The Effects of Time Pressure on Audit Effort and Audit Risk:

An Analysis of Audit Fees Surrounding the Accelerated Filing Regulation

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January 15, 2018

Abstract: This study investigates whether the imposition of time constraints on the independent audit causes time pressures that increase the cost and/or reduce the quality of professional audit services. I investigate this question in the context of the accelerated filing regulation passed by the Securities and Exchange Commission (SEC) in 2002. It is important to determine the existence and extent of these unintended consequences as they may have implications for future regulatory changes. To answer this question, I identify client engagements that may experience audit time pressures given their audit report dates in the year prior to regulatory implementation. I analyze audit fees as an input cost to measure changes in audit effort and/or perceived audit risk. I then investigate the relationship between audit fees and restatements, an output measure of audit quality. Results provide evidence that client engagements under time pressure to reduce their audit report lag are associated with significantly *lower* audit fees in the years of regulatory implementation when compared to no pressure engagements. The effect is most pronounced for larger client firms, suggesting the influence of large client bargaining powers. Finally, in the years of regulatory implementation, lower abnormal audit fees are associated with reduced audit quality for time-pressure engagements.

Keywords: accelerated filing; time pressure; audit fees; restatements; audit quality

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INTRODUCTION

This study investigates whether the imposition of time constraints on the independent audit causes time pressures that increase the cost and/or reduce the quality of professional audit services. In September 2002, The Securities and Exchange Commission (SEC) finalized its decision to accelerate the quarterly 10-Q and annual 10-K filing deadlines[1] of large public firms. In doing so, the SEC wished to improve the timeliness of financial reporting so that information provided is more relevant and useful to investors (SEC 2002). The SEC stressed the importance of achieving this goal "without sacrificing accuracy or completeness or imposing undue burden and expense on registrants" (SEC 2002). This decision resulted in a lot of push-back from both firms and auditors. The SEC received 302 comment letters[2] on the initial proposal with the large majority (282 commenters) in opposition. Many anticipated significant effort adjustments needed by firms and their auditors and thus increased internal costs and audit fees charged to comply with the earlier deadlines. Further, commenters expressed concerns that accelerating the deadlines would diminish the quality of financial reporting by putting time pressure on both the year-end close and audit review process. Finally, given the increased financial reporting and auditing requirements resulting from the Sarbanes-Oxley Act[1] (SOX), also passed in 2002, many worried the concurrent implementation of accelerated filing would prove detrimental to achieving its end goals.

For example, in its May 22, 2002 comment letter KPMG LLP stated the following:

> We agree that timeliness of information is a critical component of an effective capital market. However, we believe that the investing public would be better served, at this critical juncture, if company management, boards of directors, audit committees, auditors, attorneys and other advisors could continue to focus their efforts on improving the quality

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[1] Acceleration from 90 to 75 days for accelerated filers (public float between $75 million and $700 million). Acceleration from 90 to 60 days for large accelerated filers (public float of $700 million or greater).

[2] 20 of the commenters were investors and financial analysts in support of the proposal. The remaining 282 commenters were companies, business associations, law firms and accounting firms in opposition (SEC 2002).

of financial reporting without the added complication of meeting accelerated filing deadlines for quarterly and annual reports.

Based on a limited survey of current filing practices, we would expect some of the larger companies may be able to meet the proposed accelerated filing deadlines. However, many companies would need to incur substantial effort and costs to comply with the deadlines in the Proposed Rule. Similarly, audit effort and costs would increase commensurate with compressed audit efforts (adjusted audit timing, methodology and approaches) as each company situation warrants. (SEC 2002)

Prior studies investigating the impact of accelerated filing deadlines focus on the timeliness (Farag, 2017; Impink, Lubberink, Praag, & Veenman, 2012; Jayanthi Krishnan & Yang, 2009; Kutcher, 2007), information usefulness (Doyle & Magilke, 2013) and quality of financial reporting (Boland, Bronson, & Hogan, 2015; Bryant-Kutcher, Peng, & Weber, 2013; Doyle & Magilke, 2013; Lambert, Jones, Brazel, & Showalter, 2017). These studies rely on output-based measures of relevance and reliability (e.g. audit report lags, late filings, market returns, accruals, restatements). This study extends the literature by analyzing the impact of accelerated filing deadlines on audit fees, an input-based measure used to proxy audit effort and/or perceived audit risk. Analyzing audit fees surrounding the regulation provides insight on how auditors adjust to time pressures imposed on the year-end audit. Fee adjustments may have important implications for quality.

To execute this study, I rely on a traditional audit fee model (Hay, Knechel, & Wong, 2006; Simunic, 1980) and a difference-in-differences design, to investigate the effect of accelerated filing regulation on audit fees of client engagements with time pressures to accelerate the audit report date compared to those already meeting the new deadlines. I focus on the following three events surrounding the regulation (I) the initial reduction in filing deadlines to 75 days (for all accelerated filers), (II) the first year of SOX 404 implementation (for all accelerated filers), and (III) the final reduction in filing deadlines to 60 days (for large accelerated filers). Results provide evidence that

client engagements under time pressure to reduce their audit report lag are associated with significantly lower audit fees in the years of regulatory implementation when compared to no pressure engagements. The effect is most pronounced for larger client firms. Given these findings, I then estimate abnormal audit fees, or the residuals from the audit fee model, (Asthana & Boone, 2012; Blankley, Hurtt, & MacGregor, 2012; Doogar, Sivadasan, & Solomon, 2015; Eshleman & Guo, 2014; Jong-Hag, Jeong-Bon, & Yoonseok, 2010; Simunic, 1980; Yuping, Bedard, & Hoitash, 2017) to investigate the association between abnormal fee levels of time-pressure engagements and audit quality. Using restatements as an output measure of audit quality, I find lower abnormal audit fees are associated with reduced audit quality for time-pressure engagements in the years of regulatory implementation. Results suggest audit efforts to accelerate reporting may have fallen short due to time and resource constraints. Further, given the stronger result for large firms, it's possible that large client bargaining powers were at play. Negotiations to keep fees low may have worked to the detriment of regulator's goals to maintain audit quality. Results of this study may be of interest to both academics and regulators concerned with the unintended consequences of accelerating reporting deadlines.

THEORETICAL MODELS

Simunic (1980) develops a theoretical model in which audit fees in a competitive market are defined as the sum of audit production costs plus a premium for expected losses due to litigation. The model can be summarized as follows:

(1) Audit Fee[3] $= E(\tilde{C}) = cq + E(\tilde{d}|a, q)E(\tilde{\theta})$

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[3] $E(\tilde{C})$ is the expected total cost to the auditor, c is the unit cost of audit resources, q is the quantity of audit resources utilized, $\tilde{d}$ is the present value of possible future losses which may arise from this period's audited financial

This model can be related to the Audit Risk Model used in practice. In the year-end audit, independent auditors must obtain "reasonable assurance" on whether the financial statements are free of material misstatement and express an appropriate opinion. As only "reasonable" rather than "absolute" assurance is required, there exists a certain level of audit risk, or the risk that the auditor will unknowingly fail to modify an opinion on financial statements which are materially misstated. Auditors rely on the Audit Risk Model to reduce this risk to an appropriate low level (PCAOB 2010). The Audit Risk Model is comprised of two components: the risk of material misstatement (RMM) and detection risk. RMM includes both inherent risk[4] and control risk[5] and represents the risk of a material misstatement prior to any audit work being done. Detection risk is the risk that an auditor will fail to detect a misstatement that exists in the financial statements.

Audit Risk (AR)	=	Risk of Material Misstatement (RMM)	x	Detections Risk (DR)

Inherent Risk		Control Risk
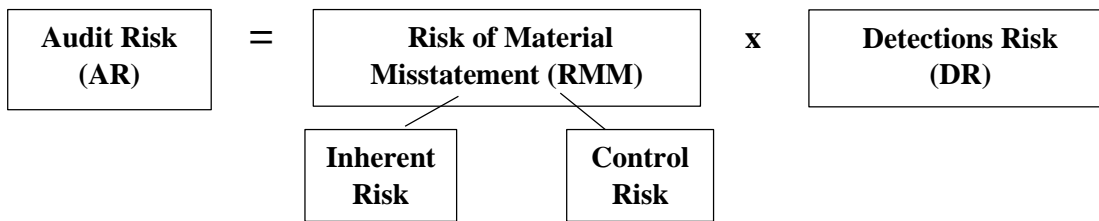
During the planning stages of the audit, auditors assess the preexisting levels of inherent risk and control risk to determine the nature, timing and extent of substantive audit procedures; such audit procedures are intended to reduce detection risk and thus maintain audit risk at an appropriately low level (PCAOB 2010). An inverse relationship arises between detection risk and RMM; given a desired level of audit risk AR, an *increase* in the level of RMM requires a *reduction* in detection risk. Detection risk is controlled by the auditor and determined by the level of work performed.

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statements, a is the quantity of auditee resources utilized in operating the internal accounting system, and θ is the ex-post fraction of losses born by the auditor where $0 \leq \theta \leq 1$ (Simunic, 1980).

[4] Inherent risk may consist of firm specific or environmental risks that increase the likelihood of a material misstatement.

[5] Control risk is the risk that a material misstatement, if it were to occur, would not be prevented or detected on a timely basis by a firm's internal controls.

Firms with higher levels of inherent risk or control risk may require more substantive procedures by the auditor to keep detection risk low.

Relating the Audit Risk Model to Simunic's (1980) fee model, the unconditional expected losses from litigation $E(\tilde{d})$ represents the firm's level of inherent risk. The auditee's choice of a (i.e. investment in internal control system) will determine the firm's level of control risk. The auditor's choice of q (i.e. effort) will determine the level of detection risk. $E(\tilde{d}|a,q)E(\tilde{\theta})$ represents expected litigation losses resulting from the audit, or a firm's inherent risk, conditional on the levels of control risk and detection risk. And cq reflects the costs of audit efforts. Therefore, the audit fee can be interpreted as the costs of audit effort (cq) plus a premium for audit risk ($E(\tilde{d}|a,q)E(\tilde{\theta})$). Relying on this definition, I empirically test the impact of accelerated filing deadlines on audit fees to gain insight on the effects of regulatory induced time pressures on audit effort and/or perceived audit risk.

REGULATORY BACKGROUND

In recent years, the regulatory environment over financial reporting has emphasized both relevance and reliability. Specifically, two notable changes impacting large public firms were Section 404 of the Sarbanes-Oxley Act (SOX) enacted by Congress in July 2002 and the Amendment to the Exchange Act Rule 12b-2 passed shortly thereafter in September 2002. Addressing the issue of reliability, Sections 404 (a) & (b) of SOX require that managers of publicly traded companies assess the effectiveness of internal controls over financial reporting and that independent auditors attest to management's assessment. Section 404(c) [6] provides exemption under Section 404(b) for non-accelerated filers or firms with public float of less than $75 million

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[6] Section 989G of the Dodd-Frank Act (2010) approves Section 404(c) exemption for non-accelerated filers. Management, however, is still required to report on internal controls as required under Section 404 (a) (SEC 2010).
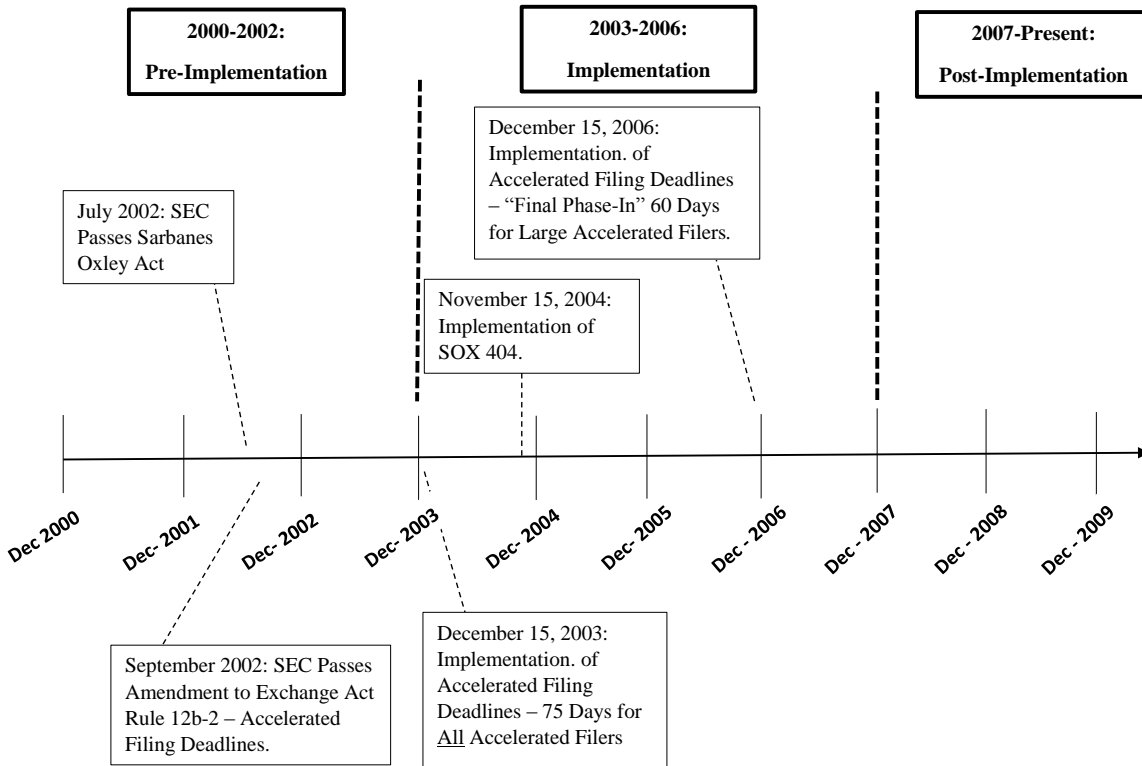
(SEC 2002). During this period, the Public Company Accounting Oversight Board (PCAOB 2004)

issued several standards[7] which laid out the framework for auditors to follow when testing internal

controls. Overall, SOX and the PCAOB standards vastly expanded the responsibilities and

workload of the auditor for year-end audits of large firms. To address the issue of relevance, the

amendment to the Exchange Act Rule 12b-2 reduced the filing deadlines of quarterly and annual

reports for all accelerated filers (firms with public float of $75 million or greater). In 2005, the

amendment was further updated by expanding the filer status into three categories, large

accelerated[8], accelerated[9] and non-accelerated[10] filers and reducing year-end filing deadlines to

