect that the likelihood of an eventual restatement increases. This intuition is consistent with papers that find a negative association between audit fees and discretionary accruals (Ashbaugh et al. 2003; Frankel et al. 2002), and leads to our hypothesis, stated in the alternative:

Hypothesis: Abnormal audit fees in the current year are negatively associated with future restatements of the current year's financial statements.

Research Methods

Research Design

To determine the influence of abnormal audit fees on the likelihood of a future restatement, we use a two-stage approach analyzing data from 2004 through 2007. The first model estimates audit fees using an audit fee model adapted from recent prior studies (e.g., DeFond et al. 2002; Whisenant et al. 2003; Francis and Wang 2005; Krishnan et al. 2005; Ghosh and Pawlewicz 2009; Choi et al. 2010), with an emphasis on controlling for fee determinants associated with firm risk. In this stage, we regress logged audit fees (*LAF*) on variables controlling for risk, audit effort, and industry. To control for within-firm correlation of the residuals, we use the robust cluster technique suggested by Petersen (2009). The fee model we use for the first stage is:

Audit Fee Model

$$\begin{aligned} LAF_{i,t} = & \beta_0 + \beta_1 LTA_{i,t} + \beta_2 CR_{i,t} + \beta_3 CA_TA_{i,t} + \beta_4 ARINV_{i,t} + \beta_5 ROA_{i,t} + \beta_6 LOSS \\ & + \beta_7 FOREIGN + \beta_8 MERGER + \beta_9 BUSY_{i,t} + \beta_{10} LEV_{i,t} + \beta_{11} INTANG_{i,t} \\ & + \beta_{12} SEG_{i,t} + \beta_{13} OPINION_{i,t} + \beta_{14} MATWEAK_{i,t-(t-1)} + \beta_{15-27} INDCON + \varepsilon_{i,t} \quad (1) \end{aligned}$$

where:

LAF = logarithm of audit fees;

LTA = logarithm of end of year total assets (Data6);

CR = current assets (Data4) divided by current liabilities (Data5);

CA_TA = current assets divided by total assets;

ARINV = sum of accounts receivable (Data2) and inventory (Data3) divided by total assets;

ROA = earnings before interest and taxes (Data178) divided by total assets;

LOSS = 1 if firm incurred a loss (Data172), 0 otherwise;

FOREIGN = 1 if firm has any foreign operations (Data64), 0 otherwise;

MERGER = 1 if the firm reported the impact of a merger or acquisition on net income (Data360), 0 otherwise;

BUSY = 1 if a company's fiscal year is December 31st, 0 otherwise;

LEV = long-term debt (Data9) divided by total assets;

INTANG = ratio of intangible assets to total assets;

SEG = logarithm of number of business segments;

OPINION = 1 if the auditor issues a going concern audit opinion, 0 otherwise;

MATWEAK = 1 if the client receives a material weakness opinion in the current year or the next year, 0 otherwise; and

INDCON = industry fixed effects; industry membership follows Ashbaugh et al. (2003) and is determined by SIC code as follows: agriculture (0100–0999), mining and construction (1000–1999, excluding 1300–1399), food (2000–2111), textiles and printing/publishing (2200–2799), chemicals (2800–2824; 2840–2899), pharmaceuticals (2830–2836), extractive (1300–

1399; 2900–2999), durable manufactures (3000–3999, excluding 3570–3579 and 3670–3679), transportation (4000–4899), retail (5000–5999), services (7000–8999, excluding 7370–7379), computers (3570–3579; 3670–3679; 7370–7379), and utilities (4900–4999).

Consistent with prior research, we include several control variables (Simunic 1980; Palmrose 1986; Francis et al. 2005; Hay et al. 2006). To control for audit effort, we include total assets (*LTA*); the presence of mergers (*MERGER*) or foreign operations (*FOREIGN*); the number of business segments (*SEG*); and the issuance of a going concern opinion (*OPINION*). To control for audit risk, we include: *CR*; *CA_TA*; *ARINV*; *ROA*; *LOSS*; and *INTANG*. We include leverage (*LEV*) as a measure of the long-term financial structure of the client. We include an indicator variable if the company has a calendar year-end (*BUSY*). Consistent with Ashbaugh et al. (2003), we include industry controls (*INDCON*), since audit fees may vary by industry.

