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THE EFFECT OF AUDITING STANDARD NO. 5 ON AUDIT DELAY AND AUDIT FEES

By
Mark Washburn

A DISSERTATION

Submitted to
H. Wayne Huizenga School of Business and Entrepreneurship
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entitled

THE EFFECT OF AUDITING STANDARD No. 5 ON AUDIT DELAY AND AUDIT FEES

By

Mark Washburn

We hereby certify that this Dissertation submitted by Mark Washburn conforms to acceptable standards, and as such is fully adequate in scope and quality. It is therefore approved as the fulfillment of the Dissertation requirements for the Degree of Doctor of Business Administration.

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2016

CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and appropriate credit is given where I have used the language, ideas, expressions or writings of another.

Signed Mark Washburn

Mark Washburn

ABSTRACT

THE EFFECT OF AUDITING STANDARD No. 5 ON AUDIT DELAY AND AUDIT FEES

By

Mark Washburn

Formed under the provisions of the Sarbanes-Oxley Act of 2002, the Public Company Accounting Oversight Board (PCAOB) was charged with providing the interpretive guidance for auditors to use in carrying out their responsibilities under Sarbanes-Oxley Section 404. Auditing Standard No. 2 (AS2) provided the initial guidance to auditors beginning in 2004. Early research on audit delay and audit fees under these new requirements revealed significant increases in both. Although audit delay and audit fees decreased in subsequent years, they remained much higher than predicted. As a result of the concerns and complaints of the accounting profession and the public firms affected by AS2, the PCAOB rescinded AS2 and replaced it with Auditing Standard No. 5 (AS5) in 2007. The primary objective of the new guidance focuses the auditors' attention on the most important matters in the audit of internal controls over financial reporting and eliminating procedures that the Board believes are unnecessary to an effective audit of internal control. Intended to streamline the audit process, the goal of the PCAOB was to reduce audit delay and audit fees. Research in the AS5 era has produced mixed results for both. In this study, I extend the early AS5 research to determine if AS5 has had a significant impact on reducing both audit delay and audit fees. Using multiple regression analysis, I examine audit delay and audit fees from 2007 through 2013 to determine their long-term trend. Data sources include Audit Analytics, Compustat, and CRSP. Based on the literature review, I expect to find a decrease to both audit delay and audit fees over the long-term.

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In memory of my beloved mother, Betty M. Washburn, who inspired me to always be curious and pursue my dreams.

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CHAPTER I

INTRODUCTION

Background of Problem

In 2002, Congress enacted the Sarbanes-Oxley Act (SOX) in an effort to restore public confidence in U.S. financial markets by improving the timeliness and quality of financial reporting. The accounting failures associated with the collapse of Enron, Tyco, and Worldcom caused Congress to act in the best interests of the investing public. Congress charged the SEC with all enforcement activities associated with the new law.

The accuracy and timeliness of accounting information directly affect firms' securities prices. If financial information is less than credible, capital markets behave less efficiently. This results in poor allocation of investment capital further increases the rate of return demanded by investors.

The Sarbanes-Oxley Act contains multiple sections, but Section 404 has proven to be the most controversial. Section 404 requires publicly traded firms on U.S. financial markets to include their assessment of internal controls over financial reporting. Initially, the external auditors were required to provide an attestation to management's assessment of internal controls over financial reporting.

The Public Company Accounting Oversight Board (PCAOB), an agency created by Congress under a provision of SOX, was charged with establishing standards relating to public company audits and enforcing compliance with SOX. These standards provide the interpretive guidance to auditors in their efforts to implement the provisions of SOX Section 404. Initially, the PCAOB implemented Auditing Standard No. 2 (AS2) to provide the aforementioned interpretive guidance. Effective for audits performed beginning in 2004, SOX Section 404 proved to be costly and time-consuming to implement. Initial studies conducted in the AS2 era reveal significant increases to audit delay and audit fees (Ettredge, Li, & Son, 2006 and Grundfest & Bochner, 2007). Although audit delay and audit fees declined after the initial year under AS2 guidance, both remained unacceptably high (Ettredge, Li, & Son, 2006 and Grundfest & Bochner, 2007). Acting in response to the concerns and complaints of the accounting profession as well as the publicly traded firms affected by AS2, the PCAOB took swift action to these unintended consequences by replacing AS2 with Auditing Standard No. 5 (AS5) in 2007.

From its beginning, SOX generated substantial controversy, primarily centered on its compliance costs versus its perceived benefits. SOX contains eleven major titles, each with one or more sections, all aimed at regaining and restoring investor confidence. SOX Section 404, which requires publicly traded companies to include their assessment of internal controls over financial reporting as well as an attestation by the external audit firm, generates the most debate and controversy. Although the primary objectives of Section 404 of improving the accuracy and timeliness of financial disclosures appear simplistic, its implementation has been anything but simple. In response to lax attitudes and practices in the pre-SOX era, auditors and firms both applied overly aggressive interpretations to SOX 404 to ward off criticism of insufficient vigor. Initially, the Securities and Exchange Commission (SEC) implemented Section 404 requirements slowly in an attempt to reduce audit firms and reporting companies' struggle adapting to these new auditing and reporting standards. The SEC initially required qualifying companies to implement the reporting requirements within prescribed deadlines. After several changes, the SEC settled on the following company classifications and deadlines. First, in 2005, a new classification was carved out of the accelerated filer category. This new classification was designated as large accelerated filers (LAFs). These were firms with a public float of at least $700 million. Public float is defined by the SEC as the number of shares available for investors to trade. Large

accelerated filers initially had to file their annual reports within seventy-five days after the end of their fiscal year. Accelerated filers (AFs), companies with a public float of at least $75 million but less than $700 million, were also subject to this expeditious deadline. In 2006, the deadline for LAFs was reduced to sixty days, while the deadline for AFs remained at 75 days. The SEC relaxed implementation deadlines several times to allow both audit firms and businesses time to comply with the new rules and procedures. Research provides evidence that significant increases to audit delay (the length of time between a firm's fiscal year end to the date the auditors sign their report) and audit fees arose as audit firms and businesses attempted to comply with the vague and subjective wording of Auditing Standard No. 2 (AS2) (Grundfest & Bochner, 2007). After considerable debate and criticism of AS2 by both businesses and audit firms, the SEC approved Auditing Standard No. 5 (AS5). AS5 was effective for businesses whose fiscal year ended on or after November 15, 2007. AS5 provides a top-down approach to the audit and streamlines many of the processes established in AS2. The Public Company Accounting Oversight Board (PCAOB) intended that AS5 would lead to increased efficiencies in the audit process and thus decrease audit delay and audit cost by directing auditor focus on those matters considered most important to the audit process and eliminating procedures unnecessary to an effective audit of internal controls (PCAOB, 2010). Initial studies do not conclusively show that the new standard

led to reductions to either audit delay or audit cost nor do the studies demonstrate that auditors understand how to apply AS5 guidance to achieve best results at the lowest cost (Cohn, 2012). The purpose of this study is to investigate whether audit delay and audit cost decrease after the implementation of AS5.

Ultimately, the most important questions to be answered in this study focus on how well AS5 has performed in achieving reductions to audit delay and audit fees. Before such questions can be addressed, it is necessary to understand the past and prevailing regulatory environment as well as why we got to this point. Auditing Standard No. 5 establishes a streamlined audit process intended to increase auditor effectiveness and eliminate costly and unnecessary audit procedures. Prior research identifies increased audit delay and audit fees as unintended consequences of the predecessor standard to AS5, AS2, by providing extra layers of compliance (Krishnan & Yang, 2009; Beneish, Biddings, & Hodder, 2008; Hogan & Wilkins, 2008; Krishnan, Rama & Zhang, 2008; Patterson & Smith, 2007; Behn, Searcy, & Woodroof, 2006; Pollock, 2006; and Controllers Report, 2005).