60, 75 and 90 days, respectively. This amendment imposed a strict time constraint on both firms

and their auditors to close the books, complete the audit and report the financials. *See timeline of*

two regulations below:

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[7] In 2004, the Public Company Accounting Oversight Board (PCAOB) issued Auditing Standard No. 2 (AS2) which laid out the framework to be followed by auditors when performing an audit of internal controls (PCAOB 2004). In 2007, AS2 was superseded by AS5 in response to concerns over the extensive financial costs of implementation. The goal of AS5 was to narrow the focus of the controls testing process as well as reduce the burden on the auditor by allowing reliance on the "work of others"[7] (PCAOB 2007).

[8] Large accelerated filers are defined as firms with market value of outstanding voting and non-voting common equity held by non-affiliates of $700 million or greater (SEC 2005).

[9] Accelerated filers are defined as firms with market value of outstanding voting and non-voting common equity held by non-affiliates between $75 million and $700 million (SEC 2005).

[10] Non-accelerated filers are defined as firms with market value of outstanding voting and non-voting common equity held by non-affiliates of less than $75 million (SEC 2005).

2000-2002:
Pre-Implementation

2003-2006:
Implementation

2007-Present:
Post-Implementation

December 15, 2006: Implementation. of Accelerated Filing Deadlines – "Final Phase-In" 60 Days for Large Accelerated Filers.

July 2002: SEC Passes Sarbanes Oxley Act

November 15, 2004: Implementation of SOX 404.

Dec 2000   Dec- 2001   Dec- 2002   Dec- 2003   Dec- 2004   Dec- 2005   Dec- 2006   Dec- 2007   Dec- 2008   Dec- 2009

September 2002: SEC Passes Amendment to Exchange Act Rule 12b-2 – Accelerated Filing Deadlines.

December 15, 2003: Implementation. of Accelerated Filing Deadlines – 75 Days for All Accelerated Filers

PRIOR RESEARCH AND HYPOTHESES

There exists a large stream of literature investigating the impact of SOX regulation on audit fees (Coster, Dahl, & Jenson, 2014; Dechun & Jian, 2012; DeFond & Lennox, 2011; Desir, Casterella, & Kokina, 2014; Dickins, Higgs, & Skantz, 2008; Doogar, Sivadasan, & Solomon, 2010; Ettredge, Chan, & Scholz, 2007; Ghosh & Pawlewicz, 2009; Hoitash, Hoitash, & Bedard, 2008; Iliev, 2010; Jiang & Wu, 2009; Jagan Krishnan, Krishnan, & Song, 2011; Raghunandan & Rama, 2006; Sneller & Langendijk, 2007). Results from these studies show an overall increase in audit fees during the period of adoption and implementation (2002-2007), with increases being most significant for smaller accelerated filers and firms with material weakness disclosures. Fee increases are attributed to increased audit effort and expected legal liability due to increased auditor responsibility under SOX.

Given the significant fee increases, researchers are interested if net benefits are obtained from the regulation. Iliev (2010) investigates the impact of SOX Section 404 compliance on earnings quality. Findings show that although experiencing significant fee increases, firms issuing auditor attesttation reports had lower accruals and discretionary accruals in the first year of reporting. Additionally, the study finds increased earnings informativeness for these firms as measured by long-window returns in the first year of Section 404 reporting. A more recent study (Chen, Krishnan, Sami, & Zhou, 2013) finds similar results when looking at returns, and further, finds no significant difference between increased informativeness for firms with small vs. large compliance costs. This suggests that the costs and benefits of compliance were not distributed proportionally amongst firms.
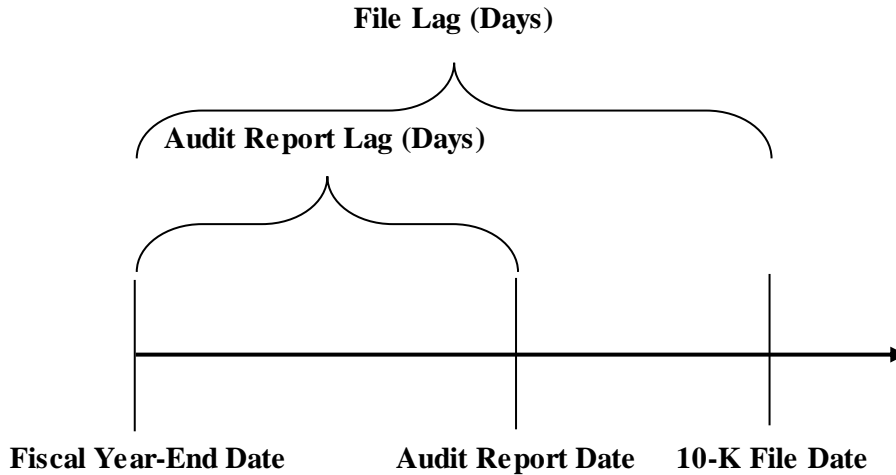
I find no prior literature that investigates the impact of accelerated filing regulation on audit fees. The accelerated filing regulation provides a unique setting in which there is no specific increase to the auditor's production requirement (i.e. quantity of work required), but instead, a strict time constraint imposed for when the work must be completed. Presumably, auditors would try to allocate additional resources or adjust the timing or methodology of procedures (as decribed in the KPMG comment letter) to meet the shortened deadlines and mainatin audit quality. Such reallocations and adjustments may result in fee increases. However, due to time and resource constraints, it's possible that auditors are forced to make a tradeoff between timeliness and reliabilty whereby they sacrifice audit quality by means of reduced audit effort (e.g. less hours, less productive hours, less experienced hours, or weaker methodologies used) in order to meet the shortened deadline. In this case, fees may decrease (increase) due to decreased audit effort (increased perceived audit risk - i.e. detection risk). Futher, the imposed deadlines also affect the timing of the client's year-end reporting process and while the auditor may be prepared to handle

the shortened deadlines the client may not have the capactiy to do so. Fee premiums due to increased audit risk driven by the client (i.e. inherent risk) may also be charged. Finally, given the time constraints imposed on both the auditor and client, it is possible that the client misses the new deadline and files late. Fee premiums due to increased business risk (i.e. regulatory penalties, shareholder litigation, reputational or other negative market effects) may be charged. By analyzing fee changes surrounding the accelerated filing regulation I wish to gain insight on how auditors adjust to time pressures and the implications of these adjustments on audit quality. I examine the following research questions:

RQ1: Are auditing time pressures associated with increased audit fees?

RQ2: What is the association between abnormal audit fees due to time pressure and audit quality?

To answer these questions, I identify client engagements that may experience audit time pressures given their audit report lags in the year prior to each mandatory reduction in filing deadlines. Audit report lag refers to the number of days from the fiscal year-end date to the date the audit report is signed. 10-K file lag refers to the number of days from the fiscal year-end date to the date the 10-K is filed with the SEC. In this study my focus is the audit report lag given this is the date by which the financial statements are finalized and the audit opinion is issued. See summary diagram below:

File Lag (Days)

Audit Report Lag (Days)

Fiscal Year-End Date   Audit Report Date   10-K File Date

For the first acceleration to 75 days, the time-pressure group consists of all accelerated filers whose audit report lag was greater than 75 days in the year prior to mandatory reduction (beginning fiscal years-ended December 15, 2003). For the second acceleration to 60 days, the time-pressure group consists of large accelerated filers whose audit report lag was greater than 60 days in the year prior to mandatory reduction (beginning fiscal years-ended December 15, 2006). No time-pressure engagements, or the control group, are all accelerated filers (large accelerated filers) whose audit report lags in the year prior to mandatory reduction were less than or equal to 75 (60) days for the first (second) acceleration.

Research Question 1:

I analyze the differential impact of regulatory induced time pressures on audit fees of time-pressure vs. no time-pressure engagements during the first two years of Phase 1 of the acceleration (decreasing the filing requirements from 90 to 75 days for all accelerated filers) and the first year of Phase 2 of the acceleration (further decreasing the filing requirement to 60 days for large accelerated filers). Note the second year of implementation of the 75-day deadline is also the first year of SOX 404 implementation (beginning fiscal years ended 11/15/2004). I include this year to

investigate any incremental impact the additional SOX 404 requirements may have on time-pressure engagements.

Looking at time-pressure engagements, both the prior year's audit report and 10-K file lags did not meet the accelerated deadline. First, looking at the audit function, acceleration of the audit process is required to meet the tighter deadline. The audit process may be accelerated by reallocating extra staff, changing the timing of procedures (e.g. shifting more testing to interim) or making changes to the audit methodology as described in the KPMG comment letter (SEC, 2002). Such changes are reflective of increased audit efforts and therefore we should expect increased audit fees. However, even if reallocations are made, it is possible that efforts fall short of maintaining audit quality. For example, there may be a shortage of audit resources resulting in less hours billed, less productive hours billed (e.g. more overtime and late-night hours), less experienced hours billed (e.g. lower level staff on the engagement and/or staff recruited from other departments), or weaker methodologies used resulting in increased detection risk. Thus, fees may decrease (increase) due to decreased audit efforts (increased perceived audit risk).

Second, looking at the client's financial reporting process, given that accelerations are necessary, auditors may perceive these clients as riskier (i.e. increased inherent risk) as the acceleration of the client's financial reporting process may lead to reduced earnings quality. Prior studies find lower accruals quality (Doyle & Magilke, 2013; Lambert et al., 2017) and increased likelihood of restatements (Boland et al., 2015; Bryant-Kutcher et al., 2013; Doyle & Magilke, 2013) in the first year of acceleration to 75 days for firms subject to the reduction in deadlines, in particular, small accelerated filers and firms whose prior year audit report and/or file lags did not meet the new deadline. Further, studies find a heightened sensitivity to financial reporting risk beginning in 2002 (Charles, Glover, & Sharp, 2010). I therefore anticipate auditors to price any

financial reporting risk resulting from the client's acceleration. Thus, fees may increase due to increased perceived audit risk stemming from increased inherent risk.

Further, given the need to accelerate either the client's financial reporting or audit process to meet the new deadlines, these firms may be perceived by auditors as having a higher risk of late filing upon implementation. Lambert et al. (2017), finds that firms needing to accelerate were more likely to file late in the first year of implementation of the accelerated deadlines. Further, studies indicate negative capital market consequences for late filers in the form of negative returns (Alford, Jones, & Zmijewski, 1994; Bartov & Konchitchki, 2017) and find audit fees are positively associated with Non-Timely Notifications (Changjiang, Raghunandan, & McEwen, 2013). Given these findings, it is possible that auditors will perceive time-pressure firms as having increased business risk and price this risk in the form of increased fees.