Finally, to control for internal control quality, we include a variable defined as the presence of a material weakness in the current year or the subsequent year (*MATWEAK*). This proxy is consistent with Ettredge et al.'s (2006) and Doyle et al.'s (2007) proxies for internal control problems, which use a long window. In essence, there is a “sticky” quality to internal controls so firms that received a material weakness in the future likely had weaker internal controls in the current year.⁵

Restatement Model

In the second stage, we take the residuals from the audit fee model in stage one and include them as an independent variable (*ABAFEE*) in a logistic regression having the presence of a restatement as the dependent variable. In this case, a significant negative coefficient on unexpected audit fees would indicate that abnormally low fees are associated with a greater likelihood of a future restatement.

Consistent with Romanus et al. (2008), Aier et al. (2005), and Richardson et al. (2002), the restatement model we use for our second-stage is:

$$REST_{i,t} = \beta_0 + \beta_1 LTA_{i,t} + \beta_2 LEV_{i,t} + \beta_3 MTB_{i,t} + \beta_4 FIN_{i,t} + \beta_5 EPSGROW_{i,t} + \beta_6 EPR_{i,t} + \beta_7 FREEC + \beta_8 MATWEAK_{i,t} + \beta_9 ABAFEE_{i,t} + \varepsilon_{i,t} \quad (2)$$

where:

REST = 1 if the firms announce a restatement in the next two years, 0 otherwise;

LTA = logarithm of end of year total assets;

LEV = total debt divided by total assets;

MTB = market-to-book ratio ([Data25 * Data199]/Data60);

FIN = financing raised, defined as the sum of additional cash raised from issuance of long-term debt (Data111), common stock and preferred stock (Data108) deflated by total assets;

EPSGROW = equals 1 if the company had positive earnings change for four consecutive quarters, 0 otherwise;

EPR = earnings-to-price ratio, defined as income from continuing operations (Data178) scaled by market capitalization at the end of the year;

FREEC = demand for external financing, measured as the sum of cash from operations (Data308) less average capital expenditures (Data128) scaled by lagged total assets;

MATWEAK = 1 if the client receives a material weakness opinion in the current year or the next year, 0 otherwise; and

ABAFEE = the unscaled residual from the audit fee model, Equation (1) above.

⁵ Due to sample size limitations, we were unable to perform a finer partition of material weakness. However, this limitation biases against finding results.

We define the dependent variable as 1 if the firm restates its earnings within the next two years, 0 otherwise.⁶ We control for firm size (*LTA*) because we expect larger firms may be subject to closer scrutiny by regulatory agencies and have stronger internal controls (Balsam et al. 2003; Richardson et al. 2002). We anticipate a positive association between size and restatement occurrence. We control for leverage (*LEV*) because evidence suggests that companies with debt covenant constraints upwardly manipulate earnings (Jaggi and Lee 2002).

Since Richardson et al. (2002) present evidence that capital markets influence aggressive accounting practices ultimately associated with restatements, we include several variables Richardson et al. (2002) found to be associated with restatement firms. We include an earnings multiple variable (*EPR*) and a market-to-book variable (*MTB*) to control for the market's perception of future growth. We also include *FIN* and a measure of free cash flow (*FREEC*) to control for the demand for external financing. *FIN* captures the extent to which the firm was actively raising cash in the capital markets. *FREEC* measures a company's ability to cover its capital expenditures through assets that the company already holds. Finally, we include *EPSGROW*, which proxies for the pressure to maintain a string of earnings increases. Myers et al. (2007) find that managers attempt to increase earnings when failing to do so would result in the break of consistent earnings increases. We also include the internal control indicator variable (*MATWEAK*), as ineffective internal controls are associated with restatements (Feldmann et al. 2009).

Sample Selection

To form the sample, we first identified all firms in Audit Analytics that employed a Big N auditor for the period 2004 to 2007. Since we require two years of data surrounding the restatement year, our sample data extend from 2002–2009. We also limit our sample to Big N clients in order to ensure relative homogeneity in audit quality among the sample. Table 1 identifies the composition of the sample as well as the attrition based on the following contingencies.