In 2004, the first year of SOX Section 404 reporting with auditors using AS2 as the interpretive guidance, audit delay increased 20 days from the prior year without SOX 404 and AS2 (Ettredge, Li, & Sun, 2006). According to a report prepared by CRA International (2005), first year total Section 404 implementation costs for large

accelerated filer averaged $7.3 million and $1.5 million for accelerated filers. The SEC estimated these costs at $91,000 (Grundfest & Bochner, 2007). Stripping out the costs other than Section 404 related audit fees reduced implementation cost for large accelerated filers to an average $1.9 million and accelerated filers to an average cost of $520 thousand, still far exceeding the SEC estimate. Although compliance costs decreased in 2005, they remained much higher than the SEC estimate (Grundfest & Bochner, 2007). Subsequent studies indicate decreased fees in the first two years of AS5, but results are divided between firms without previous internal control weaknesses and those with previous internal control weaknesses (Hoag & Hollingsworth, 2011; Krishnan, Krishnan & Song, 2011).

In the post AS5 era, Munsif, Raghunandan, and Rama (2012) find audit delay increase in the presence of material weaknesses over internal control when comparing results between large accelerated and accelerated filers. Impink, Lubberline, Praag, & Veenman (2012) find tightened filing deadlines are not associated with changes in the incidence of late filing. Clearly, prior research focuses on determinants of audit delay and audit cost but no study to date has examined the actual trend of audit delay and audit cost comparing the pre-AS5 period to the post-AS5 period. In fact, I find no studies that examine both these issues concurrently. As such, it represents a comprehensive study to examine both audit delay and audit cost in the AS5 period to 2012. This study

contributes to the literature with this analysis and should answer the question if the SEC achieved their objectives by examining whether AS5 improved the audit process and thus real reductions in audit delay and audit fees are occurring.

Audit delay measures the time between the end of a firm's fiscal year and the date the auditor signs the report. Although audit delay is also referred to as audit lag or audit report lag in the literature, I use the term audit delay throughout this study. Total audit cost consists of two components, Section 404 audit-related fees and implementation costs other than Section 404 audit-related fees. Audit cost as described in the literature typically includes both components when stated as a dollar amount. The top three non-audit related implementation fees cited in the CRA (2005) survey include initial documentation costs, learning curve costs, and remediation efforts.

Slow disclosure also represents potentially bad news. Prior research finds that firms disclosing information in a timely manner are more likely to have clean audit opinions (Chambers & Penman, 1984). Givoly and Palmon (1982) suggest that management has incentives when exercising discretion when timing reporting disclosures, particularly the release of bad news. Thus, increased audit delay likely signals bad news to investors as well as extends the audit time, increasing audit fees. Therefore, changes to the audit process specifically aimed at streamlining audit procedures should lead to improvements in audit delay and audit cost. This research

attempts to answer the question if audit delay and audit fees decreased after the implementation of AS5. This research should be of interest to regulatory agencies such as the SEC, the PCAOB, audit firms, publicly traded businesses subject to SEC regulation, and investors.

Audit Delay

Most prior studies of audit delay and audit fees focus on the determinants of the phenomena. Ettredge et al., (2006) examine the impact of AS2 and Section 404 internal control quality assessment on audit delay. In particular, they examine how Section 404 implementation issues increases audit delay. They measure audit delay consistent with Leventis, Weetman, and Caramanis (2005) and compare that same measurement to pre-SOX accounting periods. They find the number of days increase in the post-SOX era suggesting Section 404 added additional reporting burdens on auditors, thus increasing the time to complete audit duties. Discussing limitations of their study, they note that timeliness prevented analysis of data beyond one year of SOX implementation. An issue suggested for future research is to extend their study to determine if audit delays continue to be a problem. This study responds to their recommendation by extending the analysis to include the additional years (2008 through 2013) firms have been subject to AS5.

Since the Ettredge et al., (2006) study, AS5 (PCAOB 2007) superseded AS2 (PCAOB 2004). The main objective of AS5 is to streamline the audit process which should lead to decreased audit delay and audit fees.

Other research (Bedard and Graham, 2011; Ettredge et al., 2006) finds audit delay associated with material weakness in internal control over financial reporting (ICOFR). Firms with material weaknesses require more time to complete the audit process (Bryant-Kutcher, Peng, & Zvinakis, 2007). Research finds audit delay affects the timeliness of accounting information and also signals conditions which have a negative market reaction (Impink et al., 2012; Feldman, Rosenfeld, Lazar, & Segal, 2006). Firms suffer regulatory sanctions in addition to market discipline for extended audit delay (Givoly & Palmon, 1982).

Audit delay results from various causes. Researchers find vague and subjective wording in early interpretive guidance provided by the PCAOB contributes to audit delay (Orcutt, 2009; Grundfest & Bochner, 2007). Knechel and Sharma (2012) examine audit delay both pre and post SOX and find that companies with high non-audit service fees associated with shorter audit report lags. Regulators need to understand the determinants of audit delay so they may effectively promulgate rules designed to decrease delay (Leventis et al., 2005).

Prior to SOX 404 and AS2 implementation, audit delay averaged 50 days. In 2004, the first year of AS2 implementation, the mean delay increased to 70 days (Ettredge et al., 2006). While 70 days average delay is less than the time frame of 75 days allowed by the Securities and Exchange Commission (SEC) for filing 10K reports, the increase of 20 days represents a significant increase.

Following AS5 implementation, Munsif, Raghunandan, and Rama (2012) extend the audit delay work of Ettredge et al., (2006) using data from 2008 and 2009. Additionally and unlike Ettredge et al., (2006), they stratify their sample into two groups, accelerated filers and non-accelerated filers. They find audit delay increased during 2008 and 2009 with the 2009 results for accelerated filers showing significantly less effect on audit report lag. Results for non-accelerated filers show no such change. Other research (Impink et al., 2012) explores the timeliness of 10-K reporting relative to SEC filing deadline changes, but did not associate these late filings with audit delay.

Feldman et al. (2006) find audit delay affects the timeliness of accounting information and also signals conditions which have a negative market reaction. Audit delay attributable to SOX 404 complexity and its supporting guidelines has received considerable attention from the SEC and its support agencies since 2004.

Audit Fees

Perhaps the most controversial outcome resulting from SOX, SOX Section 404, and AS2 implementation is audit fees. The criticism of SOX and AS2 focuses on the perception of benefits attained versus cost incurred and the disproportionate expense incurred by small businesses. The SEC clearly underestimated the impact of SOX and AS2 on audit fees. Compliance costs in the initial year of SOX Section 404 reporting as guided by AS2 exceeded SEC projections by some 80 times for large accelerated filers and 16 times for accelerated filers (Grundfest & Bochner, 2007). These excessive costs generated intense criticism from both businesses and audit firms. Senator Paul Sarbanes, the co-author of the SOX legislation, expressed his belief that the auditor's engagement to evaluate management's compliance with Section 404 should not result in increased fees (Pollock, 2006). Much of the criticism centered on the vague and subjective language of AS2, which provided guidance as to how the audit should be conducted. After the accounting scandals surrounding businesses such as Enron and Arthur Anderson, audit firms transformed what had been rather lax approaches to the audit into audits of hypervigilance. As a direct consequence of the additional audit requirements first imposed by AS2, as well as the additional resources required to

address the additional requirements, auditors increased audit fees (Jiang & Wu, 2009). Firms were often guilty of over-auditing when risk was not material. Other factors contributing to the excessive costs were lack of staffing, by both businesses and audit firms, increase in documentation required under the new regulations, and the learning curve effect (CRA, 2005). SOX 404 imposed real costs to the attestation function due to the additional layer of regulation required by SOX in general and Section 404 in particular (Iliev, 2010). Compounded by the new requirements, audit costs exploded in the years immediately following the AS2 implementation (Grundfest & Bochner, 2007).

As a result of the SEC re-examination of AS2 and following a period of invited public comment, the PCAOB proposed a new audit approach to replace the way audits were being conducted under AS2. In mid-June 2007, Auditing Standard No. 5 received final approval. Designed to increase audit efficiency by streamlining audit practices, AS5 superseded AS2. Christopher Cox, while head of the SEC, testified before the U.S. House of Representatives Committee on Small Business on December 12, 2007, that it was the intention of the SEC that AS5 would lower overall compliance cost to all businesses regardless of size. A key provision of AS5 allows the auditor to scale the audit, which in theory permits the auditor to adjust field work based on the size and complexity of the audited firm.