To investigate any changes in audit effort and/or perceived audit risk, I look to the years of *implementation* of both the 75-day and 60-day accelerated deadlines. Summarized below in **Diagram 1** is the distribution of audit report lags in the year prior to implementation (12/15/2002-12/14/2003) and the year of implementation (12/15/2003-11/14/2004)[11] of the 75-day deadline for all accelerated filers. In the year prior to implementation, 16% of firms have audit report lags greater than 75 days (i.e. time-pressure engagements) and 11% of firms fall in the 61 to 75-day interval immediately to the left. In the year of implementation, only 8% of firms have audit report lags greater than 75 days indicating a significant reduction in reporting lags by time-pressure engagements to meet the 75-day deadline. Meanwhile in the year of implementation, 29% of firms

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[11] I end the implementation period for the 75-day accelerated filing deadline at 11/14/2004 to avoid effects due to SOX 404 implementation as 12/15/2004 is the first month of SOX 404 implementation for all accelerated filers.

fall in the 61 to 75-day interval indicating an overall trend of increasing audit report lags for non-time-pressure engagements during this period.

Diagram 1:
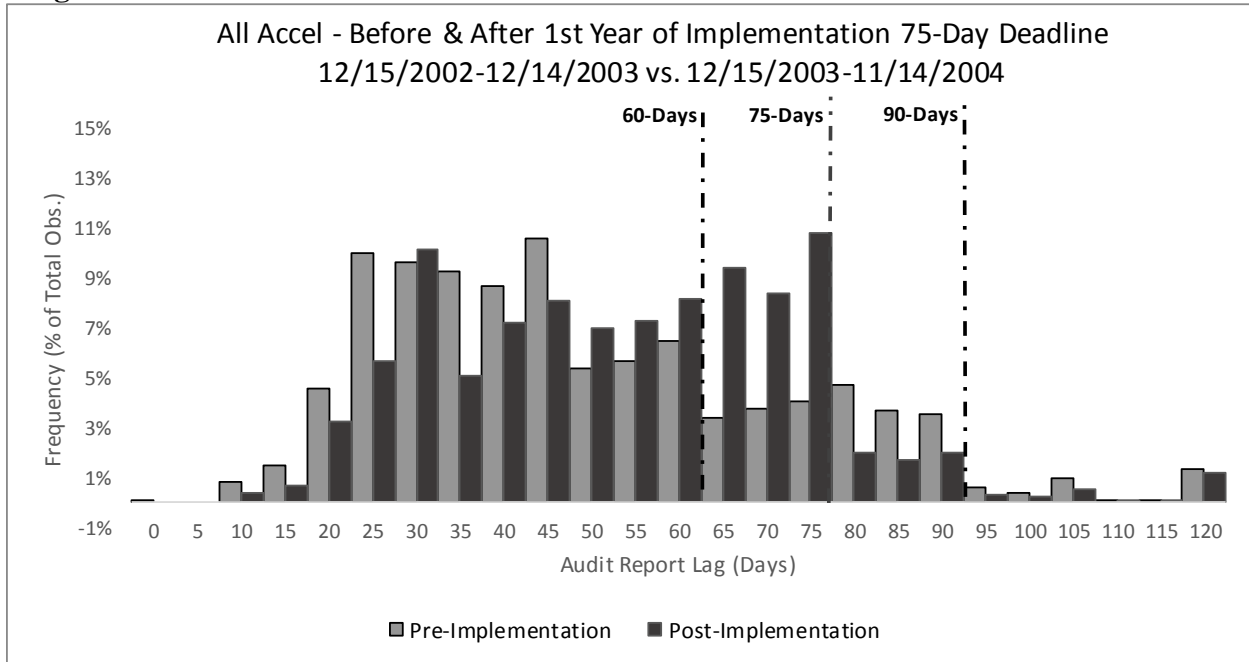
I suspect increased auditor efforts were necessary to achieve this reduction to 75 days and thus increased audit fees. Given the trend of increasing audit fees during this period (Coster et al., 2014; Ettredge et al., 2007; Ghosh & Pawlewicz, 2009; Hoitash et al., 2008; Iliev, 2010; Raghunandan & Rama, 2006; Sneller & Langendijk, 2007), I make my prediction with respect to fee *increases* for time-pressure vs. no time-pressure engagements. I therefore make the following hypothesis:

H1: Audit fee increases will be greater in the first year of implementation of the 75-day deadline for client engagements with audit time-pressures to meet accelerated deadlines compared to no pressure engagements.

Diagram 2 is the distribution of audit report lags in the year prior to implementation (12/15/2003-11/14/2004) and the year of implementation (11/15/2004-11/14/2005) of SOX 404

for all accelerated filers. In the year prior to implementation of SOX 404, 8% of firms have audit report lags greater than 75 days (i.e. time-pressure firms) and 29% of firms fall in the 61 to 75-day interval immediately to the left. In the year of implementation, 16% of firms have audit report lags greater than 75 days and 57% of firms fall in the 61 to 75-day interval. This indicates a significant increase in the average audit report lag of all firms in the first year of SOX 404 implementation, likely due to the increased auditing and financial reporting requirements imposed by the regulation.[12]

Diagram 2:
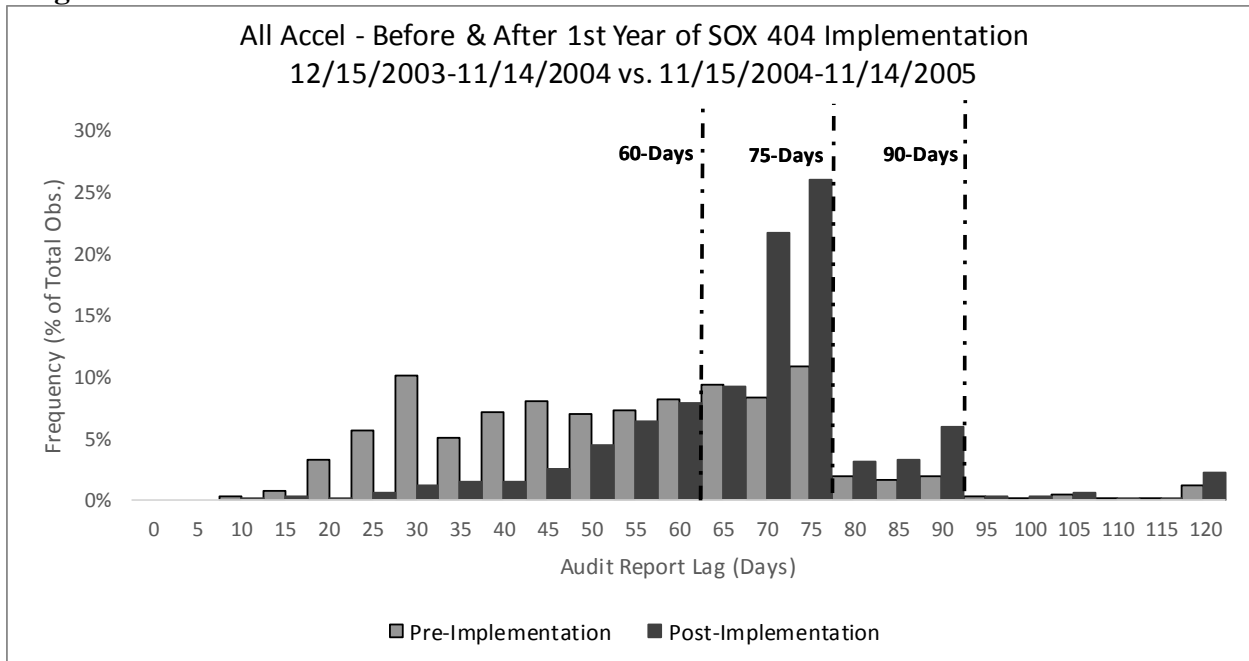
Given this increase in responsibilities, I wonder how time-pressure engagements handled the additional workload pressures while still trying to maintain the new 75-day deadline. I suspect

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[12] Sections 404 (a) & (b) of SOX require that managers of publicly traded companies assess the effectiveness of internal controls over financial reporting and that independent auditors attest to management's assessment.

increased auditor efforts were necessary to maintain the 75-day deadline while implementing SOX 404 and thus increased audit fees. I therefore make the following hypothesis:

H2: Audit fee increases will be greater in the second year of implementation of the 75-day deadline (first year of SOX 404) for client engagements with audit time pressures to meet accelerated deadlines compared to no pressure engagements.

      Diagram 3 is the distribution of audit report lags in the year prior to implementation (12/15/2005-12/14/2006) and the year of implementation (12/15/2006-11/14/2007) of the 60-day deadline for large accelerated filers. In the year of prior to implementation, 61% of large accelerated filers have audit report lags greater than 60 days (i.e. Group C firms) and 33% of large accelerated filers fall into the 46 to 60-day interval immediately to the left. In the year of implementation, only 24% of large accelerated filers have audit report lags greater than 60 days and 71% of large accelerated filers fall in the 46 to 60-day interval indicating a significant reduction in reporting lags by time-pressure firms to meet the 60-day deadline.

Diagram 3:

Large Accel - Before & After 1st Year of Implementation of 60-Day Deadline
12/15/2005-12/14/2006 vs. 12/15/2006-12/14/2007
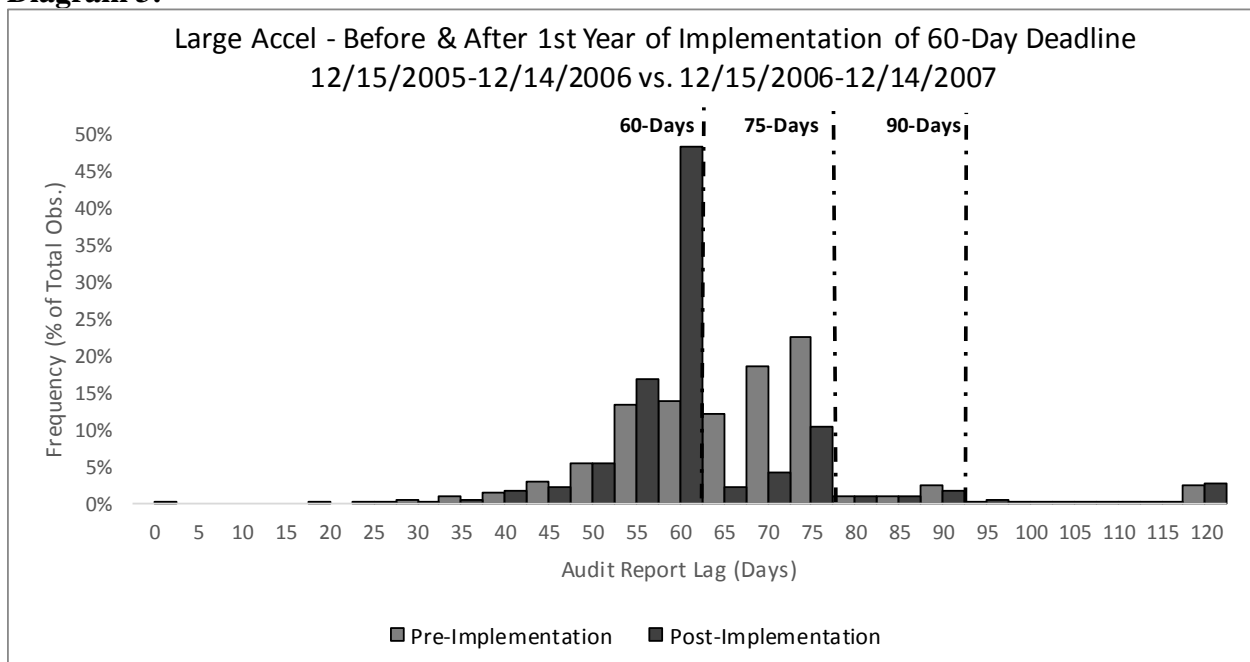
I suspect increased auditor efforts were necessary to achieve this reduction to 60 days and thus increased audit fees. I therefore make the following hypothesis regarding the second acceleration for large accelerated filers:

H3: Audit fee increases will be greater in the first year of implementation of the 60-day deadline for client engagements with audit time pressures to meet accelerated deadlines compared to no pressure engagements.

Research Question 2:

In the second part of this study, I investigate the association between abnormal audit fees due to time pressure and audit quality. I look at the following implementation periods: (I) first year of implementation of the 75-day deadline for all accelerated filers, (II) first year of implementation of SOX 404 (i.e. second year of implementation of the 75-day deadline) for all accelerated filers, and (III) first year of implementation of the 60-day deadline for large accelerated filers. I focus on abnormal audit fees, or the difference between actual and expected audit fees during the period of interest. I use restatements as my measure of audit quality, with higher (lower) levels of restatements indicating lower (higher) audit quality. Restatements reflect a direct measure of audit failure (i.e. the failure to modify an opinion for financial statements that are materially misstated).