First, we eliminate all firm years where the firm is a foreign filer or failed to issue a SOX 404 Internal Control report.⁷ Next, we eliminate firms that paid no audit fees and those that paid audit fees to multiple audit firms. We then eliminate firms that changed auditors within our sample window to avoid potential problems associated with lowballing to gain new clients and to eliminate the possibility of a differential response to reporting policies between the predecessor and the successor auditors. Stanley and DeZoort (2007) find that the influence of audit fees on the likelihood of restatement is fundamentally different in the first years of an audit engagement. We exclude firms in the financial services industry (SIC 6000–6999), firms with missing Compustat data, and firms with multiple reporting problems.⁸ In the final step, we exclude firm-year observations if a firm announced a restatement in the current year, or if the firm had announced a restatement within the previous two years. Since we are interested in whether the current year's audit fees have a negative association with future restatements, observations with a restatement announcement preceding the future restatements represent potentially confounding observations.⁹

⁶ We do not attempt to develop a finer partition of restatements based on either the length of the misstatement period or magnitude of the misstatement. Since determining the association between audit fees and the audit failure represented by a restatement is our primary concern, the length or magnitude of the misstatement is of less concern because the presence of any undetected material misstatement is evidence of audit failure.

⁷ We exclude foreign filers because they were not required to issue an internal control opinion prior to July 2007; in addition, the audit fee function may depend upon the country of operations.

⁸ As part of matching Audit Analytics with Compustat data, we only consider internal control as originally reported.

⁹ As a practical matter, we also ran all tests including these observations with control variables for current restatements and past restatements, and our results were similar to what we report.

TABLE 1
Sample Composition and Attrition

Panel A: Sample Attrition

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Firms Audit Analytics with Big N auditor	9,394	8,684	8,091	7,458
Less:				
No internal control report	(6,907)	(5,430)	(4,610)	(3,866)
Foreign filers	(64)	(79)	(399)	(563)
No audit fees	(11)	(8)	(8)	(5)
Firms having multiple auditors	(46)	(86)	(82)	(64)
Firms changing auditors during the sample period	(381)	(397)	(352)	(299)
Financial firms	(512)	(550)	(559)	(527)
Missing Compustat data	(72)	(96)	(83)	(71)
Multiple restatements	(50)	(100)	(97)	(113)
Firms with announced restatements in current or prior years	(130)	(253)	(378)	(401)
Sample Observations	<u>1,221</u>	<u>1,685</u>	<u>1,523</u>	<u>1,549</u>

Panel B: Occurrence of Firms in Sample

Firms appearing in all four years	686
Firms appearing in at most three years	549
Firms appearing in at most two years	471
Firms in the sample for only one year	<u>645</u>
Total number of unique firms	2,351

Panel C: Restatements by Year

2005	83
2006	162
2007	79
2008	38
2009	<u>37</u>
Total number of unique restatements	399

To identify restatements, we use the Audit Analytics Restatement Database. This dataset contains details of over 6,000 restatements announced between March 2001 and December 31, 2010. Consistent with current research (Hennes et al. 2008), we consider adverse restatements that are not caused by clerical errors.¹⁰ A restatement is considered adverse if it has a negative impact on earnings, retained earnings, changes in cash flow from operations, or reveals an undisclosed

¹⁰ Our partition of restatements is not as restrictive as that proposed by Hennes et al. (2008). They document a qualitative difference between restatements based on errors (i.e., unintentional) and those based on irregularities (i.e., intentional). While we eliminate restatement observations that were classified as clerical errors, we include those that may have been caused by other types of errors. Since it is the auditor's responsibility to detect material misstatements regardless of managerial intent, and these failures may be associated with actions or events affecting fees, we believe it is important to include these observations. We note, however, that if this does introduce bias into the study, it is likely to bias against finding results; Hennes et al. (2008) document significantly weaker results for their error group.

liability. We also exclude FIN 48 restatements because these restatements were triggered by a new interpretation of Statement of Financial Accounting Standard (SFAS) No. 109 rather than those representing some form of audit or reporting failure. As reported in Table 1, Panel C, our final sample consists of 399 unique restatements with nearly 40 percent of the restatements being related to the audits of the 2006 fiscal year.¹¹ The pattern of restatements increasing until 2006 and then declining is consistent with the pattern documented in [Chan et al. \(2009\)](#).¹²

RESULTS AND DISCUSSION

Tables 2 and 3 provide descriptive statistics for the variables used in the models. Several items are worth noting. First, we find a strong correlation (Table 2) between our internal control variable, *MATWEAK*, and future restatements (correlation = 0.23, $p < 0.01$). In addition, *MATWEAK* shows considerable variation between restatement and non-restatement firms. Table 3 indicates that firms never restating their financial statements show a 9 percent occurrence rate of material weaknesses in their internal control systems, while firms that restate in the future have occurrence rates of 34.7 percent. Together, these results are consistent with relatively poor internal control systems in firms that restate financial statements compared to those that never restate.