Another provision of SOX prevents businesses engaging in substantial consulting and other non-audit related activities with the firms they audit. This effects a shift away from using the audit fee as a "loss leader" when it could be bundled in a package of services. As a result, audit fees had to more accurately reflect their true economic cost. However, Hoag and Hollingsworth (2011) point out anecdotal stories of higher audit costs that imply price gouging by audit firms. In their study they cite a study performed by the law firm of Foley and Lardner which suggests price gouging after companies reported significant reductions to internal Section 404 costs but no corresponding reduction in audit fees charged. According to the National Venture Capital Association (NVCA), many venture capital backed companies use Big 4 accounting firms to perform Section 404 audits because SOX 404 requires the use of only registered accounting firms. Thus, small companies that decide to go public pay premiums to have Big 4 accounting firms conduct their SOX 404 audits. As an alternative, the NVCA points out that many of these companies either refuse to go public or take their IPOs to foreign exchanges directly as result of the high cost of compliance with SOX 404 (Hessen, 2007). However, Hoag and Hollingsworth (2011) use audit pricing theory and an audit risk model to reinforce the concept that audit pricing is a function of both risk and effort. Dickins, Higgs, and Skantz (2008) document changes in audit fees resulting from a significant change in the audit fee estimation process in the post SOX era. Not

surprisingly, as audit requirements changed and the perception of audit risk changed, fees increased.

Early evidence shows that audit costs declined in the second year of AS2, but not to the extent projected by the SEC. Foster, Ornstein, and Shastri (2007) examine audit fees in the AS2 period and find no significant decrease in the second reporting year, but their study is limited to audit cost behavior only during the 2003 to 2005 period. Since most of the studies on audit costs, even the most recent ones, examine audit cost behavior during the AS2 period or just the first and second years of AS5, the body of knowledge is limited about the trend of audit cost behavior. Thus, this study contributes to the existing literature by examining audit cost behavior over a greater period of time, which should produce a better picture of the trend of audit cost as we get further from the implementation year.

Purpose of Study

The purpose of this research is to determine if audit delay and audit cost decreased following the implementation of AS5. The unintended increases to both audit delay and audit fees under the initial auditing standard, AS2, led the PCAOB to rescind AS2 and replace it with AS5. The PCAOB expected this new auditing standard to streamline the audit process, theoretically reducing audit efforts thus reduce both audit delay and audit fees. This research contributes to the existing audit delay and audit fee

literature by examining the impact of AS5 in an effort to determine if a decreasing trend exists for both audit delay and audit fees. Evidence of a decrease would provide regulators such as the SEC and the PCAOB positive feedback that AS5 has been effective in streamlining the audit process. Conversely, evidence of no significant decreases would suggest AS5 has not been effective in streamlining the audit process and further efforts are required.

Research Questions

This study examines the following research questions:

Question 1: Did audit delay decrease for U.S. companies classified as large, accelerated filers and accelerated filers with calendar year ends 2007-2013 subsequent to AS5 implementation?

Question 2: Did audit fees decrease for U.S. companies classified as large, accelerated filers and accelerated filers with calendar year ends 2007-2013 subsequent to AS5 implementation?

This study provides further empirical evidence of the effect of AS5 on audit delay and audit fees.

Expected Contribution of the Study

This study contributes to the body of knowledge regarding the effectiveness of AS5 in reducing audit delay and audit fees. This study is expected to provide evidence of a decrease in audit delay and audit fees since the AS5 implementation. If the evidence supports the decrease, it will provide feedback to regulatory bodies such as the SEC and PCAOB that AS5 has been effective since its implementation and that further revisions of this interpretive guidance is not necessary. This study provides a comprehensive review of AS5 trends since its implementation and thus builds on the results obtained in prior studies which only review the first or the first and second audit periods following implementation. Agency theory and signaling theory contribute to the theoretical perspective of this study.

Organization of the Study

The remainder of this study provides the literature background, the methodology used to investigate the relationships, the results of the investigation, and concluding remarks. Chapter two discusses the prior literature related to this study. Chapter three describes the methodology employed for the study. Chapter four explains the results of the data analysis. Chapter five summarizes the results and provides suggestions and direction for future research.

CHAPTER II

REVIEW OF LITERATURE

This chapter includes discussions of the relevant literature on audit delay and audit costs. Included also is an overview of agency theory as it pertains to these matters and an integration of signaling theory. This chapter reviews the literature in audit delay and audit fees prior to and subsequent to the enactment of the Sarbanes-Oxley Act of 2002 (SOX) and also focuses on the effective periods of Auditing Standard No. 2 (AS2) and Auditing Standard No. 5 (AS5).

Voluntary and mandatory disclosures of conflicting interests are rooted in agency law (Mahoney, 1995). Mahoney (1995) further argues that mandatory disclosures aid in reducing agency costs arising from conflicting interests of managers and investors. Section 404 of SOX requires reporting companies to provide new, additional disclosures regarding their internal controls over financial reporting and imposes greater responsibilities on U.S. firms to maintain effective internal controls over financial reporting. SOX Section 409 authorizes the SEC to compel reporting firms to

publicly disclose information about material changes in their financial condition or operations (Ettredge et al., 2006).

The obligation to disclose these reports and information lies with the senior management of these firms. Senior management, despite regulations, does not always accurately or timely disclose information to the public. Thus, an element of risk exists with respect to these disclosures. Underlying reasons for this unprofessional and possibly illegal activity vary, but certainly the opportunity to enrich themselves at stockholders' expense figures into the discussion (Jensen & Meckling, 1976; Eisenhardt, 1989).

According to Orcutt (2009), a more systematic source of erroneous data disclosed by management is the inadvertent use of either inaccurate or incomplete information. Impink et al., (2012) find negative market reactions to late filing notifications when management provides no meaningful explanation with their Form 12b-25 filings. Firms use these forms to notify the SEC when they cannot meet the deadline for filing Form 10-K and Form 10-Q. Approved Form 12b-25 filings grant firms an additional 15(5) days to file the Form 10-K (10-Q). An explanation for the request is not required, but firms not providing an explanation suffer market sanctions (Impink et al., 2012). Bryant-Kutcher et al., (2007) find negative market reactions associated with Form 12b-25 filings, implying such delays signal bad news. Prior research suggests

investors respond negatively to Form 10-K and Form 10-Q filed after a Form 12b-25 filing (Griffin, 2003).

As businesses gather and assess their data, they use the information to make both mandatory and voluntary disclosures. The value of accounting information lies with its accuracy and timeliness. Provided businesses adhere to quality internal controls, the quality of the accounting information disclosed should better inform investors which translates into securities markets which operate more efficiently and more directly, to a lower cost of capital for those businesses (Lang, Lins, & Maffett, 2012). Francis, Huang, Khurana, and Pereira (2009) research transparency and its influence on efficient resource allocations. They find transparency influences a greater flow of resources (i.e., capital) to businesses possessing better growth opportunities. Orcutt (2009) posits businesses providing less than credible disclosures suffer from diminished market pricing leading to less than desirable allocation of investment capital. Businesses can influence their cost of capital by their corporate disclosure policies as long as the information is credible (Easley & O'Hara, 2004). Nagy (2010) provides empirical evidence that Section 404 compliance reduces the possibility of issuing materially misstated financial statements, suggesting Section 404 is fulfilling its intended objective of improving financial statement quality. Therefore, management has incentives to provide accurate and timely disclosures.

Signaling theory recognizes that one party (the agent) to a transaction possesses greater or unequal levels of information than another party (the principal) (Spence, 1973; Morris, 1987; Connelly, Certo, Ireland & Reutzel, 2011). Information can be public or private. Holders of private information have the potential to make better decisions than those without access (Connelly et al., 2011). This information asymmetry results in one party (principals) not knowing valuable information about the quality of the firm. Management can communicate quality by making voluntary disclosures or early release of mandatory disclosures. Early and timely release of information can be viewed as a signal of the quality of the firm to other parties. The timing of required disclosure, whether released in advance of required SEC filings or delayed beyond the normal release date, can have an impact on the cost of capital and the audit engagement (Mahoney, 1995).