Prior research shows mixed evidence on the relationship between audit fees and restatements. Several studies looking at pre-SOX years find a positive relationship between audit fees and future restatements suggesting issues of auditor independence (Kinney Jr, Palmrose, & Scholz, 2004; Li & Lin, 2005; Stanley & Todd DeZoort, 2007). Looking at the post-SOX era, other studies find a negative relationship between audit fees and future restatements (Blankley et al., 2012; Yuping et al., 2017) and suggest that findings of prior studies may have been due to the

correlated, omitted variable of material weakness in internal controls or due to heightened regulatory scrutiny over independence concerns. These later studies support the argument that audit fees reflect the level of auditor efforts. Further, studies looking at other measures of audit quality, such as discretionary accruals, also find evidence in support of the effort argument (Asthana & Boone, 2012; Eshleman & Guo, 2014) (i.e. a positive association between audit fees and audit quality)[13]. Given my study starts in the period of adoption and implementation of SOX 404, I anticipate audit fees to show an effort story due to the higher regulatory scrutiny during this period. Further, I plan to control for material weaknesses in my analysis. I therefore make the following hypothesis regarding abnormal audit fees of time-pressure engagements:

H4: There is a negative association between abnormal audit fees and likelihood of restatement for time-pressure engagements during the implementation periods.

RESEARCH METHODS AND SAMPLE SELECTION

Research Design:

Using a traditional audit fee model (Hay et al., 2006; Simunic, 1980) and a difference-in-differences design, I investigate the effect of the following three events on audit fees of time-pressure engagements:

Events Investigated

I. The initial reduction in filing deadlines to 75 days (for all accelerated filers) beginning fiscal years-ended 12/15/2003.

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[13] Note there are also studies which find a negative association between audit fees and audit quality when analyzing discretionary accruals (Jong-Hag et al., 2010). These findings are attributed to independence issues.

II.   The first year of SOX 404 implementation (for all accelerated filers) beginning fiscal years-ended 11/14/2004.

III.   The final reduction in filing deadlines to 60 days (for large accelerated filers) beginning fiscal years-ended 12/15/2006.

Time-Pressure Engagements

For the first acceleration to 75 days, the time-pressure group consists of all accelerated filers whose audit report lag was greater than 75 days in the year prior to mandatory reduction (beginning fiscal years-ended December 15, 2003). For the second acceleration to 60 days, the time-pressure group consists of large accelerated filers whose audit report lag was greater than 60 days in the year prior to mandatory reduction (beginning fiscal years-ended December 15, 2006). No time-pressure engagements (or the control group) are all accelerated filers (large accelerated filers) whose audit report lags in the year prior to mandatory reduction were less than or equal to 75 (60) days for the first (second) acceleration.

I utilize a "levels" rather than a "changes" model given the high explanatory power of the fee "levels" model (approximately 80%) (Hay et al., 2006). I utilize a difference-in-differences design to reduce the bias of omitted correlated variables in cross-sectional regressions that are firm-specific and time invariant, as well as, the bias of time-series trends unrelated to the treatment effect. The sample includes all accelerated filers (both accelerated and large accelerated categories) for analysis of the first acceleration to 75 days and large accelerated filers only for analysis of the second acceleration to 60 days. Non-accelerated filers are dropped from the sample as these firms are not subject to accelerated filing deadlines. Further, given these firms are permanently exempt from SOX 404 (b) and granted extension for compliance with SOX 404 (a), they do not make a

good matched control group for comparison against accelerated filers. Using OLS regression I estimate the following model:

$$(2) FEE = \alpha + \beta_1\,IMP + \beta_2\,TIMEPRESSURE$$

$$+ \beta_3\,TIMEPRESSURE * IMP + \beta_4 LFEE + \beta_5\,ASSETS$$

$$+ \beta_6\,CURRENTASSETS + \beta_7\,BTM + \beta_8\,INVREC + \beta_9 BUSSEG$$

$$+ \beta_{10}\,FOREIGN + \beta_{11}\,SPECIAL + \beta_{12}\,ACQ + \beta_{13}\,CURRENTRATIO$$

$$+ \beta_{14}\,LEV + \beta_{15}\,\Delta ROA + \beta_{16}\,LOSS + + \beta_{17}\,GCONCERN$$

$$+ \beta_{18}\,MW302/M404 + \beta_{19} BIG4 + \beta_{20}\,BUSY + \beta_{21}\,AUDITORCHG$$

$$+ + \beta_{22}\,ABSDA + \beta_{23}\,LATE + IndustryControls + \varepsilon$$

Model (2) is estimated separately over two distinct periods and sample groups. The first sample period/group is fiscal years-ended 12/15/2002-11/14/2005 for both large accelerated and accelerated filers to capture the effects of the first acceleration to 75 days (12/15/2003-11/14/2004) and SOX 404 (11/15/2004-11/14/2005) compared to the prior period (12/15/2002-12/14/2003). The second sample period/group is fiscal years-ended 11/15/2004-12/14/2007 for large accelerated filer observations only to capture the effect of the final acceleration to 60 days (12/15/2006-12/14/2007) compared to the prior period (11/15/2004-12/14/2005). Time-pressure groups are measured using the 75-day deadline and relative to the initial acceleration period for events (I) & (II) and using the 60-day deadline and relative to the final acceleration period for event (III). The dependent variable *FEE* is the natural logarithm of audit fees charged to the client firm. *TIMEPRESSURE* is an indicator variable to identify client firms whose audit report lag in the year prior to the year of mandatory acceleration did not meet the accelerated deadline. *IMP* is an indicator variable to identify the different treatment years for events (I), (II), and (III) and are denoted *IMP75 IMPSOX* and *IMP60*, respectively.

ASSETS is the natural logarithm of total firm assets and is used to control for client firm size. Audit efforts are expected to be increasing with firm size, thus there is an expected positive association with audit fees (Hay et al., 2006; Simunic, 1980). *CURRENTASSETS* is the client's total current assets divided by total assets, and *INVREC* is the sum of the client's inventory plus receivables divided by total assets. *CURRENTASSETS* and *INVREC* involve balance sheet accounts generally identified as having greater exposure to loss and more complex valuation thus increasing a client's inherent risk and in turn auditor effort for which there is an expected positive association with audit fees (Hay et al., 2006; Simunic, 1980).

BTM is the client's book value of common equity divided by market value and is used to control for firm growth opportunities, for which there is an expected negative association with audit fees. *SPECIAL* is equal to 1 if the client firm reported either an extraordinary item or discontinued operations during the period, and *ACQ* is equal to 1 if the client firm reported an acquisition during the period. Both *SPECIAL* and *ACQ* are used to control for client activities with financial reporting complexities thus increasing a client's inherent risk and in turn auditor effort for which there is an expected positive association with audit fees (Hay et al., 2006). *BUSSEG* and *FOREIGN* are used to control for complexity of the client's operations due to decentralization and diversification. *BUSSEG* is equal to the number of client business segments, and *FOREIGN* is equal to a client's foreign sales as a percentage of total sales. There is an expected positive association between both *BUSSEG* and *FOREIGN* and audit fees due to greater exposure to loss and thus increased inherent risk (Hay et al., 2006; Simunic, 1980).

ROA, LOSS, and *GCONCERN* are used to control for client profitability for which there is an expected negative association with audit fees; as client profitability increases, the auditor's risk of bearing all losses due to client insolvency decreases (Hay et al., 2006; Simunic, 1980). *ROA* or

return on assets is measured as the client's net income divided by total assets for which there is an expected negative association with audit fees (Hay et al., 2006; Simunic, 1980). *LOSS* is equal to 1 if the client reported a net loss in the current, for which there is an expected positive association with audit fees (Ghosh & Lustgarten, 2006). *GCONCERN* is equal to 1 if the audit opinion includes a going-concern qualification in the current year, for which there is an expected negative association with audit fees (Ghosh & Lustgarten, 2006). *CURRENTRATIO* is the client's current ratio measured as total current assets divided by total current liabilities for which there is an expected negative association with audit fees. *LEV* is client leverage measured as total liabilities divided by total assets and is used to control for the risk of client insolvency for which there is an expected positive association with audit fees (Hay et al., 2006; Simunic, 1980).

MW302/404 measures control risk and is equal to 1 if either a SOX 302 or SOX404 material weakness is reported in the current year[15], else 0. There is an expected positive association between control risk and audit fees (Hay et al., 2006; Simunic, 1980). *BIG4* is equal to 1 if the auditor is part of the Big 4 (i.e. Deloitte & Touche, Ernst & Young, KPMG or PricewaterhouseCoopers) and is used to control for audit quality (Becker, Defond, Jiambalvo, & Subramanyam, 1998) for which there is an expected positive association with audit fees (Hay et al., 2006). *BUSY* is equal to 1 if the client's fiscal year-end is in December and is used to control for the auditor's "busy-season" for which there is an expected positive association with audit fees due to resource constraints and thus increased overtime hours worked by audit staff (Hay et al., 2006). *AUDITORCHG* is equal to 1 if there was a change in auditor during the current year for which there is an expected negative association with audit fees due to audit firms offering new

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[15] Given the implementation of SOX 404 did not begin until fiscal years ending on or after 12/15/2004 and my sample period extends before and after this date, I expand this control variable to include either SOX 302 or SOX 404 material weakness disclosures.

clients a discount to attract new business (Ebrahim, 2010; Ghosh & Lustgarten, 2006; Ghosh & Pawlewicz, 2009; Hay et al., 2006).

ABSDA is the absolute value of discretionary accruals measured using the Modified Jones Model (Dechow & Sloan, 1995). Studies find a decrease in accruals quality for firms affected by the accelerated filing regulation in the first year of implementation (Doyle & Magilke, 2013; Lambert et al., 2017). Given that decreased accruals quality may have a negative (positive) association with audit fees due to decreased audit efforts (increased rents or risk premium), it is important to control for accruals (Asthana & Boone, 2012; Eshleman & Guo, 2014; Gul, Chen, & Tsui, 2003; Mande & Son, 2015; Srinidhi & Gul, 2007). *LATE*[16] is equal to 1 if the firm's 10-K was filed after the SEC deadline for the current year. Studies find an increased incidence of late filing for time-pressure firms in the first year of implementation of the accelerated deadlines (Lambert et al., 2017). Non-Timely filing notifications are found to be positively associated with audit fees due to increased audit effort and/or perceived audit risk (Changjiang et al., 2013); therefore it is important to control for late filings.

LFEE is the natural logarithm of prior year audit fees charged to the client-firm and is used as an additional control variable for firm size/risk for which there is an expected positive association with audit fees. Finally, *IndustryControls* are indicator variables used to control for client industry following the categories as defined in Frankel, Johnson, & Nelson (2002). Prior research suggests some industries are more difficult to audit than others (Hay et al., 2006; Simunic, 1980).

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[16] I also run regressions using NT-Notifications identified from the Audit Analytics Database instead of late-filing (as calculated by audit report lags). Results are consistent using either variable.

To execute the second part of this study, I estimate abnormal audit fees, or the residuals from the audit fee model, using the first two sample period/groups above. See Appendix 2 for summary of regression coefficients. Then, to investigate the relationship between abnormal audit fees due to time-pressure and audit quality I estimate the following logistic regression separately for time-pressure vs. no time-pressure firms over the years of regulatory implementation (12/15/2003-11/14/2005 for *IMP75 & IMPSOX;* 12/15/2006-12/14/2007 for *IMP60)*:

$$
\begin{aligned}
(3) RESTATE = {} & \alpha + \beta_1 \, LARGE + \beta_2 \, ABAFEENEG \\
& + \beta_3 \, LARGE * ABAFEENEG + \beta_4 RESANN + \beta_5 NEWFIN + \beta_6 NEGEQUITY \\
& + \beta_7 AGE + \beta_4 LFEE + \beta_5 \, ASSETS + \beta_6 \, CURRENTASSETS + \beta_7 \, BTM \\
& + \beta_8 \, INVREC + \beta_9 BUSSEG + \beta_{10} \, FOREIGN + \beta_{11} \, SPECIAL + \beta_{12} \, ACQ \\
& + \beta_{13} \, CURRENTRATIO + \beta_{14} \, LEV + \beta_{15} \, \Delta ROA + \beta_{16} \, LOSS \\
& + + \beta_{17} \, GCONCERN + \beta_{18} \, MW302/M404 + \beta_{19} BIG4 + \beta_{20} \, BUSY \\
& + \beta_{21} \, AUDITORCHG + + \beta_{22} \, ABSDA + \beta_{23} \, LATE + IndustryControls + \varepsilon
\end{aligned}
$$

RESTATE is an indicator variable equal to 1 if there is a subsequent restatement originating in the current year's 10-K, else 0. *LARGE* is an indicator variable equal to 1 for sample firms from the original fee regressions whose total assets were greater than the median total assets for the regression sample, else 0. *ABAFEENEG* is equal to -1 multiplied by estimated abnormal audit fees for the client-firm-year. This is the variable of interest, for which there is a predicted positive association with restatements, meaning that as abnormal audit fees decrease, there is an increased likelihood of a restatement originating in the current year's 10-K. *RESANN* is equal to 1 if a restatement for a prior reporting period was announced during the current year, else 0 (Boland et al., 2015). Firms with restatement announcements are more likely to have restatements in subsequent reporting years, thus there is an expected positive association with restatements of the

current year's 10-K. *NEWFIN* is equal to 1 if the client issued new long-term debt or equity which exceeded 20% of total assets for the period, else 0 (Boland et al., 2015). There is an expected positive association with new debt or equity issuances and restatements. *NEGEQUITY* is equal to 1 if the firm has negative equity (i.e. total liabilities are greater than total assets). There is an expected positive association with restatements (Yuping et al., 2017). *AGE* is equal to the natural logarithm of total years since the client-firm first became available on Compustat for which there is an expected negative association with restatements (Boland et al., 2015). The remaining control variables are the same as those used for the audit fee regression model and are summarized above.