Table 3 also indicates that firms restating in the future have mean logged audit fees of 14.15 in the periods prior to the restatement, while those never restating have fees of 14.30 in the same periods. The difference is statistically significant at $p < 0.00$ and provides preliminary evidence consistent with restatement firms having lower fees in periods prior to restatements. Likewise, abnormal audit fees differ between the restatement and non-restatement groups as well. Firms that restate their financials in the future have lower abnormal audit fees than firms that do not restate their financials ($p < 0.00$).

Audit Fee Model Results

The first stage in our multivariate analysis involves generating the residuals representing abnormal audit fees from the audit fee model discussed above. Again, consistent with [Petersen \(2009\)](#), we performed a clustered, robust regression since we have multiple observations of individual firms within the data (See Table 1). Table 4 presents the regression results.

The model proves highly significant ($R^2 = 0.79$) with all variables proving significant at $p < 0.05$, except *ARINV* and *BUSY*. The year controls are all negative and significant for each year following 2004. Since the year dummies capture the fixed audit fee that a client pays in the current year, the negative coefficient on the year dummies may indicate that auditors became more effective at pricing risk after 2004. Alternatively, the effect may be associated with increasingly efficient 404 compliance implementation or the reduction of SOX-induced labor constraints in the market for audit services.

Consistent with the prior work done by [Raghunandan and Rama \(2006\)](#), [Hoitash et al. \(2008\)](#), [Hogan and Wilkins \(2008\)](#), and [Choi et al. \(2010\)](#), we find that our internal control proxy, *MATWEAK*, is positive and significant. This result indicates a substantial fee premium of 30 percent applied to firms with weak internal controls, most likely due to the increased hours needed to compensate for control weaknesses. The result further supports the need for an internal control proxy in models evaluating audit fees and implies that previous studies examining the relationship

¹¹ Since our study is focused upon audit fees, we classify restatements according to the audit year in which the misstatement was detected, as determined by Audit Analytics. For example, if a company with a December 31, 2007 year-end announced a restatement on January 8, 2008, then this would be considered a restatement related to the 2007 audit year.

¹² The conclusions in this paper do not change if we consider each sample year separately.