Based on signaling theory, audit delay and audit fees represent issues that affect capital markets. Management possesses the financial data of the firm, shareholders typically do not. AS5 was intended to provide streamlined audit processes that would presumptively reduce audit delay and audit fees, as either or both tend to signal bad news to securities markets. Previous research finds audit delay signals conditions which have a negative impact on investor confidence in capital markets and creates volatility (Hakansson, 1977). Ashton et al., (1989) find empirical research supports the assertion

that management exercises discretion versus the delayed release of bad news. The SEC and the PCAOB desire to minimize the negative impact of audit delay by implementing AS5 to streamline the audit process and reduce audit delays.

Agency Theory

Unless required by statute or regulation, management has the option of disclosing private information about the firm on a voluntary basis. SOX Section 409 mandates firms make quick public disclosure of information on material changes in their financial condition or operations. Slow disclosure potentially represents bad news, whereas timely disclosures tend to represent good news (Givoly & Palmon, 1982). Mandatory disclosure also provides insider information helpful to market participants in determining securities pricing by making available more information (Mahoney, 1995).

Agency theory provides the underpinning for this quantitative study. Agency theory has been used in accounting research to describe the relationship and activities of management (the agent) and stockholders (the principals). It involves the study of inevitable conflicts of interest that occur between these two parties due to opportunistic behavior (Jensen & Meckling, 1976). This opportunistic behavior reveals itself whenever the agent does not act in the best interest of the principal. Since conflict abounds between executive management and shareholders, management

should be constrained by appropriate corporate governance mechanisms such as regulatory monitoring (He & Ho, 2011). The problem is one of verification. The principal encounters limitations trying to verify what the agent is actually doing (Eisenhardt, 1989; Mahoney, 1995). These monitoring attempts can be difficult and expensive to devise. Management has access to information not readily or easily accessible to stockholders or other interested parties (Kross & Schroeder, 1984; Healy & Palepu, 2001). Publicly traded corporations typically exhibit more problems associated with agency theory as privately held corporations tend to be managed by their shareholder/owners. U.S. publicly traded companies fall under the jurisdiction of the SEC, which requires among other matters, disclosures of management's compensation as well as significant transactions between managers and their companies. Such disclosures provide information to shareholders helpful in monitoring the self-interested behavior of a company's management. Mandatory disclosures remove some of the burden of monitoring costs incurred by the principals, effectively reducing total agency costs (Mahoney, 1995). Perhaps the most useful monitoring device is the external audit performed by an independent audit firm. The audit, conducted by a registered public accounting firm, examines evidence supporting the amounts and disclosures found in a company's financial statements in order to form an opinion as to whether the financials are free from material misstatement. The goal of the audit is to provide users of the

financial statements with reasonable assurance they are fairly stated. Thus, the usefulness and purpose of the external audit as a means of monitoring management opportunistic behavior provides a foundation for this quantitative study.

Signaling Theory

Signaling theory is based on information asymmetry. Perhaps more correctly, it is primarily concerned with reducing information asymmetry between two parties such as agent and principals (Spence, 2002). Typically, management has access to firm information that is not possessed by or available to the shareholder. In an attempt to equalize this asymmetry, management signals shareholders by providing relevant information to them that, if interpreted correctly, causes the shareholders to adjust their investing behavior (Connelly et al., 2011). In a corporate governance setting, CEOs signal to potential investors the unobservable quality of their firms using the observable quality of their financial statements (Zhang & Wiersema, 2009). As has been discussed previously in this literature review, information affects the decision-making processes used by individuals. However, their decisions are based primarily on information available in the public domain. To the extent they can obtain private information, it too is used to make investing decisions. It is this private information that creates information asymmetry. Individuals possessing private information are able to make

better informed decisions, sometimes to the detriment of those who do not possess the information.

Signaling theory involves a signaler, receiver, and of course, a signal. The signaler is the firm insider, such as the CEO (agent), who has access to information about the organization that is not available to the receiver (principal) and provides the insider with a privileged perspective about the underlying quality of the business. This information can be positive or negative in context, but either way, would be useful to the receiver if it could be obtained (Connelly et al., 2011). Thus, the early disclosure of a clean audit opinion can be used to signal superior firm quality while at the same time reduces the information asymmetry (Morris, 1987). Audit delay's association with negative findings in the audit result in market sanctions against the firm. Management delays this type of voluntary disclosure in an effort to minimize market punishment. That management can use the time to engage in opportunistic behavior at the expense of the average shareholder cannot be overlooked or discounted. Newton and Ashton (1989) reason that audit delay is the only publicly observable measure of audit efficiency.

Management is motivated to share insider knowledge with external investors so that a company's stock price will increase. Management has incentives to issue self-serving announcements and disclosures. Investors may infer the credibility of voluntary

disclosures from other informative managerial signals such as reductions to audit delay. Announcements alone are insufficient as this audience will view them as self-serving. For information to be credible to external users, it generally must be costly to provide. Since any company could release a good news announcement without it being true, managers who possess good news would not announce. Reduced audit delay provides an indirect measure of signaling theory as shorter delays are associated with higher firm value (Chambers & Penman, 1984).

Audit Delay

Audit delay affects the timeliness of accounting information which adversely impacts investor confidence in capital markets. Auditors are expected to perform assurance services without delay, guided by constraints imposed by professional codes and ethics (Leventis, et al., 2005). The SEC indirectly regulates audit delay by restricting the amount of time large, accelerated firms have after the end of the year to release their annual report, Form 10-K, to 60 days. The importance of corporate disclosure for the functioning of an efficient capital market cannot be understated (Healy & Palepu, 2001). Hakansson (1977) explains the timeliness of public disclosures is important because delays compromise the idea of equal access to information among investors, creating information asymmetry. Delay likely increases the level of uncertainty associated with decisions for which the financial statements provide information. Thus,

buy and sell decisions by investors risk delay until earnings reports are made public (Givoly & Palmon, 1982). Given that well-informed investors can exploit their private information at the expense of less informed investors provides reason for SEC concerns over timeliness of information disclosures.

Krishnan and Yang (2009) identify audit delay as one of the unintended consequences of AS2 due to the extra layers of compliance required. This issue, along with other issues associated with audit delay, suggests that SOX 404 along with its interpretive guidance added a layer of complexity whose effect negated the SEC's intent to improve the timeliness of information release. Adding new reporting requirements for external auditors should increase the time it takes to complete an audit, especially in the initial year of implementation. Research finds audit delay affects the timeliness of accounting information and signals conditions which have a negative market reaction (Impink et al., 2012; Feldman, Rosenfeld, Lazar, & Segal, 2006). Firms suffer regulatory sanctions in addition to market discipline for extended audit delay (Givoly & Palmon, 1982). Other research (Bedard & Graham, 2011; Ettredge et al., 2006) finds audit delay associated with material weakness in internal control over financial reporting (ICOFR). Firms with material weaknesses require more time to complete the audit process (Bryant-Kutcher et al., 2007). Mande and Son (2011) associate auditor resignations in the year following the audit to lengthy audit delay.

Audit delay is attributable to the complexities of implementing SOX 404, particularly supporting interpretive guidance provided by the PCAOB (Orcutt, 2009; Grundfest & Bochner, 2007). Ashton et al. (1989) find audit delay associated with market reactions to information disclosures. Adverse consequences such as abnormal price variability (Impink et al., 2012) and lower abnormal returns (Givoly & Palmon, 1982; Chambers & Penman, 1984; Kross & Schroeder, 1984) as well a higher degree of information asymmetry (Hakansson, 1977; Bamber et al., 1993) are representative of conditions having a negative impact on investor confidence in capital markets. Impink et al., (2012) find that firms disclosing an explanation for filing their 10-Ks late triggers negative abnormal returns (-1.35%) when the explanation pertains to material weaknesses of internal controls and those negative abnormal returns increase when no explanation is provided. Chambers and Penman (1984) find a positive relationship between the size of abnormal post report price variability and the size of the price reaction to the size of the price reaction to the report positively related to report lag time and higher following the report of bad news than a report of good news.