Sample Selection:

Table 1 shows the sample derivation process and identifies each database used. Sample data is collected for fiscal years-ended 12/15/2002-12/14/2007. I start with the Audit Analytics – Audit Opinions database to obtain the audit report dates (signature dates), 10-K file dates and the auditor assigned to the engagement for each client-year observation. Using Audit Fees, I obtain total audit fees charged. Using SOX 302/404, I obtain any material weaknesses identified in management's report on disclosure controls or in the auditor's report on internal controls (for periods in which SOX 404 is applicable). Using Auditor Changes, I identify client-years in which there was a change in auditor. I use Compustat to obtain client-specific financial data and merge this data with the Audit Analytics dataset. I drop non-accelerated filers when analyzing the implementation of the 75-day deadline and SOX 404 and both non-accelerated and accelerated filers for the implementation of the 60-day deadline. I exclude foreign issuers as these firms were subject to different reporting regulations. Consistent with prior fee studies, I exclude financial companies (6000-6999). These companies have significantly different reporting formats which makes comparison of Compustat financial variables difficult. I exclude observations with missing

Segments information needed to determine total number of business segments. I drop observations with missing financial data needed to estimate discretionary accruals. I drop observations with missing prior or current year audit report dates used to determine time-pressure groups, as well as, missing variables from the regression model. I drop any duplicate fiscal year reports, as well as, any 10-KT transition reports. I drop observations where either the audit report or file lag falls outside the window 0-365 days. Finally, for the first regression I exclude any client-firms whose prior year audit report lag was greater than 90 days; these clients were already missing the old deadline. For the second regression I exclude any client-firms whose prior year audit report lag was greater than 75 days; these clients were already missing the 75-day deadline from the first acceleration. The final sample for the audit fee regressions consists of **4,927** unique client-years for the first acceleration period and **2,384** unique client-years for the second acceleration period. From here, I keep client-year observations from the years of implementation and merge the sample with the Restatements database found in Audit Analytics. I drop any observations whose prior year 10-K was restated as these firms may be more likely to restate in the current year. The final sample for the restatement regressions consists of **3,231** unique client-years for the implementation of the 75-day deadline and SOX 404 and **650** unique client-years for the implementation of the 60-day deadline.

TABLE 1
Sample Selection

	Implementation - 75 Days & SOX 404	Implementation - 60 Days
	12/15/2002-11/14/2005	11/15/2004-12/14/2007
	Client-Years	Client-Years
1. Merged Compustat and Audit Analytics data	17,432	16,587
2. Less: NAFs for "Imp - 75 Days & SOX 404"; NAFs & AFs for "Imp - 60 Days"	(8,188)	(11,795)
Foreign issuers	(219)	(184)
Financial companies (6000-6999)	(2,396)	(1,181)
Missing Segments data	(622)	(466)
Missing information to estimate discretionary accruals	(168)	(56)
Missing information to determine "Time-Pressure" groups	(383)	(80)
Missing variables from regression model	(359)	(260)
Obs. where audit report or file lag falls outside the window: 0-365 days	(22)	(8)
Obs. with 10-KT transition reports	(7)	-
Duplicate fiscal-year reports	(1)	-
Obs. where prior year audit report date was greater than 90 days for "Imp- 75 Days & SOX404" & 75 days for "Imp- 60 Days"	(140)	(176)
3. Final sample for Audit Fee Regressions	***4,927***	***2,381***
4. Less: Fiscal years other than implementation years of "IMP75 & IMPSOX"; "IMP60".	(1,579)	(1,574)
Obs. where prior year 10-K was restated.	*(43)*	(3)
Obs. dropped from logistic regression due to certain regressors predicting failure perfectly.	(74)	(154)
5. Final sample for Restatement Regressions	***3,231***	***650***

RESULTS & DISCUSSION

Diagram 4 shows audit fee trends over the period 12/15/2001-11/14/2005 for all accelerated filers and compares firms whose prior year audit report lag was between 75 and 90 days to firms whose prior year audit report lag was less than or equal to 75 days. Overall, there is a trend of increasing audit fees during the sample period, and average audit fees are the same for both groups prior to regulatory implementation. However, beginning in the first year of implementation of the 75-day deadline and extending into the first year of SOX 404 implementation, I find year-over-year decreases in the slope of firms whose prior year audit report lag was between 75 and 90 days. In contrast, looking at firms whose prior year audit report lag was less than or equal to 75 days, I document year-over-year increases in the slope during the

implementation periods. The result is lower average audit fees during the implementation periods, *IMP75 & IMPSOX,* by approximately $60,000 and $1.3 million respectively, for firms whose prior year audit report lags were between 75 and 90 days. This suggests the 75-day mark for audit reports is an important factor in the determination of audit fees beginning in the first year of regulatory implementation of the 75-day deadline.

Diagram 4:

Audit Fee Trends Based on Prior Year Audit Report Lag: All Accelerated Filers - First Acceleration (75-Day Deadline
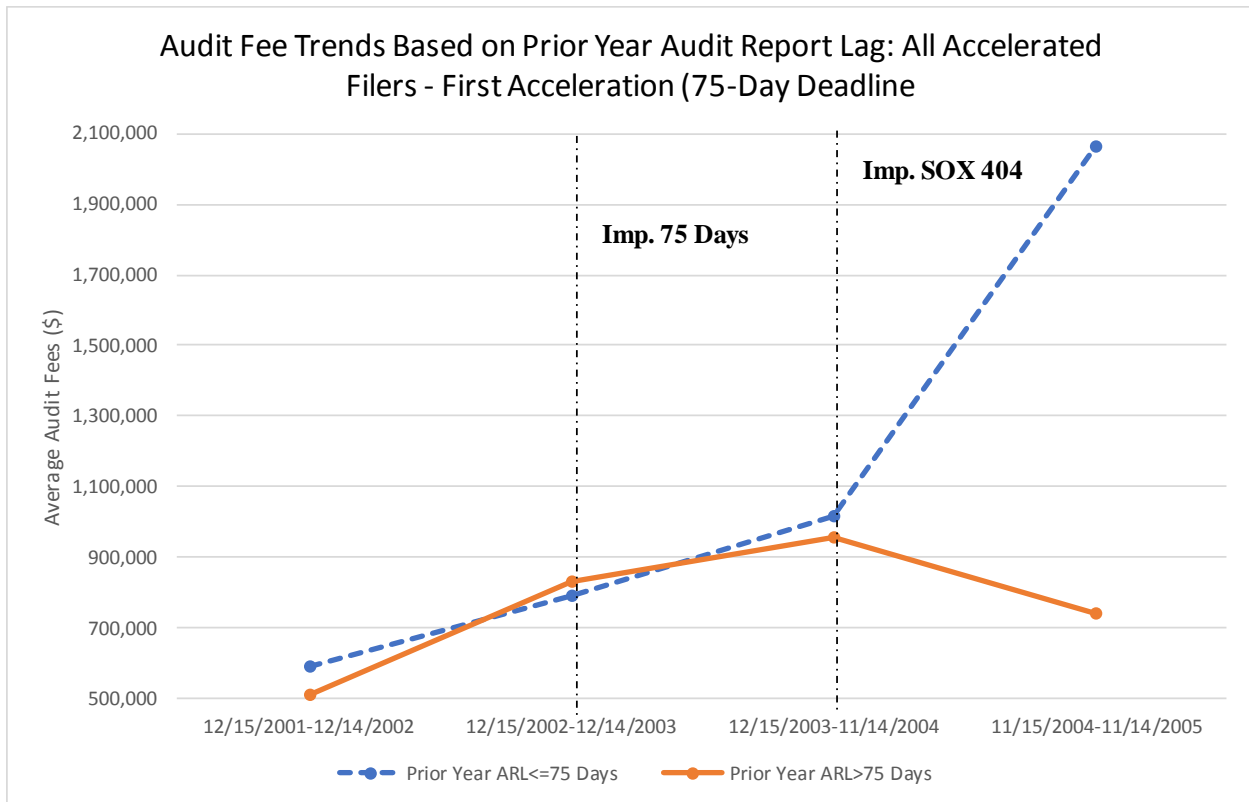
Diagram 5 shows audit fee trends over the period 12/15/2001-12/14/2007 for all large accelerated filers and compares firms whose prior year audit report lag was between 60 and 75 days, to firms whose prior year audit report lag was less than or equal to 60 days. Overall, there is a trend of increasing audit fees during the sample period, and average audit fees are the same for both groups prior to regulatory implementation. However, beginning in the year prior to the first year of implementation of the 60-day deadline and extending into the first year of implementation,

I document a decrease in average audit fees of firms whose prior year audit report lag was between 60 and 75 days. In contrast, fees continue to increase for firms whose prior year audit report lag was less than or equal to 60 days. The result is lower average audit fees during the early and implementation periods, *PREIMP60 & IMP60,* by approximately $1.3 million and $1.8 million respectively, for firms whose prior year audit report lags were between 60 and 75 days. This suggests the 60-day mark for audit reports is an important factor in the determination of audit fees around the time of regulatory implementation of the 60-day deadline.

Diagram 5:

Audit Fee Trends Based on Prior Year Audit Report Lag: Large Accelerated Filers - Second Acceleration (60-Day Deadline)
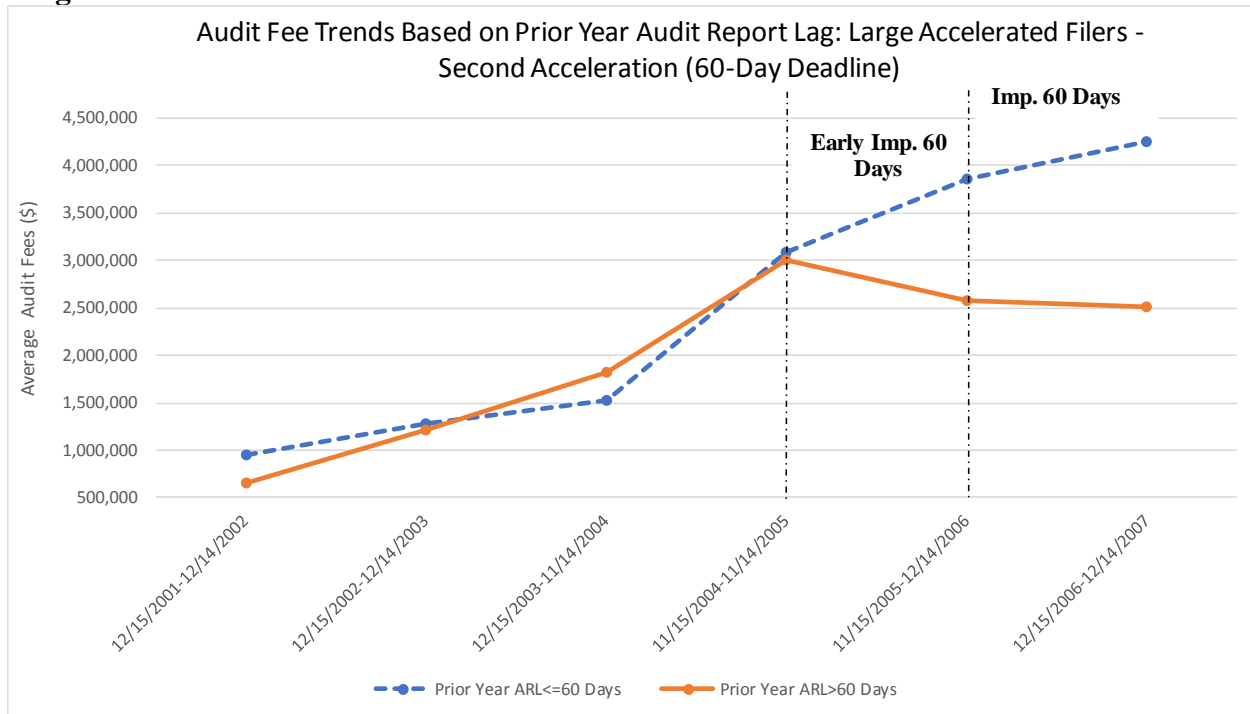
Tables 2-3 report the descriptive statistics for time-pressure vs. no time-pressure engagements. Looking at **Table 2**, during the sample period 12/15/2002-12/14/2007, time-pressure clients have lower average total assets and lower return on assets than no time-pressure clients. Time-pressure clients are also younger in age and have a higher percentage of new debt/equity issuances. These clients also have a greater percentage of loss years, receive more

going concern opinions, and report more material control weaknesses on average than no time-pressure clients. A lower percentage of time-pressure clients use Big 4 auditors compared to no pressure clients. Finally, time-pressure clients have a higher incidence of late filing, report higher levels of absolute discretionary accruals, and have a greater percentage of restatements over the sample period. **Table 3** summarizes the estimated abnormal audit fees (or the residuals from the audit fee model) of time-pressure vs. no time-pressure engagements during the years of regulatory implementation (*IMP75, IMPSOX & IMP60).* Overall, in the years of implementation, abnormal audit fees of time-pressure engagements are negative and lower than no time-pressure engagements. Abnormal audit fees are the lowest for large time-pressure firms (total assets greater than the sample median) in the first year of implementation of both the 75-day and 60-day deadline (*IMP75 & IMP60*). Abnormal audit fees are the lowest for small time-pressure firms (total assets less than the sample median) in the first year of SOX 404 implementation.