TABLE 2
Pearson Correlation Coefficients between Variables

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 LAF	0.82**	-0.39**	-0.33**	0.11**	0.24**	0.13**	0.25**	0.38**	-0.00	0.03*	0.10**	0.27**	-0.26**	0.39**	0.29**	0.01	-0.02	-0.04**	0.02**	-0.04**
2 LTA	1.00	-0.40**	-0.55**	-0.02	0.36**	0.20**	0.18**	0.36**	-0.00	0.04**	0.14**	0.35**	-0.38**	0.23**	0.24**	0.04**	-0.11**	-0.04**	-0.12**	-0.05**
3 CR		1.00	0.54**	-0.15**	-0.13**	-0.20**	-0.23**	-0.19**	-0.00	-0.12**	-0.09**	-0.14**	0.23**	-0.06**	-0.020**	-0.02	-0.03*	0.07**	-0.01**	-0.01
4 CA_TA			1.00	0.34**	-0.23**	-0.37**	-0.39**	-0.20**	0.01	-0.18**	-0.13**	-0.21**	0.27**	0.07**	-0.11**	-0.11**	0.04**	0.06**	0.05**	0.00
5 ARINV				1.00	0.22**	-0.16**	-0.06**	0.11**	-0.01	0.02	0.03**	0.21**	-0.22**	0.22**	0.11**	-0.18**	-0.05**	0.00**	0.02**	-0.01
6 ROA					1.00	0.04**	0.10**	0.15**	0.04**	0.01	0.16**	0.85**	-0.56**	0.18**	0.15**	-0.08**	-0.37**	0.03**	-0.07**	0.02
7 LEV						1.00	0.14**	0.05**	0.03*	0.40**	0.00	-0.05**	0.07**	-0.10**	0.03*	0.12**	0.01	-0.04**	-0.01**	0.01
8 INTANG							1.00	0.09**	-0.02	0.10**	0.03**	0.19**	-0.09**	0.13**	0.41**	0.01	-0.05**	-0.02	-0.02	0.02
9 SEG								1.00	-0.02	0.00	0.04**	0.15**	-0.20**	0.13**	0.14**	-0.03*	-0.05**	-0.03*	-0.03**	-0.01
10 MTB									1.00	-0.00	0.00	0.05**	-0.01	-0.03	-0.02	0.01	-0.04**	0.01	-0.01	0.00
11 FIN										1.00	0.03*	-0.01	-0.01	-0.08**	0.09**	0.03**	0.01	-0.04**	0.00	-0.00
12 EPR											1.00	0.21**	-0.11**	0.02	0.03*	-0.02	-0.04**	-0.00	-0.02	-0.00
13 FREEC												1.00	-0.48**	0.21**	0.20**	-0.09**	-0.36**	0.02	-0.05**	0.02
14 LOSS													1.00	-0.14**	-0.20**	0.08**	0.19**	-0.03*	0.13**	0.02
15 FOREIGN														1.00	0.17**	-0.08**	-0.05**	0.01	0.03*	-0.02
16 MERGER															1.00	-0.05**	-0.07**	-0.03*	-0.03*	-0.02
17 BUSY																1.00	0.03*	0.03*	-0.02	-0.03*
18 OPINION																	1.00	-0.02	0.09**	-0.03*
19 EPSGROW																		1.00	-0.04**	-0.01
20 MATWEAK																			1.00	-0.01
21 RES_FUT																				1.00

*, ** Significant at the 0.05 and 0.01 levels respectively.

Variable Definitions:

LAF = logarithm of audit fees;

LTA = logarithm of end of year total assets;

CR = current ratio;

CA_TA = current assets divided by total assets;

ARINV = sum of accounts receivable and inventory divided by total assets;

ROA = earnings before interest and taxes divided by total assets;

LEV = long-term debt divided by total assets;

INTANG = ratio of intangible assets to total assets;

SEG = logarithm of number of business segments;

MTB = market-to-book ratio;

EPR = income from continuing operations scaled by market capitalization at the end of the year;

FIN = the sum of cash raised from the issuance of long-term debt, common stock, and preferred stock deflated by total assets;

FREEC = the sum of cash from operations less average capital expenditures scaled by lagged total assets;

LOSS = 1 if firm incurred a loss, 0 otherwise;

FOREIGN = 1 if firm has any zero foreign sales, 0 otherwise;

MERGER = 1 if the firm reported the impact of a merger or acquisition on net income, 0 otherwise;

BUSY = 1 if a company's fiscal year is December 31st, 0 otherwise;

OPINION = 1 if the auditor issued an audit opinion, 0 otherwise;

EPSGROW = 1 if the company had positive earnings change for four consecutive quarters, 0 otherwise;

RES_FUT = 1 if the firm announces a restatement within the next two years, 0 otherwise; and

MATWEAK = 1 if the client receives a material weakness opinion in the current year or next year, 0 otherwise;

TABLE 3
Descriptive Statistics and Tests of Differences

Panel A: Descriptive Statistics—Mean (Std. Dev)