While the effects of SOX have proven difficult to verify, some questions such as conservative reporting of earnings and the reduction of firm value can be answered due to their discrete results (Iliev, 2010). Coates (2007) emphasizes assessment of SOX 404 is complicated by the various financial, economic, and political changes occurring in U.S.

capital markets since 2003. This study examines the issue of the amount of change in audit delay and audit fees based on a change to a reporting standard.

If AS5 actually streamlined the audit process I would expect to find audit delay decreased, ceteris paribus, following AS5 implementation. This new standard increases the likelihood that issues affecting audit delay such as maintaining the integrity of internal controls will be discovered before they cause material misstatements of financial data. This objective should steer auditors away from procedures not necessary to achieve intended results, reducing audit complexity and audit delay (Bedard & Graham, 2011). Reduction in audit delay should lead to more accurate and timely accounting disclosures, achieving and validating AS5 and the SEC's attempt to restore confidence to U.S. capital markets. If it can be shown that audit delay decreased post AS5, then the objectives of AS5 will appear to have taken hold and validate the effectiveness of AS5. In this study, I test firms classified as large, accelerated filers and accelerated filers to determine their response to the change to AS5. As the PCAOB expects smaller firms to benefit more from AS5, the sample will be divided into two groups. One sample will consist of firms classified as large accelerated filers and the other sample will consist of firms classified as accelerated filers. Each group will be independently examined for changes to audit delay and audit fees.

Trends in Audit Delay Research

In order to understand the magnitude of the problem created by audit delay, it is necessary to review audit delay in three periods. The first period reviews audit delay prior to the infamous corporate frauds and accounting failures that occurred early in the 21st century. The second period reviews audit delay following enactment of SOX, during the effective period of AS2. The third period reviews audit delay during the effective period of AS5. Research conducted during these three distinct periods focused on different issues of audit delay.

The accounting profession has long recognized the importance and relevance of timeliness (Accounting Principles Board, 1970). Timeliness is a key characteristic of information usefulness. Feldman et.al (2006) find audit delay affects the timeliness of accounting information and also signals conditions which have a negative market reaction.

Early audit delay research tended to focus on the importance of timeliness of accounting information disclosure (Givoly & Palmon, 1982; Chambers & Penman, 1984; Kross & Schroeder, 1984). According to Givoly & Palmon (1982), incentives exist for management to employ discretion over the timing of reporting. Early audit delay research conducted by Givoly and Penman (1982) provided empirical evidence linking

early disclosure of annual earnings announcements to positive abnormal returns and delayed announcements with negative abnormal returns. Kross and Schroeder (1984) extended this early research to quarterly earnings announcements with similar empirical results. Chambers and Penman (1984) further find higher return variability associated with earnings report announcements released ahead of expectation when compared to timely released reports or unexpected late reports. The results from these studies provide strong support for the belief that management employs discretion when timing the release of proprietary information.

In these early studies on audit delay, researchers chose certain variables from those presented in prior studies, more of an ad hoc selection process than a process supported by well-established models or theory. If the variable appeared to contribute to audit delay, it was chosen. Other variables were chosen on the basis of data availability and the direction of the research questions (Givoly & Palmon, 1982).

After these early studies, attention turned to various determinants of audit delay. Variables explored included company size, net losses, busy season audits, firm complexity, audit firm structure, and auditors' opinions (Ashton et al., 1989; Bamber et al., 1993). Ashton et al., (1989) find an inverse association between company size and audit delay, an inverse association between audit firm size and increased audit delay, and a positive association between net losses and audit delay. Bamber et al., (1993)

extend the work of Ashton et al., (1989) by expanding the early audit delay model to include audit business risk, audit complexity, and use of a structured audit technology. They find a mean audit delay of 40 days with audit delay significantly and positively associated with these new, additional variables of interest. Other researchers extend the studies of determinants of audit delay beyond the United States, testing firms listed on Canadian and Athens stock exchanges (Ashton et al., 1989; Leventis et al., 2005). The Ashton et al., (1989) sample consisted only of Canadian firms audited by Canadian auditors covering the period from 1977 through 1982. Leventis et al., (2005) focus on firms listed on the Athens Stock Exchange having a fiscal year end of December 31, 2000. They found lengthy audit delay (98 days) associated significantly with variation in auditors' remarks and opinions, audit fees, and type of auditor.

With the passage of SOX in 2002, studies of audit delay focus on their determinants. In an early study under the SOX/AS2 regime, Ettredge et al. (2006) investigate the impact of AS2 guidance and SOX Section 404 internal control quality assessment on audit delay. In particular, they examine how Section 404 implementation issues increase audit delay. They find audit delay immediately prior to SOX/AS2 implementation to average 50 days. In 2004, the first year AS2 provided guidance to external auditors, audit delay increased to 70 days (Ettredge et al., 2006). They find the number of days significantly increased in the post-SOX era suggesting the

requirements of Section 404 increased the time to complete the audit process and for the external auditors to issue their reports. Discussing limitations of their study, they noted that timeliness prevented analysis of data beyond one year of SOX implementation. An issue suggested for future research is to extend the study to determine if audit delays continue to be a problem.

In 2003, the SEC introduced new deadlines accelerating the filing of 10-K reports. These accelerated deadlines placed additional pressures on auditors who were already facing new regulatory and disclosure guidelines under SOX 404 and 409. Krishnan and Yang (2009), in a study covering 2001 to 2006, find increased audit delay leading up to the accelerated SEC filing deadlines, the implementation of SOX 404 reporting requirements, and the new rapid disclosure requirements imposed by SOX 409. Further, they find audit delay significantly increased in 2004 with gradual reductions in 2005 and 2006.

Audit delay attributable to SOX 404 complexity and its supporting guidelines has received considerable attention from the SEC and its support agencies since 2004. In an effort to address the growing criticism created by AS2, the PCAOB focused on ways to curb expenditures associated with SOX 404 compliance. While acknowledging benefits of audits of internal controls, the PCAOB recognized the “significant costs” of these benefits. Small firms required to comply with SOX Section 404 bore a disproportionately

higher cost of compliance than the largest firms (Krishnan et al., 2008). Responding to this criticism, the PCAOB issued a new proposed standard on December 16, 2006. The proposed standard, Auditing Standard No. 5 (AS5) included four objectives. One, focus on issues and procedures important to internal auditors. Two, eliminate procedures determined to be unnecessary. Three, scale the audit in an effort to reduce compliance costs for the smallest companies required to comply with SOX 404. Four, simplify requirements by reducing detail and specificity.

Following a required period for public comment, the PCAOB issued the new standard, Auditing Standard No. 5 (AS5), effective for fiscal years ending November 15, 2007. AS5 officially superseded AS2 (PCAOB 2007). AS5 eliminated the requirement for auditors to provide an opinion on management's assessment of internal controls, instituted a "top-down" approach in assessing internal controls, directs audit focus to high risk areas, allows auditors to scale their tests for smaller and less complex companies, and allows auditor's to once again rely on the work of others such as internal auditors.

Research of audit delay in the AS5 era remains scant. In the only published AS5 era study of audit delay, Munsif et al. (2012) extend Ettredge et al. (2006). Their study examines audit delay during 2008 and 2009, the first two years following AS5 implementation. In addition, they include non-accelerated filers as this group now has

the same Section 404(a) reporting requirements as the large accelerated and accelerated filers. They find significant increases in audit delay within both filer groups during 2008 and 2009. Munsif et al., (2012) find the effect of internal control material weakness on audit delay to be significantly lower in 2009 compared to 2008 when examining the large accelerated and accelerated filer groups. However, audit delay was flat within the non-accelerated filer group, meaning audit delay in both periods exhibits no significant difference. The Financial Executives Research Foundation, an affiliate of Financial Executives International, surveyed public, private, and non-profit companies for 2012 data regarding audit fees. The survey results reveal an increase in audit fees of approximately four percent compared to the previous year. The survey data also reveals increases in audit hours, suggesting audit delay increased as well (Cohn, 2013).

Audit fees

In 2000, the SEC issued new rules requiring publicly traded companies registered with the SEC to disclose fees firms paid to accounting firms. These companies were required to disclose amounts paid to their external auditors, separating audit work from consulting and tax services. Original disclosure requirements revealed that the non-audit related services generated approximately three times the fees as did audit-related activities. These revelations fueled the belief that auditor independence was impaired, possibly tainting auditor ability to remain impartial in their audits.