TABLE 2
Descriptive Statistics

Panel A: Continuous Variables

	Implementation of First Acceleration to 75 Days & SOX 404 All Accelerated Filers Sample Period: 12/15/2002-11/14/2005				**Implementation of Second Acceleration to 60 Days** Large Accelerated Filers Only Sample Period: 11/15/2004-12/14/2007			
Variable Mean (Standard Deviation)	**Overall**	**Time Pressure**	**No Time Pressure**	**P-Values for Dif in Means**	**Overall**	**Time Pressure**	**No Time Pressure**	**P-Values for Dif in Means**
FEE	13.165	13.055	13.184	0.0143	14.383	14.241	14.631	0.0000
	(1.322)	(1.328)	(1.320)		(1.079)	(1.036)	(1.107)	
LFEE	12.752	12.656	12.769	0.0196	14.095	13.908	14.421	0.0000
	(1.210)	(1.210)	(1.210)		(1.139)	(1.073)	(1.177)	
ASSETS	6.084	5.542	6.180	0.0000	7.409	7.102	7.944	0.0000
	(1.815)	(1.889)	(1.785)		(1.554)	(1.435)	(1.609)	
CURRENTASSETS	0.500	0.503	0.500	0.7172	0.440	0.451	0.421	0.0019
	(0.245)	(0.243)	(0.245)		(0.224)	(0.229)	(0.215)	
BTM	0.494	0.441	0.503	0.0006	0.370	0.377	0.358	0.0423
	(0.452)	(0.541)	(0.433)		(0.226)	(0.235)	(0.207)	
INVREC	0.232	0.228	0.233	0.4601	0.228	0.223	0.237	0.0275
	(0.170)	(0.176)	(0.169)		(0.154)	(0.153)	(0.155)	
BUSSEG	2.233	2.188	2.241	0.3875	2.693	2.532	2.972	0.0000
	(1.532)	(1.460)	(1.544)		(1.694)	(1.646)	(1.740)	
CURRENTRATIO	3.069	2.951	3.090	0.2353	2.433	2.577	2.183	0.0000
	(2.923)	(3.009)	(2.908)		(1.938)	(1.999)	(1.802)	
LEV	0.475	0.512	0.468	0.0000	0.520	0.503	0.548	0.0000
	(0.260)	(0.302)	(0.252)		(0.228)	(0.237)	(0.207)	
ROA	-0.039	-0.114	-0.026	0.0000	0.041	0.030	0.061	0.0000
	(0.243)	(0.332)	(0.222)		(0.120)	(0.131)	(0.095)	
ABSDA	1.326	1.612	1.275	0.0055	0.895	0.952	0.796	0.0936
	(3.027)	(3.360)	(2.963)		(2.187)	(2.284)	(2.004)	
AGE	2.622	2.459	2.650	0.0000	2.922	2.801	3.133	0.0000
	(0.782)	(0.709)	(0.791)		(0.791)	(0.755)	(0.808)	
Observations	4927	735	4192		2381	1512	869	

Panel B: Indicator Variables

Rate of Occurrence	**Overall**	**Time Pressure**	**No Time Pressure**		**Overall**	**Time Pressure**	**No Time Pressure**
FOREIGN	0.219	0.211	0.220		0.305	0.317	0.284
SPECIAL	0.250	0.287	0.244		0.260	0.251	0.275
ACQ	0.402	0.366	0.408		0.522	0.519	0.528
LOSS	0.339	0.441	0.321		0.145	0.173	0.097
GCONCERN	0.021	0.071	0.012		0.007	0.009	0.003
MW302/MW404	0.130	0.168	0.124		0.058	0.082	0.016
BIG4	0.909	0.852	0.919		0.948	0.937	0.967
BUSY	0.728	0.731	0.727		0.771	0.765	0.781
AUDITORCHG	0.101	0.131	0.096		0.054	0.056	0.052
LATE	0.151	0.312	0.123		0.127	0.175	0.043
RESTATE	0.080	0.101	0.076		0.055	0.065	0.036
RESANN	0.059	0.094	0.053		0.071	0.089	0.039
NEWFIN	0.278	0.343	0.267		0.243	0.261	0.211
NEGEQUITY	0.031	0.057	0.027		0.026	0.026	0.026

See Appendix 1 for variable definitions.

Continuous variables are winsorized at the 1st and 99th percentiles.

Observations include both accelerated and large accelerated filers.

TABLE 3
Descriptive Statistics
Abnormal Audit Fee Trends

Implementation of First Acceleration to 75 Days & SOX 404				Implementation of Second Acceleration to 60 Days			
All Accelerated Filers				Large Accelerated Filers Only			
Sample Period: 12/15/2002-11/14/2005				Sample Period: 11/15/2004-12/14/2007			
Variable: *ABAFEE*				Variable: *ABAFEE*			

Variable Mean (Standard Deviation)	Overall	Time Pressure	No Time Pressure	P-Values for Dif in Means	Variable Mean (Standard Deviation)	Overall	Time Pressure	No Time Pressure	P-Values for Dif in Means
Pre-Imp 75 Days	0.013	0.114	-0.006	0.0045	Imp SOX	0.008	0.028	-0.043	0.0223
12/15/2002-12/14/2003	(0.609)	(0.667)	(0.597)		11/15/2004-11/14/2005	(0.393)	(0.413)	(0.333)	
Imp 75 Days	-0.003	-0.064	0.006	0.0376	Pre-Imp 60 Days	0.007	0.001	0.017	0.5200
12/15/2003-11/14/2004	(0.471)	(0.504)	(0.465)		11/15/2005-12/14/2006	(0.347)	(0.370)	(0.311)	
Imp SOX	0.003	-0.054	0.014	0.0415	Imp 60 Days	-0.002	-0.013	0.015	0.1982
11/15/2004-11/14/2005	(0.500)	(0.586)	(0.482)		12/15/2006-12/14/2007	(0.307)	(0.343)	(0.245)	
ASSETS > 50th Pctl					*ASSETS > 50th Pctl*				
Pre-Imp 75 Days	-0.000	0.148	-0.019	0.0202	Imp SOX	-0.029	0.007	-0.090	0.0044
12/15/2002-12/14/2003	(0.625)	(0.699)	(0.613)		11/15/2004-11/14/2005	(0.316)	(0.326)	(0.291)	
Imp 75 Days	-0.021	-0.126	-0.010	0.0282	Pre-Imp 60 Days	0.005	-0.014	0.024	0.2504
12/15/2003-11/14/2004	(0.462)	(0.442)	(0.463)		11/15/2005-12/14/2006	(0.320)	(0.310)	(0.329)	
Imp SOX	0.018	-0.023	0.023	0.3247	Imp 60 Days	0.001	-0.022	0.024	0.0882
11/15/2004-11/14/2005	(0.427)	(0.516)	(0.414)		12/15/2006-12/14/2007	(0.282)	(0.309)	(0.250)	
ASSETS < 50th Pctl					*ASSETS < 50th Pctl*				
Pre-Imp 75 Days	0.024	0.096	0.007	0.2503	Imp SOX	0.041	0.042	0.035	0.8956
12/15/2002-12/14/2003	(0.595)	(0.651)	(0.580)		11/15/2004-11/14/2005	(0.447)	(0.461)	(0.383)	
Imp 75 Days	0.015	-0.027	0.024	0.4166	Pre-Imp 60 Days	0.009	0.011	0.006	0.9049
12/15/2003-11/14/2004	(0.479)	(0.535)	(0.467)		11/15/2005-12/14/2006	(0.373)	(0.408)	(0.280)	
Imp SOX	-0.012	-0.072	0.004	0.1251	Imp 60 Days	-0.005	-0.006	-0.003	0.9292
11/15/2004-11/14/2005	(0.569)	(0.622)	(0.553)		12/15/2006-12/14/2007	(0.334)	(0.369)	(0.235)	

Table 4 summarizes the regression results for the main two audit fee regressions.
Looking at regression (1), "Implementation of the First Acceleration to 75 Days & SOX 404 for
All Accelerated Filers," the coefficients on the interaction terms *TIMEPRESSURE*IMP75* and
*TIMEPRESSURE*IMPSOX* are negative and significant with p-values less than 1%, indicating
audit fees for time-pressure engagements during these two periods were significantly lower than
those for no pressure engagements. Looking at regression (2), "Implementation of the Second
Acceleration to 60 Days for Large Accelerated Filers," the coefficient on the interaction term
*TIMEPRESSURE*IMP60* is negative and significant with a p-value less than 5%, indicating
audit fees for time-pressure engagements during the second acceleration period were again
significantly lower than those for no pressure engagements.

Table 5 summarizes the audit fee regression results after splitting each sample by median total assets. Looking at regressions (3) & (4), the coefficients on the interaction terms *TIMEPRESSURE*IMP75* and *TIMEPRESSURE*IMP60* are significantly lower for large time-pressure firms compared to the coefficients for small time-pressure firms, indicating a possible client-size effect. The coefficient on the interaction term *TIMEPRESSURE*IMPSOX* is also lower for large time-pressure firms compared to small time-pressure firms, although the difference is not significant.

Findings from the fee regressions suggest time pressure on the audit has a negative effect on total audit fees billed. This result is counterintuitive given the expected increase in auditor efforts, and thus cost of audit services to get the work done sooner. Given that audit fees are determined by the amount of audit effort (i.e. total hours billed) and/or perceived audit risk (Simunic, 1980), this result may be indicative of constrained audit resources and possibly lower audit effort for time-pressure engagements during the implementation years. Furthermore, the finding of a stronger result for larger time-pressure clients suggests that large-client bargaining powers are at play to keep fees low despite the time pressures to accelerate reporting. Given these findings, it is important to understand the quality implications, if any, of the lower fees.