Variable	Overall (n = 5978)	Never Restate (n = 5448)	Restate Future (n = 530)	Difference	t-statistic	p-value
<i>LAF</i>	14.29 (1.02)	14.30 (1.04)	14.15 (0.83)	0.15	3.31	0.00
<i>LTA</i>	20.67 (1.75)	20.70 (1.78)	20.36 (1.39)	0.33	4.20	0.00
<i>CR</i>	2.85 (2.82)	2.86 (2.88)	2.73 (2.08)	0.13	1.01	0.31
<i>CA_TA</i>	0.48 (0.25)	0.47 (0.25)	0.48 (0.23)	−0.00	−0.32	0.75
<i>ARINV</i>	0.22 (0.16)	0.22 (0.16)	0.22 (0.15)	0.01	0.73	0.47
<i>ROA</i>	0.00 (0.27)	0.00 (0.27)	0.01 (0.18)	−0.02	−1.41	0.16
<i>LEV</i>	0.19 (0.24)	0.19 (0.24)	0.20 (0.23)	−0.01	−0.80	0.42
<i>INTANG</i>	0.18 (0.20)	0.18 (0.20)	0.20 (0.20)	−0.01	−1.42	0.16
<i>SEG</i>	0.54 (0.69)	0.54 (0.69)	0.52 (0.66)	0.02	0.59	0.55
<i>MTB</i>	4.07 (30.67)	4.07 (31.90)	4.08 (12.21)	−0.01	−0.00	1.00
<i>FIN</i>	0.10 (0.22)	0.10 (0.22)	0.09 (0.20)	0.00	0.22	0.83
<i>EPR</i>	0.06 (0.44)	0.06 (0.46)	0.06 (0.12)	0.06	0.02	0.98
<i>FREEC</i>	0.00 (0.22)	0.00 (0.22)	0.02 (0.16)	−0.02	−1.87	0.06
<i>ABAFEE</i>		0.01 (0.47)	−0.08 (0.47)	0.10	4.53	0.00

Panel B: Rates of Occurrence

Variable	Overall (n = 5978)	Never Restate (n = 5448)	Restate Future (n = 530)	Difference	t-statistic	p-value
<i>LOSS</i>	22.9%	22.7%	24.9%	−2.2%	−1.17	0.24
<i>FOREIGN</i>	50.1%	50.3%	47.4%	3.0%	1.31	0.19
<i>MERGER</i>	46.8%	46.5%	50.4%	−3.9%	−1.72	0.09
<i>BUSY</i>	77.5%	77.9%	73.4%	4.5%	2.37	0.02
<i>OPINION</i>	1.6%	1.7%	0.6%	1.1%	2.00	0.05
<i>EPSGROW</i>	5.9%	5.9%	5.1%	0.9%	0.80	0.43
<i>RES-FUT</i>	8.9%	0.0%	100%			
<i>MATWEAK</i>	11.3%	9.0%	34.7%	−26.7%	−18.3	0.00

TABLE 4
Audit Fee Model Regression Results

	b	t	p-value
<i>CONSTANT</i>	3.40	14.96	0.00
<i>LTA</i>	0.51	59.77	0.00
<i>CR</i>	−0.04	−9.49	0.00
<i>CA_TA</i>	0.90	11.13	0.00
<i>ARINV</i>	0.10	1.17	0.24
<i>ROA</i>	−0.20	−4.29	0.00
<i>LOSS</i>	0.13	5.17	0.00
<i>FOREIGN</i>	0.24	10.21	0.00
<i>MERGER</i>	0.07	3.75	0.00
<i>BUSY</i>	0.02	0.99	0.32
<i>LEV</i>	0.11	2.01	0.04
<i>INTANG</i>	0.53	7.99	0.00
<i>SEG</i>	0.11	6.61	0.00
<i>OPINION</i>	0.32	4.56	0.00
<i>MATWEAK</i>	0.30	10.66	0.00
<i>Y2005</i>	−0.06	−5.29	0.00
<i>Y2006</i>	−0.05	−3.26	0.00
<i>Y2007</i>	−0.05	−3.36	0.00
Industry controls included			
<i>R</i> ²	0.79		
<i>n</i>	5,978		

Estimated using the robust cluster technique as suggested in [Petersen \(2009\)](#).

between restatements and audit fees without an internal control proxy may have suffered from omitted variable bias.

Restatement Model Results

We next evaluate the evidence concerning our principal hypothesis, which states that abnormal audit fees are negatively related to the occurrence of future restatements.

The univariate results discussed above suggest a negative association exists between abnormal fees and future restatements. To examine our hypothesis more rigorously, we performed a clustered, robust logistic regression since we have multiple observations of individual firms (see Table 1, Panel C). Results generally confirm the univariate test results we observed from Table 3. With the exception of size, leverage, the demand for external financing, and internal control quality, the control variables are not significant. The internal control variable is significant and positive, supporting the earlier finding that restatement firms generally have weaker controls. Most importantly, though, the coefficient on abnormal audit fees is both negative and significant ($p < 0.00$). This result is consistent with the notion that the lower the abnormal fee, the greater the incentive the auditor has to minimize hours spent on the audit in order to maintain profitability. The significant, negative coefficient on the unexpected fee variable suggests that as fee pressure increases (i.e., the residual becomes more negative), the likelihood that the firm will restate the financial statements in the future increases significantly.