In 2001, the SEC required publicly traded firms in the U.S. to disclose fees paid to their auditors. Initially, the SEC allowed fees be classified as either audit fees or non-audit fees. These initial disclosures revealed substantial non-audit fees, causing considerable concern in the public domain about auditor independence. In 2003, as a response to substantial and ongoing concern by regulators and the public regarding external auditor independence, the SEC established revised fee disclosure rules (Asthana & Krishnan, 2006). The SEC introduced two new categories of non-audit fees, audit-related fees and tax-related fees, as well as eliminating the category information systems fees. These new classifications allowed for reclassification of non-audit fees into classifications with less objectionable titles to the public (Asthana & Krishnan, 2006).

The prior definition of audit fees promulgated by the SEC quite narrowly defined them to include the fee paid for the annual audit and review of the company's financial statements included in the quarterly SEC filings. The new definition includes services which can only be provided by the independent accounting firm. Such services included statutory audits and other services rendered on behalf of the SEC. The newly created audit-related fee category includes any type assurance service involving due diligence traditionally provided by the independent accounting firm. Examples provided by the SEC include employee benefit plan audits, internal control reviews, and others.

Looking at the impact of SOX on audit fees, it is understandable that audit fees would increase in the face of new regulation. Other factors attributable to SOX regarding audit fees include issues such as new audit work paper retention requirements found in Section 103 and the denial by SOX for external auditors to rely on the work of internal auditors. Any internal control related work performed by internal auditors was required to be repeated by the external auditors if they used such work as primary evidence.

Dickens, Higgs, and Skantz (2008) conducted interviews with audit practitioners and were able to identify variables pre-SOX and post-SOX which influence audit pricing. From the pre-SOX era, they identified three factors driving audit pricing: estimated audit effort, rank of audit personnel conducting the audit, and risks and rewards from the perception of the audit firm. Post-SOX changes to audits increased the amount of work necessary to conduct audits that comply with these new standards. Where discounts were somewhat common pre-SOX for off-peak work, staff shortages at audit firms make such discounts less likely. The economic recession of 2007-2009 led to pressures from clients to reduce audit fees (Ettredge, Fuerherm, & Li, 2014). Both studies identify audit risk as a factor to not reduce fees given the probability of legal action and PCAOB monitoring of this issue.

SOX Section 201 prohibits any registered public accounting firms from performing any audit required by SOX if they also provide any non-audit services. Non-audit services prohibited by Section 201 include management functions or other services related to the accounting records. Prior to SOX, common billing practices allowed audit firms include their audit fee in prepackaged bundle of services. Such bundling enabled audit firms to offer cheap audit fees in a "loss leader" pricing schema. SOX Section 201 effectively ended that practice (Foster, et al., 2007). As compliance with Section 404 became mandatory, audit fees increased substantially (Foster et al., 2007; Jiang & Wu, 2009).

Initial studies focused on audit fee increases by comparing fees generated in the pre-SOX era to those from the post-SOX era (Grundfest & Bochner, 2007; Orcutt, 2009). Additionally, audit fees were measured when early audits were guided by AS2, the interpretive guidance used by auditors to conduct the audit. Although results of early studies provide some evidence of audit fee decrease during the second year of AS2, fees remained significantly above the levels projected by the SEC (Orcutt, 2009). A later regulatory change to AS5 resulted in new changes to audit fees.

Compliance with Section 404 reporting differed between large accelerated filers and accelerated filers. Large accelerated filers began compliance with Section 404 first, followed later by accelerated filers. In one of earliest published studies on audit fees,

Foster et al. (2007) examined a sample which included companies required to comply with SOX 404 reporting requirements (the large accelerated filers) as well as companies not yet required to comply with those reporting requirements (accelerated filers) and find audit fees increased from 2003 to 2005. The companies showing the largest increases in audit fees were those required to meet the reporting provisions. Some accelerated filers voluntarily began reporting earlier than required by SOX 404 scheduling. The variable of interest in this study, mandatory compliance with SOX 404, showed firms first complying with Section 404 experienced significantly greater increases in fees than those not yet required. However, in all cases, company's audit fees increased substantially whether required to comply with SOX Section 404 in 2004 or 2005 (Foster et al., 2007).

Millar and Bowen (2011) tested the effects of SOX on audit fees for fiscal years 2002 through 2005, the AS2 era. This study deviated from other studies in two distinct ways. One, it examines data from fiscal years 2002 and 2003, which are pre-SOX compliance years. Two, they differ in how they defined small and large firms. Instead of using the more commonly accepted SEC designations of large accelerated filers and accelerated filers, they used Standard and Poor's Smallcap 600 index designations for small and large firms. This deviation reduces the comparability of this study with other studies, but it does provide insight into audit fee direction during this period. The

empirical results derived in this study show that audit fees were statistically higher in the post-SOX period.

Acknowledging the difficulty in assessing the effect of SOX 404 due to confounding issues of financial, economic, and political changes as well as the lack of a control group, Iliev (2010) constructs a study using two groups and finds audit fees to be higher for the large accelerated filer group compared to the accelerated filer group. Later, he controls for size of the company, risk, and complexity, obtaining similar results.

In perhaps the most comprehensive study in the AS5 era, Krishnan, Krishnan, and Song (2011) actually compare audit fee changes using pre-AS5 data and post-AS5 data. While audit fees decreased in the first two years of AS5 compared to fees incurred during the AS2 era, only large firms experienced the reduction. Smaller companies, which the PCAOB expected to benefit the most from the scaled approach implemented with AS5, experienced no significant reductions. Wang & Zhou (2012) conduct a similar study using data for only the first year of the AS5 era. They find audit fees decrease in the AS5 period compared to the AS2 period with no reduction in audit quality.

In 2012, the Financial Executives International Research Foundation conducted a survey of audit fees paid by a variety of U.S. companies. Executives of 87 U.S. publicly-held companies, 118 privately-held companies, and 16 non-profit companies responded

to the survey. Although these companies represent a different cross-section of firms than other studies, their results are similar to results of studies consisting of only publicly traded companies and separated by market capitalization. Results of the survey using 2012 data reveals total audit fees incurred by public firms, private firms, and nonprofit organizations increased by an average of four percent (Cohn, 2013). As I do not intend to examine privately-held or non-profit companies, the data of interest from the FEI study comes from the 87 U.S. publicly-held companies. Survey esults of this group reveals that 79 of these firms were classified as accelerated filers with 61 of those firms classified as large, accelerated filers. Eight of the eighty-seven firms were classified as non-accelerated filers. Of these 87 firms, audit fees for 2012 averaged $4.5 million, with audit fees for large, accelerated filers leading the group at slightly more than $6.0 million. This represents a four percent average increase from the prior year. The average tenure of auditors ranges from 7 years for the non-accelerated filers to 27 years for the large, accelerated filers (FEI 2013 Survey).

Hypotheses Development

As a result of the escalated audit cost associated with the implementation of SOX Section 404, the PCAOB amended AS2 (2004) by issuing AS5 (2007). The primary objective of the new guidance focuses on directing auditors' attention on the most important matters in the audit of internal control over financial reporting and

eliminating procedures that the Board believes are unnecessary to an effective audit of internal control. The proposals were designed to both increase the likelihood that material weaknesses in companies' internal control will be found before they cause material misstatement of the financial statements and steer the auditor away from procedures that are not necessary to achieve the intended benefits. Selected language in AS5 was amended in 2010 when the PCAOB issued additional audit guidance pertaining to the auditor's assessment of and response to the risks of material misstatements in an audit.

The objective of steering auditors away from procedures not necessary to achieve the intended benefits should therefore reduce audit complexity and audit delay. Based on the above reasoning, the first hypothesis is:

H1: Audit delay decreased following the implementation of Auditing Standard No. 5 (AS5) for U.S. firms classified as large accelerated filers.

H2: Audit delay decreased following the implementation of Auditing Standard No. 5 (AS5) for U.S. firms classified as accelerated filers.

In testing H1 and H2, this study determines if audit delay decreased following implementation of AS5.