TABLE 4
Audit Fee Regression Results:

| Dependent Variable: FEE | Predicted Sign | (1) Implementation of First Acceleration to 75 Days & SOX 404 for All Accelerated Filers | | (2) Implementation of Second Acceleration to 60 Days for Large Accelerated Filers | |
| | | Time Pressure All Accel vs. No Time Pressure All Accel | | Time Pressure Large Accel vs. No Time Pressure Large Accel | |
Independent Variables	**Predicted Sign**	**Coeff.**	**(t-stat)**	**Coeff.**	**(t-stat)**
IMP75	+	0.158***	(6.71)		
IMPSOX	+	0.663***	(27.02)		
PREIMP60	-			-0.415***	(-10.90)
IMP60	-			-0.369***	(-11.43)
TIMEPRESSURE	?	0.245***	(4.74)	0.102***	(3.32)
TIMEPRESSURE*IMP75	+	**-0.221*** **	**(-3.17)**		
TIMEPRESSURE*IMPSOX	+	**-0.229*** **	**(-3.55)**		
TIMEPRESSURE*PREIMP60	?			**-0.077***	**(-1.89)**
TIMEPRESSURE*IMP60	+			**-0.091** **	**(-2.35)**
LFEE	+	0.486***	(24.83)	0.669***	(23.05)
ASSETS	+	0.288***	(22.46)	0.173***	(9.93)
CURRENTASSETS	+	0.339***	(5.65)	-0.048	(-0.97)
BTM	-	-0.056**	(-2.43)	0.073	(0.85)
INVREC	+	0.164**	(2.14)	0.221*	(1.91)
BUSSEG	+	0.028***	(4.73)	0.015**	(2.44)
FOREIGN	+	0.076***	(3.74)	0.079***	(3.91)
SPECIAL	+	0.002	(0.09)	-0.011	(-0.51)
ACQ	+	0.087***	(4.63)	0.077***	(3.86)
CURRENTRATIO	-	-0.024***	(-6.46)	-0.012	(-1.52)
LEV	+	0.064	(1.44)	0.057	(0.97)
ROA	-	-0.177***	(-3.22)	-0.117	(-0.94)
LOSS	-	0.070***	(2.79)	0.020	(0.48)
GCONCERN	+	-0.018	(-0.25)	-0.024	(-0.27)
MW302/MW404	+	0.242***	(5.47)	0.123**	(2.19)
BIG4	+	0.273***	(6.95)	0.040	(0.62)
BUSY	+	-0.033*	(-1.87)	-0.032	(-1.47)
AUDITORCHG	-	-0.734***	(-12.92)	-0.563***	(-5.54)
ABSDA	?	0.002	(0.75)	0.003	(0.49)
LATE	+	0.006	(0.18)	0.050	(1.12)
CONSTANT	?	3.876***	(9.50)	3.721***	(12.88)
Observations		4927		2381	
Adjusted R-squared		0.809		0.850	
Industry Controls Included		Yes		Yes	
Sample Period:		12/15/2002-12/14/2005		11/15/2004-12/14/2007	

See Appendix 1 for variable definitions.
* p<0.10, ** p<0.05, *** p<0.01
Dependent variable FEE is equal to the natural logarithm of audit fees reported for the fiscal year audit. For each regression, all continuous independent variables are winsorized at the 1st and 99th percentiles. T-statistics reflect two-tailed significance and are calculated using heteroscedasticity-robust standard errors and firm-level clustering.

TABLE 5
Audit Fee Regression Results:

		(3) Implementation of First Acceleration to 75 Days & SOX 404 for All Accelerated Filers				(4) Implementation of Second Acceleration to 60 Days for Large Accelerated Filers			
Dependent Variable: FEE		Time Pressure All Accel vs. No Time Pressure All Accel				Time Pressure Large Accel vs. No Time Pressure Large Accel			
		ASSETS>50th Pctl		ASSETS<50th Pctl		ASSETS>50th Pctl		ASSETS<50th Pctl	
Independent Variables	**Predicted Sign**	**Coeff.**	**(t-stat)**	**Coeff.**	**(t-stat)**	**Coeff.**	**(t-stat)**	**Coeff.**	**(t-stat)**
IMP75	+	0.177***	(5.68)	0.157***	(4.53)				
IMPSOX	+	0.704***	(21.50)	0.650***	(17.55)				
PREIMP60	-					-0.393***	(-8.05)	-0.456***	(-7.54)
IMP60	-					-0.321***	(-8.03)	-0.429***	(-7.25)
TIMEPRESSURE	?	0.276***	(3.31)	0.224***	(3.43)	0.137***	(3.65)	0.054	(1.00)
TIMEPRESSURE*IMP75	+	**-0.300***	**(-2.96)**	**-0.160***	**(-1.73)**				
TIMEPRESSURE*IMPSOX	+	**-0.243****	**(-2.34)**	**-0.198****	**(-2.37)**				
TIMEPRESSURE*PREIMP60	?					**-0.085***	**(-1.71)**	**-0.025**	**(-0.38)**
TIMEPRESSURE*IMP60	+					**-0.139***	**(-2.69)**	**0.005**	**(0.08)**
LFEE	+	0.458***	(15.07)	0.474***	(18.05)	0.681***	(16.94)	0.624***	(14.73)
ASSETS	+	0.340***	(14.79)	0.250***	(12.27)	0.213***	(7.31)	0.171***	(5.82)
CURRENTASSETS	+	0.375***	(3.22)	0.237***	(3.27)	-0.069	(-1.03)	0.023	(0.29)
BTM	-	0.019	(0.59)	-0.096***	(-2.91)	-0.266*	(-1.75)	0.144	(1.55)
INVREC	+	0.295**	(2.19)	0.180*	(1.83)	0.690***	(3.12)	0.052	(0.41)
BUSSEG	+	0.033***	(4.42)	0.008	(0.77)	0.025***	(2.86)	-0.006	(-0.54)
FOREIGN	+	0.105***	(3.99)	0.055*	(1.72)	0.093***	(3.16)	0.088***	(3.11)
SPECIAL	+	-0.020	(-0.71)	0.011	(0.32)	-0.019	(-0.72)	-0.009	(-0.23)
ACQ	+	0.117***	(4.94)	0.062**	(2.03)	0.102***	(4.41)	0.056*	(1.84)
CURRENTRATIO	-	-0.034***	(-4.31)	-0.019***	(-4.59)	0.029*	(1.88)	-0.020**	(-2.16)
LEV	+	0.143**	(2.12)	0.046	(0.75)	0.106	(1.18)	0.119	(1.47)
ROA	-	-0.189*	(-1.68)	-0.107	(-1.59)	-0.511*	(-1.94)	0.084	(0.57)
LOSS	-	0.033	(0.88)	0.103***	(3.04)	-0.016	(-0.27)	0.050	(0.84)
GCONCERN	+	-0.069	(-0.50)	0.005	(0.06)	-0.200***	(-3.36)	0.236	(1.31)
MW302/MW404	+	0.202***	(2.96)	0.252***	(4.49)	0.062	(0.83)	0.145**	(2.01)
BIG4	+	0.296**	(2.48)	0.303***	(7.00)	0.077	(1.13)	0.045	(0.66)
BUSY	+	-0.018	(-0.72)	-0.047*	(-1.84)	-0.012	(-0.39)	-0.059*	(-1.90)
AUDITORCHG	-	-0.717***	(-7.83)	-0.746***	(-10.48)	-0.276**	(-2.22)	-0.786***	(-5.49)
ABSDA	?	-0.001	(-0.23)	0.002	(0.57)	0.013*	(1.81)	-0.001	(-0.20)
LATE	+	0.163***	(2.85)	-0.068*	(-1.80)	0.152**	(2.06)	0.016	(0.30)
CONSTANT	?	3.958***	(12.69)	4.045***	(6.62)	2.984***	(8.57)	4.288***	(10.24)
Observations		2463		2464		1190		1191	
Adjusted R-squared		0.772		0.647		0.847		0.688	
Industry Controls Included		Yes		Yes		Yes		Yes	
Sample Period:		12/15/2002-12/14/2005		12/15/2002-12/14/2005		11/15/2004-12/14/2007		11/15/2004-12/14/2007	

See Appendix 1 for variable definitions.

* p<0.10, ** p<0.05, *** p<0.01

Dependent variable FEE is equal to the natural logarithm of audit fees reported for the fiscal year audit. For each regression, all continuous independent variables are winsorized at the 1st and 99th percentiles. T-statistics reflect two-tailed significance and are calculated using heteroscedasticity-robust standard errors and firm-level clustering.

Table 6 summarizes the restatement regression results of time-pressure vs. no time-pressure engagements during the implementation periods (*IMP75* & *IMPSOX*; *IMP60*). The variables of interest are *ABAFEENEG* (or -1 multiplied by abnormal audit fees) and the interaction term of abnormal audit fees on large clients *LARGE*ABAFEENEG*. If quality is impaired, we should expect a positive coefficient on *ABAFEENEG* of time-pressure engagements indicating that as abnormal audit fees decrease, the likelihood of a restatement increases. Looking at regression (5), which summarizes the results for the first year of implementation of the 75-day deadline and SOX 404, the coefficient on *ABAFEENEG* of time pressure engagements is negative, but not significant. When interacting *ABAFEENEG* with *LARGE* in the second equation, however, the coefficient is positive and significant with a p-value less than 1%, while the coefficient on *ABAFEENEG* alone is negative and significant with a p-value less than 5%. This indicates lower abnormal audit fees are negatively associated with the likelihood of restatement for small time-pressure firms, whereas lower abnormal audit fees are positively associated with the likelihood of restatement for large time-pressure firms. The overall coefficient for *ABAFEENEG* of small time-pressure firms is -1.078, while the overall coefficient for *ABAFEENEG* of large time-pressure firms is equal to 0.972[17]. Taking the exponent of these values gives us the odds ratios for *ABAFEENEG* of 0.34 for small time-pressure firms and 2.59 for large time-pressure firms. This means as abnormal audit fees decrease for small (large) time-pressure firms, the likelihood of restatement decreases (increases) by a factor of 0.34 (2.59). Meanwhile, looking at the regressions for no time-pressure engagements, coefficients on *ABAFEENEG* are not significant. This indicates a possible unintended consequence of lower fees is lower audit quality for large time-pressure engagements.

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[17] Or the sum of the coefficient on *ABAFEENEG* (-1.078) plus the coefficient on *LARGE*ABAFEENEG* (2.050).

Looking at regression (6), which summarizes the results for the first year of implementation of the 60-day deadline for large accelerated filers, the coefficient on *ABAFEENEG* of time-pressure engagements is positive and significant with a p-value less than 10%. There is no significant difference when interacting *LARGE* with *ABAFEENEG* of time-pressure engagements. In contrast, when looking at no time-pressure engagements, the coefficient on *ABAFEENEG* is negative and significant with a p-value less than 1%. This indicates lower abnormal audit fees are negatively associated with the likelihood of restatement for no time-pressure firms, which is a possible indication of increased audit efficiencies and maintained audit quality during the post-SOX period. In contrast, time-pressure firms do not share in these increased efficiencies, and lower abnormal audit fees come at the expense of lower audit quality. The overall coefficient for *ABAFEENEG* of time-pressure firms is 1.251, while the overall coefficient for *ABAFEENEG* of no time-pressure firms is equal to -10.393. Taking the exponent of these values gives us the odds ratios for *ABAFEENEG* of 3.49 for time-pressure firms and 0.00003 for no time-pressure firms. This means as abnormal audit fees decrease for time-pressure firms, the likelihood of restatement increases by a factor of 3.49, while the likelihood of restatement stays relatively the same for no time-pressure firms.