FIGURE 1
Graph of Abnormal Fees against the Likelihood of Future Reporting Problems

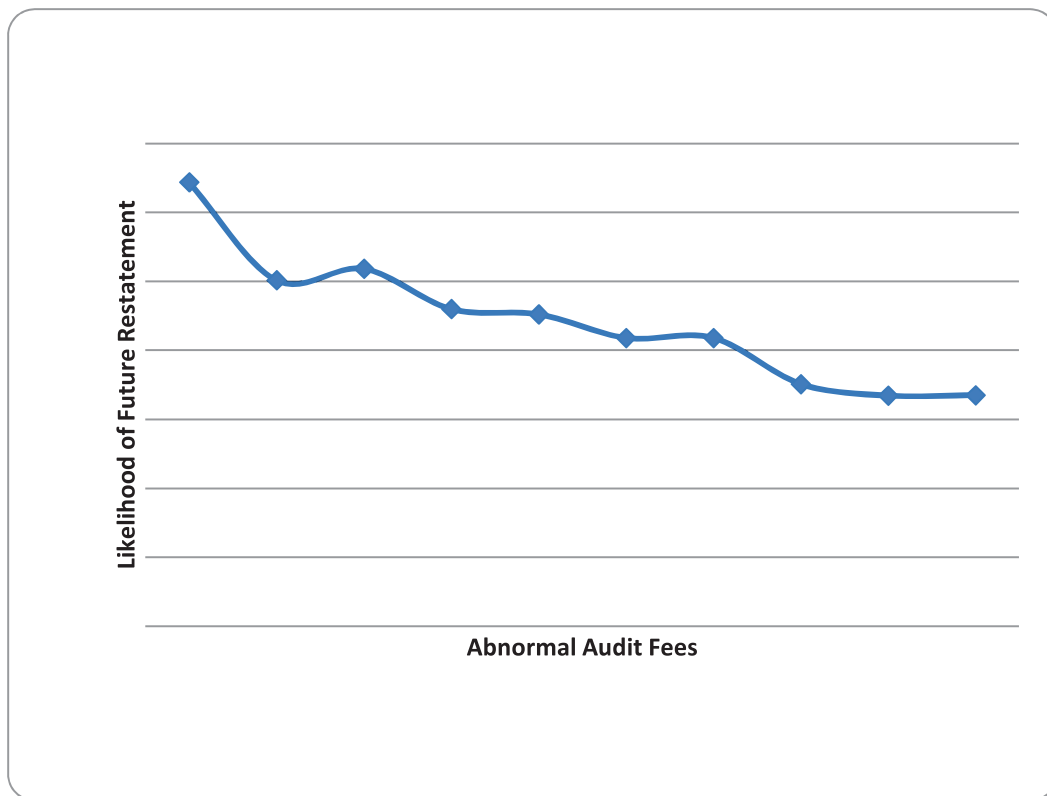


Figure 1 plots the likelihood of a future restatement (vertical axis) against abnormal audit fees (horizontal axis). Abnormal fees are partitioned into 10 decile groups (i.e., group one includes firms in the bottom 10 percent of abnormal fees, group two includes firms in 10th to 20th percentile of abnormal fees, etc.). Each group consists of 714 firms. We compute the likelihood of restatement as the fraction of firms in the group that subsequently restate divided by total firms in the fraction.

We also plot the likelihood of future restatements against abnormal audit fee deciles in Figure 1 to see if this association differs over the distribution of positive and negative abnormal fees. The graph displays a generally negative slope as the abnormal audit fees increase. Firms having the highest likelihood of future restatements have noticeably lower abnormal audit fees than firms with lower future restatements. At the low end of the distribution, the mean firm in the lowest decile has abnormal fees of -0.82 and a corresponding likelihood of a future restatement of approximately 13 percent. At the other end, the mean firm in the highest decile has abnormal fees of 0.83 and a corresponding likelihood of a future restatement of less than 7 percent. Figure 1 illustrates that abnormal fees are negatively associated with the likelihood of future restatements (a negative quality indicator). This result contrasts with those of [Choi et al. \(2010\)](#), who found that abnormal audit fees are positively related to abnormal accruals (a negative quality indicator), particularly at the higher levels of abnormal fees.