Prior research on audit fees focused on determinants of audit cost, such as business risk, internal control strength, audit complexity, firm size, the firm conducting the audit, and amount of foreign assets (Thornton & Moore, 1993; Peel & Roberts, 2003; Foster et al., 2007). The FEI survey results for 2012 reveal fee increases of 3 to 4 percent, depending on firm classification (Cohn, 2013). This study looks in particular at the absolute changes in dollar costs attributable to audit fees. Recently research on this issue uses parameters differing from SEC definitions of accelerated and large accelerated filers (Millar & Bowen, 2011) but find similar results as studies using the prevailing definitions. This study retains the SEC definitions of accelerated and large, accelerated filers thus contributing to the literature by maintaining an approach to the problem using accepted SEC definitions of accelerated and large accelerated filers. Prior studies examine the regulatory significance, i.e., was the amount of change in dollar cost significant. The objective of this study is to determine if audit fees have decreased as a result of AS5 implementation. Therefore, this study tests the presumption that audit costs decreased as a result of AS5 implementation. Based on the above reasoning, the second hypothesis is:

H3: Audit fees decreased following the implementation of Auditing Standard No. 5 for U.S. firms classified as large accelerated filers.

H4: Audit fees decreased following the implementation of Auditing Standard No. 5 for U.S. firms classified as accelerated filers.

In testing H3 and H4, this study determines if audit fees decreased following implementation of AS5

CHAPTER III

RESEARCH METHODOLOGY

Audit delay for large accelerated U.S. companies with calendar year ends 2007 to 2013 will be examined, analyzed, and compared in this quantitative study following the implementation of Auditing Standard No. 5 (AS5). Additionally, audit fees will be similarly examined.

In order to determine the effectiveness of AS5 in achieving its intended purpose, this study provides a rigorous examination of the association between audit delay and AS5 as well as the association between audit fees and AS5. Based on prior research, this study hypothesizes decreased audit delay and audit fees are positively associated with AS5 implementation. The research methods and design, sample, and regression models are presented followed by an explanation of the study's operational variables.

Research Methods and Empirical Design

This study utilizes a non-experimental, quantitative approach using regression analysis. Prior researchers routinely utilize regression analysis to predict audit delay and audit fees as well as examine their determinants (Ettredge et al. 2006, Impink et al. 2011, Munsif et al. 2012, Iliev 2010, and Stanley 2011). To examine the effect of AS5 on audit delay, I perform multiple regression analyses to compare the sample firms' audit delays in 2007-2013 (AS5 era). Due to the greater expected impact of AS5 on smaller firms, a sample is derived for firms defined as large accelerated filers and another sample consisting of accelerated filers. The sample consists only of firms having a stable auditor-client relationship during the periods under examination. Regression analysis is utilized to study the trend of audit delay and audit fee changes since the implementation of AS5 for large accelerated and accelerated firms subject to SOX Section 404 and having calendar year ends between 2007 and 2013. Regression analysis is used to determine to what extent differences exist in SOX Section 404 audit delay and audit fees for large accelerated and accelerated U.S. companies subsequent to AS5 implementation.

To test the audit delay hypothesis, I use an adaptation of the Ettredge et al., (2006) and Munsif et al., (2012) models. To test the audit fee hypothesis, I use an

adaptation of the Krishnan et al., (2011) and Millar & Bowen (2011) models. Each of these models use control variables such as SEC designation, clean audit opinion, and stable auditor relationship as part of the audit delay and audit cost hypotheses tests. Audit delay and audit fees are computed using the secondary data found in the Compustat and Audit Analytics database. The data includes the time from the end of the accounting year to the time the audit report is issued for years 2007 to 2013 together with the audit fees charged by the external audit firm for the same years.

The first hypothesis evaluates the audit delay using data in the Compustat and Audit Analytics databases and follows the methodology employed by Ettredge et al., (2006). This study contributes to the literature by extending the research to include the effects of AS5 and the further change by the SEC in 2006 reducing the filing deadline for large, accelerated filers' 10-K reports from 75 to 60 days.

The second hypothesis uses audit fee data obtained from the Compustat and Audit Analytics databases and follows the methodology used by Krishnan et al., (2011) and Millar & Bowen (2011). Expected methods of analyzing these data include multiple regression and trend analysis. This study contributes to the literature by extending the research to include data through 2013, which adds five additional years of observations and results compared to prior studies. Additionally, this study adds to the existing body of research by taking a comprehensive approach to the issues of audit delay and audit

costs by comparing yearly results from the AS5 without eliminating certain years as some studies do, and examining results of natural groupings such as pre and post AS5 firms with same auditors, no internal control deficiencies, firms with internal control deficiencies, and accelerated or non-accelerated firms. By extending the periods covered through 2013, this study will provide additional trend information on both audit delay and audit fees in the AS5 era.

Sample and Data Sources

This study's sample uses firm year observations from 2007-2013 derived from all firms that file Section 404 reports from January 2007 to December 2013 and that are covered by the Audit Analytics Database, which provides information about Section 404 reports, auditor information, and audit report date. Other financial data are obtained from the Compustat annual database.

The necessary data to conduct this analysis are available through the Audit Analytics and Compustat databases. The Compustat database is available through Nova Southeastern University. Audit Analytics is available through Sam Houston State University.

In order to better isolate the effect of the regulatory change and to control for the effects of auditor shopping, this study more closely follows the approach of Krishnan

et al., 2011, wherein the sample is limited to only firms having a stable auditor relationship for the years of study. Stable auditor relationships should remove some of the early delay and cost drivers such as learning new regulations, knowing how much manpower to provide to a particular audit engagement, and unfamiliarity with a client. Due in part to the scrutiny caused by the increased costs occurring under AS2 regulation, any cost savings obtained under AS5 regulation are presumed to be passed on to the client. The sample is a divided sample between large accelerated filers and accelerated filers during the years 2007 through 2013. The data selection process identifies the number of U.S. public companies with calendar year end from 2007 through 2013, adjusting for non-accelerated filers, financial institutions, firms not having the same auditor during the entire observation period, missing and multiple data. Tests for multicollinearity will be performed as necessary.

Operational Definition of Variables

SOX Section 404 Audit Delay. SOX Section 404 audit delay (AUDELAY), a dependent variable in this study, was used to address and answer research question 1: Do differences exist, and if so, to what extent, in SOS Section 404 audit delay for U.S. companies classified as large accelerated filers and also U.S. companies classified as accelerated filers with calendar year ends 2007-2013 subsequent to AS5 implementation? SOX Section 404 audit delay is measured as the time from a

company's fiscal year end to the date the auditors sign their report. This study estimates the following audit delay model derived from the following classic multivariate regression audit delay model based on the prior research of Ettredge et al. (2006) and Munsif et al. (2012):

Audit Delay Model

$$AUDELAY = \beta_0 + \beta_1 MWIC + \beta_2 SIZE + \beta_3 HIGHTECH + \beta_4 ROA + \beta_5 ADLEV + \beta_6 GOCERN + \beta_7 EXT + \beta_8 SEGNUM + \beta_9 LOSS + \beta_{10} RESTATE + \beta_{11} LAUF + \beta_{12} AOPIN$$

Where: AUDELAY = the number of calendar days from a firm's fiscal year-end to the date of the auditor's report;

Model (1) is estimated using data for 2007 thru 2013 (AS5 era)

The variables are defined as follows:

AUDELAY = number of calendar days between fiscal year-end to date of the auditor's report; a dependent variable (Audit Analytics [AA]).