TABLE 6

Restatement Regression Results: Abnormal Audit Fees & Restatements

		(5) Implementation of First Acceleration to 75 Days & SOX 404 for All Accelerated Filers								(6) Implementation of Second Acceleration to 60 Days for Large Accelerated Filers							
		Time Pressure Engagements				No Time Pressure Engagements				Time Pressure Engagements				No Time Pressure Engagements			
Dependent Variable: RESTATE	Predicted Sign	Coeff.	(z-stat)	Coeff.	(z-stat)	Coeff.	(z-stat)	Coeff.	(z-stat)	Coeff.	(z-stat)	Coeff.	(z-stat)	Coeff.	(z-stat)	Coeff.	(z-stat)
Independent Variables																	
LARGE	?	-0.005	(-0.01)	-0.075	(-0.12)	-0.074	(-0.28)	-0.082	(-0.31)	-0.384	(-0.46)	-0.381	(-0.46)	1.480	(0.74)	1.952	(0.71)
ABAFEENEG	+	-0.562	(-1.38)	-1.078**	(-2.14)	0.155	(0.94)	0.040	(0.18)	1.251*	(1.72)	1.309	(1.48)	-10.393***	(-2.71)	-6.708*	(-1.80)
LARGE*ABAFEENEG	+			2.050***	(2.90)			0.271	(0.85)			-0.246	(-0.13)			-4.635	(-1.13)
RESANN	+	1.229**	(2.10)	1.252**	(2.34)	1.496***	(6.25)	1.504***	(6.27)	0.740	(1.01)	0.725	(0.91)	4.617***	(2.73)	4.478***	(2.70)
NEWFIN	+	0.570	(1.24)	0.623	(1.31)	0.366**	(2.00)	0.362**	(1.99)	1.044*	(1.74)	1.054*	(1.73)	-2.098	(-1.28)	-1.473	(-0.88)
NEGEQUITY	+	1.280	(1.00)	1.427	(1.12)	-0.514	(-0.80)	-0.521	(-0.82)	0.000	(.)	0.000	(.)	-1.566	(-0.35)	-1.395	(-0.33)
AGE	-	-0.063	(-0.18)	-0.027	(-0.08)	0.130	(0.96)	0.130	(0.96)	-0.734*	(-1.71)	-0.727	(-1.63)	-1.043	(-1.41)	-1.097	(-1.52)
LFEE	+	0.041	(0.15)	0.111	(0.38)	0.035	(0.31)	0.038	(0.33)	0.003	(0.01)	0.002	(0.00)	-1.950***	(-2.97)	-1.716**	(-2.38)
ASSETS	+	-0.100	(-0.37)	-0.173	(-0.61)	-0.159	(-1.45)	-0.156	(-1.42)	-0.581	(-1.21)	-0.582	(-1.22)	-0.931	(-0.42)	-1.253	(-0.50)
CURRENTASSETS	+	2.110	(1.57)	1.821	(1.32)	0.782	(1.27)	0.776	(1.26)	-3.341	(-1.64)	-3.327	(-1.62)	-14.345*	(-1.88)	-11.961*	(-1.80)
BTM	+	1.359*	(1.82)	1.438*	(1.93)	-0.023	(-0.08)	-0.015	(-0.05)	0.478	(0.37)	0.490	(0.38)	-4.055	(-1.37)	-3.263	(-0.90)
INVREC	+	-3.815**	(-2.56)	-3.888***	(-2.55)	-1.598***	(-1.98)	-1.572*	(-1.94)	3.581	(0.95)	3.587	(0.95)	30.783***	(3.67)	28.498***	(3.11)
BUSSEG	+	0.099	(0.60)	0.107	(0.68)	0.120**	(2.08)	0.119**	(2.08)	0.331*	(1.81)	0.330*	(1.80)	0.442	(0.97)	0.367	(0.81)
FOREIGN	+	0.801*	(1.67)	0.815*	(1.72)	0.006	(0.03)	-0.001	(-0.00)	-0.366	(-0.72)	-0.362	(-0.69)	-0.815	(-0.60)	-0.129	(-0.82)
SPECIAL	+	0.125	(0.26)	0.186	(0.39)	0.418**	(2.10)	0.424**	(2.14)	0.306	(0.52)	0.304	(0.52)	1.445	(1.19)	1.590	(1.31)
ACQ	+	0.379	(0.76)	0.350	(0.73)	0.263	(1.51)	0.266	(1.54)	0.408	(0.55)	0.410	(0.56)	2.332	(0.99)	2.241	(0.83)
CURRENTRATIO	-	-0.171	(-1.38)	-0.162	(-1.21)	-0.102**	(-2.02)	-0.101**	(-2.02)	-0.219	(-1.17)	-0.220	(-1.16)	0.957**	(2.14)	0.859**	(2.07)
LEV	+	0.034	(0.03)	0.118	(0.09)	0.016	(0.03)	0.031	(0.06)	1.501	(0.90)	1.495	(0.90)	10.638	(1.22)	10.409	(1.25)
ROA	-	0.391	(0.30)	0.465	(0.34)	1.045	(1.64)	1.027	(1.62)	-1.513	(-0.43)	-1.512	(-0.44)	-16.066**	(-2.24)	-15.001**	(-2.38)
LOSS	-	-0.298	(-0.50)	-0.368	(-0.63)	1.015***	(4.51)	1.008***	(4.48)	1.067	(1.03)	1.068	(1.04)	-1.842	(-0.87)	-2.838	(-1.58)
GCONCERN	+	0.172	(0.19)	0.287	(0.30)	0.190	(0.27)	0.186	(0.26)	0.000	(.)	0.000	(.)	0.000	(.)	0.000	(.)
MW302/MW404	+	0.149	(0.26)	0.181	(0.31)	0.614**	(2.34)	0.612**	(2.34)	1.067	(1.46)	1.061	(1.46)	0.000	(.)	0.000	(.)
BIG4	+	-1.029*	(-1.67)	-0.961	(-1.52)	0.302	(0.98)	0.299	(0.98)	0.596	(0.68)	0.584	(0.67)	0.357	(0.09)	0.361	(0.09)
BUSY	+	0.249	(0.49)	0.324	(0.63)	-0.017	(-0.09)	-0.015	(-0.08)	2.391***	(2.86)	2.386***	(2.87)	-0.257	(-0.32)	-0.218	(-0.25)
AUDITORCHG	?	-1.514*	(-1.68)	-1.549*	(-1.67)	0.459	(1.33)	0.451	(1.30)	-0.370	(-0.34)	-0.386	(-0.36)	0.000	(.)	0.000	(.)
ABSDA	+	-0.014	(-0.23)	-0.024	(-0.34)	0.014	(0.54)	0.015	(0.56)	0.296	(1.12)	0.293	(1.09)	-4.702*	(-1.88)	-4.315*	(-1.92)
LATE	+	0.510	(1.04)	0.592	(1.22)	0.387*	(1.91)	0.396*	(1.95)	0.313	(0.53)	0.303	(0.50)	2.633**	(2.22)	1.893*	(1.67)
CONSTANT	?	-0.632	(-0.18)	-1.374	(-0.38)	-4.611***	(-2.95)	-4.665***	(-2.99)	-0.220	(-0.03)	-0.200	(-0.03)	21.993**	(2.37)	21.558**	(2.10)
Observations		417		417		2814		2814		379		379		271		271	
Pseudo-R-squared		0.1445		0.1647		0.1029		0.1033		0.3077		0.3078		0.5499		0.5589	
Wald p-value		0.0088		0.0088		0.0000		0.0000		0.0000		0.0000		0.0000		0.0000	
Industry Controls Included		YES		YES		YES		YES		YES		YES		YES		YES	
Year Controls Included		YES		YES		YES		YES		N/A		N/A		N/A		N/A	
Sample Period		12/15/2003-11/15/2005				12/15/2003-11/15/2005				12/15/2006-12/14/2007				12/15/2006-12/14/2007			

See Appendix 1 for variable definitions.

* p<0.10, ** p<0.05, *** p<0.01

Dependent variable RESTATE is equal to 1 if there is a restatement originating in the current year's 10-K (Boland et al. 2015). For each regression, all continuous variables are winsorized at the 1st and 99th percentiles. Z-statistics reflect two-tailed significance and are calculated using heteroscedasticity-robust standard errors.

CONCLUSION

Results provide evidence that client engagements under time pressure to reduce their audit report lags are associated with significantly lower audit fees in the years of regulatory implementation when compared to no pressure engagements. The effect is most pronounced for larger client firms. Finally, in the years of regulatory implementation, lower abnormal audit fees are associated with reduced audit quality for time-pressure engagements. Results suggest audit efforts to accelerate reporting may have fallen short due to time and resource constraints. Furthermore, given the stronger result for large firms, it is possible that large client bargaining powers were at play. Negotiations to keep fees low may have worked to the detriment of regulator's goals to maintain audit quality. Results of this study may be of interest to both academics and regulators concerned with the unintended consequences of accelerating reporting deadlines. One setback of this study is the small sample size of restatements. This study can be extended by looking at other measure of audit quality.

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Appendices:

APPENDIX 1
Regression Variable Definitions

Variable	Description
FEE	Natural logarithm of total audit fees charged to client firm in the current year.
TIMEPRESSURE	Client firm whose audit report lag was greater than 75 (60) days in the year prior to the first year of mandatory acceleration of the 75-day (60-day) deadline for all accelerated filers (large accelerated filers).
IMP75	First year of implementation of the 75-day deadline for all accelerated filers (fiscal years-ended 12/15/2003-11/14/2004).
IMPSOX	First year of implementation of SOX 404 for all accelerated filers (fiscal years-ended 11/15/2004-11/14/2005).
PREIMP60	Year prior to implementation of the 60-day deadline for large accelerated filers (fiscal years-ended 11/15/2005-12/14/2006).
IMP60	First year of implementation of the 60-day deadline for large accelerated filers (fiscal years-ended 12/15/2006-12/14/2007).
LFEE	Natural logarithm of total audit fees charged to client firm in the prior year.
ASSETS	Natural logarithm of total client assets.
CURRENTASSETS	Client's current ratio (total current assets divided by total assets).
BTM	Book-to-market ratio (total book value of common equity divided by total market value of common equity).
INVREC	Sum of client's inventory plus receivables divided by total assets.
BUSSEG	Number of client's business segments.
FOREIGN	1 if the client has foreign sales, else 0.
SPECIAL	1 if the client reported either an extraordinary item or discontinued operations, else 0.
ACQ	1 if the client reported an acquisition, else 0.
CURRENTRATIO	Client's current ratio (total current assets divided by total current liabilities).
LEV	Client's leverage (total liabilities divided by total assets).

Regression Variable Definitions (CT'D)

Variable	Description
ROA	Client's return on assets (net income divided by total assets).
LOSS	1 if the client reported a net loss for the current year, else 0.
GCONCERN	1 if the client's audit opinion includes a going concern qualification in the current year, else 0.
MW302/MW404	1 if the client's audit reports a SOX 302/404 material weakness in the current year, else 0.
BIG4	1 if the auditor is part of the Big 4 (Deloitte & Touche, Ernst & Young, KPMG or PricewaterhouseCoopers), else 0.
BUSY	1 if the client's fiscal year end is in December ("Busy-Season" audits), else 0.
AUDITORCHG	1 if there was a change in auditor, else 0.
ABSDA	Absolute value of client's discretionary accruals estimated using the Modified Jones Model.
LATE	1 if the client's 10-K was filed after the SEC deadline for the current year, else 0.
RESTATE	1 if there is a restatement originating in the current year's 10-K, else 0.
LARGE	1 if the client's total assets is greater than the median total assets of sample firms.
ABAFEE	Estimated abnormal audit fees (i.e. the residuals from the audit fee model).
ABAFEENEG	Equal to -1 multiplied by estimated abnormal audit fees (i.e. the residuals from the audit fee model).
RESANN	1 if the client announced a restatement in the current year.
NEWFIN	1 if the client issued new long-term debt or equity which exceeded 20% of total assets for the period, else 0.
NEGEQUITY	1 if the client has a negative equity balance (i.e. total liabilities are greater than total assets), else 0.
AGE	Client's age (natural logarithm of total years the client has been on the Compustat database).
IndustryControls	Indicator variables for client industry as defined in Frankel et al. (2002).

Audit Fee Regression Results for Estimation of Abnormal Audit Fees:

		(1)		(2)	
		Implementation of First Acceleration to 75 Days & SOX 404 for All Accelerated Filers		Implementation of Second Acceleration to 60 Days for Large Accelerated Filers	
Dependent Variable: FEE *Residuals: ABAFEE*		Time Pressure All Accel vs. No Time Pressure All Accel		Time Pressure Large Accel vs. No Time Pressure Large Accel	
Independent Variables	**Predicted Sign**	**Coeff.**	**(t-stat)**	**Coeff.**	**(t-stat)**
TIMEPRESSURE	?	0.245***	(4.74)	0.102***	(3.32)
LFEE	+	0.486***	(24.83)	0.669***	(23.05)
ASSETS	+	0.288***	(22.46)	0.173***	(9.93)
CURRENTASSETS	+	0.339***	(5.65)	-0.048	(-0.97)
BTM	-	-0.056**	(-2.43)	0.073	(0.85)
INVREC	+	0.164**	(2.14)	0.221*	(1.91)
BUSSEG	+	0.028***	(4.73)	0.015**	(2.44)
FOREIGN	+	0.076***	(3.74)	0.079***	(3.91)
SPECIAL	+	0.002	(0.09)	-0.011	(-0.51)
ACQ	+	0.087***	(4.63)	0.077***	(3.86)
CURRENTRATIO	-	-0.024***	(-6.46)	-0.012	(-1.52)
LEV	+	0.064	(1.44)	0.057	(0.97)
ROA	-	-0.177***	(-3.22)	-0.117	(-0.94)
LOSS	-	0.070***	(2.79)	0.020	(0.48)
GCONCERN	+	-0.018	(-0.25)	-0.024	(-0.27)
MW302/MW404	+	0.242***	(5.47)	0.123**	(2.19)
BIG4	+	0.273***	(6.95)	0.040	(0.62)
BUSY	+	-0.033*	(-1.87)	-0.032	(-1.47)
AUDITORCHG	-	-0.734***	(-12.92)	-0.563***	(-5.54)
ABSDA	?	0.002	(0.75)	0.003	(0.49)
LATE	+	0.006	(0.18)	0.050	(1.12)
CONSTANT	?	3.876***	(9.50)	3.721***	(12.88)
Observations		4927		2381	
Adjusted R-squared		0.809		0.850	
Industry Controls Included		Yes		Yes	
Year Controls Included		Yes		Yes	
Sample Period:		12/15/2002-12/14/2005		11/15/2004-12/14/2007	

See Appendix 1 for variable definitions.

* p<0.10, ** p<0.05, *** p<0.01

Dependent variable FEE is equal to the natural logarithm of audit fees reported for the fiscal year audit. The residuals estimated from the models reflect abnormal audit fees (ABAFEE) or the difference between the actual audit fees charged and the expected audit fee based on the estimated regression coefficients. For each regression, all continuous independent variables are winsorized at the 1st and 99th percentiles. T-statistics reflect two-tailed significance and are calculated using heteroscedasticity-robust standard errors and firm-level clustering.