TABLE 5
Restatement Logistic Regression Model

	b	z	p-value
<i>CONSTANT</i>	0.11	0.14	0.89
<i>LTA</i>	-0.11	-3.11	0.00
<i>LEV</i>	0.49	2.24	0.03
<i>MTB</i>	0.00	0.28	0.78
<i>FIN</i>	-0.15	-0.61	0.54
<i>EPSGROW</i>	-0.18	-0.82	0.42
<i>EPR</i>	-0.03	-0.43	0.66
<i>FREEC</i>	1.14	3.02	0.00
<i>MATWEAK</i>	1.55	12.67	0.00
<i>ABAFEE</i>	-0.45	-3.74	0.00
Y2005	-0.20	-2.38	0.02
Y2006	-0.99	-7.05	0.00
Y2007	-1.28	-8.00	0.00
Pseudo R ²	0.11		
n	5,978		

Estimated using the robust cluster technique as suggested in [Petersen \(2009\)](#).

ROBUSTNESS TESTS

To test the robustness of our models, we introduce an alternative specification for the internal control variables. In the first iteration, we tested all models defining internal control quality as a dummy variable based on whether a material weakness was reported in the current year, consistent with [Hoitash et al. \(2008\)](#). By definition, a material weakness is evidence that the internal control system is flawed. This specification is a somewhat narrower view of internal control weakness than the variable we report in Tables 3–5, since it limits the definition to a shorter window (only the current year). The advantage of the specification is that it more precisely associates the control problems with the current period. Results of our (untabulated) regression models using this alternative specification are unchanged; signs and significance levels of all variables in both the audit fee and restatement models were similar across the two alternative specifications. In particular, the *MATWEAK* variable maintains identical signs and significance levels across the two specifications in the audit fee model, and the *ABAFEE* variable maintains the same sign while the significance in the alternative material weakness specification declined slightly in the restatement model (from $p < 0.01$ to $p = 0.01$).

In addition, we also tested models using alternative definitions of restatements. In the first, we excluded restatements from the analysis that did not have a negative market reaction. In the second, we dropped restatements related to leases, as these were related to industry practices. In the final iteration, we tested restatements announced in the next year rather than in the next two years. Regardless of the specification, our conclusions were unchanged. We thus conclude that our model is robust to a variety of internal control and restatement specifications.

SUMMARY AND CONCLUSION

This study reconsiders the issue of how audit fees relate to restatements. Understanding how restatements are related to audit fees is critically important because both restatements and audit fees

have dramatically increased over the last decade. Using a sample of firms that issued internal control reports from 2004 to 2007, we examine the association of future restatements with audit fees.

The prior work examining this relationship has generally found that audit fees and future restatements are positively associated. After controlling for internal control quality, we find that audit fees are negatively associated with future restatements. That is, audit fees are lower in the periods leading up to the discovery and announcement of the restatement. The results conflict with prior work (Kinney et al. 2004; Li and Lin 2007; to a limited extent, Stanley and DeZoort 2007), which found audit fees were positively associated with future restatements. These conflicting results may be attributable to an omitted variable (internal control quality) in the prior work. Overall, our evidence is consistent with the notion that restatements reflect low audit effort and/or incorrect risk assessment in the periods leading up to the restatement year.

Our findings have important implications for auditors, audit committees, and regulators. Given the pressure auditors currently face to reduce audit fees, auditors must be aware of the additional risk this pressure presents to the firm and take steps to ensure that their response considers not only the client's position but also minimizes the risk of future audit failure associated with current fee reductions. Likewise, clients' audit committees must be sensitive to the potentially negative consequences of placing significant pressure on auditors to reduce fees. Audit committees should be aware of the potential trade-off between current fees and future financial reporting problems. Finally, regulators should be interested in evidence examining the association of fees and restatements. If lower fees are associated with future restatements, then regulators should be attentive to auditors' fee structures and the quality of their work, particularly in economically adverse environments.

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