MWIC = 1 if there is a material weakness in internal controls, otherwise 0. This dichotomous control variable is a proxy for risk and financial factors. (AA)

SIZE = The size of the firm, measured by the natural logarithm of total assets. This control variable is a proxy for complexity. (Compustat)

HIGHTECH = 1 if client is in high tech industry, otherwise 0. This control variable is a proxy for complexity. (Compustat)

ROA = Net earnings divided by total assets. This control variable is a proxy for risk and financial factors. (Compustat)

ADLEV = total debt divided by total assets. This control variable is a proxy for risk and financial factors. (Compustat)

GOCERN = 1 if firm receives a going concern opinion, otherwise 0. This dichotomous control variable is a proxy for risk and financial factors. (AA)

EXT = 1 if firm reports an extraordinary item, otherwise 0. This dichotomous control variable is a proxy for risk and financial factors. (Compustat)

SEGNUM = number of firm's reportable segments. This control variable is a proxy for complexity. (Compustat)

LOSS = 1 if firm reports negative earnings for the year, otherwise 0. This dichotomous control variable is a proxy for risk and financial factors. (Compustat)

RESTATE = 1 if firm restated financial reports in the current year, otherwise 0. This dichotomous control variable is a proxy for risk and financial factors. (AA)

LAUDF - Natural log of audit fees in dollars. This control variable is a proxy for complexity. (AA)

AOPIN = 1 if auditor's opinion on the financial statements for other than going concern, otherwise 0. This dichotomous control variable is a proxy for risk and financial factors. (AA)

Audit Fee Model

This study utilizes an adaptation of the following classic, multivariate regression audit fee model based on prior research

$$LAUDF = \beta_0 + \beta_1 ICW + \beta_2 BIG4 + \beta_3 LASSET + \beta_4 MERGER + \beta_5 MB + \beta_6 SEGSQRT + \beta_7 FOREIGN + \beta_8 RECINV + \beta_9 LEV + \beta_{10} SPECIAL + \beta_{11} RESTRUC + \beta_{12} GC + \beta_{13} ROA + \beta_{14} ROANEG$$

The variables are defined as follows:

LAUDF = natural log of audit fees, in dollars; a dependent variable. (AA)

ICW = 1 if the firm received an adverse opinion for material weaknesses in internal control, otherwise 0. This is a dichotomous control variable that is a proxy for risk and financial factors. (AA)

BIG4 = 1 if firm audited by a big 4 auditor, otherwise 0. This is a dichotomous control variable that is a proxy for auditor type. (AA)

LASSET = natural log of assets. This is a control variable that is a proxy for company size. (Compustat)

MERGER = 1 if the firm is engaged in a merger or acquisition (identified by Compustat data item AQP or AQEPS, otherwise 0. This is a dichotomous control variable that is a proxy for complexity. (AA)

MB = market-to-book ratio, defined as market value of equity divided by book value (from Compustat data item CEQ). Market value of equity is defined as the firm's price per share at fiscal year-end (from Compustat data item PRCC-F) multiplied by the number of shares outstanding (from Compustat data item CSHO). This is a control variable that is a proxy for risk and financial factors.

SEGSQRT = square root of the number of segments disclosed (Compustat Segment disclosure). This is a control variable that is a proxy for complexity.

FOREIGN = 1 if the firm has foreign operations (from Compustat data item FCA), otherwise 0. This is a dichotomous control variable that is a proxy for complexity.

RECINV = sum of firm's receivables (Compustat data item RECT) and inventory (from Compustat data item INVT) divided by its total assets. This is a control variable that is a proxy for complexity.

AFLEV = firm's total assets (from Compustat data item AT) less its book value (from Compustat data item CEQ) divided by its total assets. This is a control variable that is a proxy for risk and financial factors.

SPECIAL = 1 if firm reports special items (from Compustat data item SPI), otherwise 0. This is a dichotomous control variable that is a proxy for risk and financial factors.

RESTRUC = 1 if firm took a restructuring charge (from Compustat data item RCP or RCEPS), otherwise 0. This is a dichotomous control variable that is a proxy for risk and financial factors.

GC = 1 if the firm receives a going concern opinion from its auditor, otherwise 0. This is a dichotomous control variable that is a proxy for risk and financial factors.

ROA = firm's return-on-assets ratio calculated as net income before extraordinary items (from Compustat data item IB) divided by beginning of year total assets (from Compustat data item AT), otherwise 0. This is a control variable that is a proxy for risk and financial factors.

ROANEG = 1 if the firm's ROA is negative, otherwise 0. This is a dichotomous control variable that is a proxy for risk and financial factors. (Compustat)

CHAPTER IV

ANALYSIS AND PRESENTATION OF FINDINGS

In this chapter, the results and findings of the study outlined in Chapter III are presented and discussed. The purpose of this study is to discover whether audit delay and audit fees decrease following the implementation of Auditing Standard No. 5 (AS5). This study focuses on United States publicly traded firms subject to the reporting provisions of Section 404 of the Sarbanes-Oxley Act of 2002. The firms are further partitioned into two groups using the Securities and Exchange Commission criteria to classify firms as either large accelerated filers (LAF) or accelerated filers (AF). This chapter describes the data collection process, the descriptive statistics of the variables in the study, and the results of the multiple regressions for each hypothesis. Statistical techniques used to analyze the sample data of each filer group and interpret the empirical findings related to the hypotheses are presented. The analyses and interpretation of the large accelerated filer findings for audit delay and audit fees are presented first, followed by those of the accelerated filers.

SPSS Version 23 for Windows is used for all data analyses. Microsoft Excel is used to capture, organize and merge all Audit Analytics and Compustat data. Pearson Correlation and multiple regression analysis is used to examine the strength of the independent variables in predicting audit delay and audit fees for both the large accelerated filer sample and the accelerated filer sample.

Large Accelerated Filers

Sample Selection

The analyses in this study are conducted for the seven-year period beginning with 2007 and ending with 2013. The samples for this study consist of firms subject to AS5 and classified by the SEC as either a large accelerated filer or an accelerated filer. AS5 was effective for firms having a fiscal year end of November 15, 2007 or later. The Audit Analytics database is used to search for U.S. firms which fit the SEC criteria as a large accelerated filer. The initial sample extracted consists of 1792 unique firms which meet the definition of a large accelerated filer. These firms are subjected to additional adjustments to help control for factors likely to affect audit delay and audit fees. Ettredge et al.(2006) found material weaknesses in internal control to be a major contributor to increased audit delay. While some firms in the final sample of this study reported internal control weaknesses in one or more years, most quickly remediated the condition resulting in few observations of internal control weaknesses throughout

the sample. Unlike Krishnan et al., (2011), who separate their samples into "full" or "clean" samples, the final samples in this study are "full" samples for both LAFs and AFs, meaning the sample includes firms having internal control weaknesses. Firms not having data in the Audit Analytics database for each of the seven years of the study were eliminated. Next, firms were eliminated if they did not have the necessary financial statement variables in the Computstat data base. To control for auditor shopping, firms not retaining the same auditor during the entire period of the study were omitted. Finally, firms identified by their SIC code as operating in the financial industry were removed from the sample. After eliminating all firms not having the necessary data, the final sample of large accelerated filers of 772 unique firms was obtained to test both the audit delay hypothesis and the audit fee hypothesis. According to the SEC, most U.S. publicly traded firms have a year-end in either December or January. Audits performed during December and/or January are referred to as busy-season audits. More than 95 percent of the sample firms have a fiscal year ending between December 1 and March 31, eliminating the need to control for non-busy season audit engagements. The sample selection process is summarized in Table 1.

Table 1
Large Accelerated Filers Sample Selection

Initial Sample of LAF Companies	1,792
Less: Companies not having data in Audit Analytics for each year of study, 2007-2013	-358
Less: Companies not having necessary financial statement data in Compustat	-188
Less: Companies having financial sector SIC codes	-212
Less: Companies changing external auditors during any year of the study, 2007-2013	-262
Final Full Sample	772

Descriptive Statistics

Table 2 provides the descriptive statistics for the variables used in testing audit delay for large accelerated filers. These statistics include the minimum value, maximum value, means, standard deviations, skewness, and kurtosis for the dependent and independent variables.

The sample of 5,378 observations of audit delay and other company data reveals a mean audit delay for large accelerated filers for the seven-year period of 55.11 days. This finding is consistent with Mitra et al., 2015, who find a mean of 57.75 days with their large accelerated filer sample. Skewness values indicate normal symmetry of the distribution whereas kurtosis values indicate a sharply peaked distribution with long, thin tails.

Table 2
Audit Delay Descriptive Statistics for Large Accelerated Filers

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Audit Delay (AUDELAY)	5425	14	458	55.11	15.651	13.964	268.535
Material Weakness (MWIC)	5426	0	12	.03	.306	20.840	602.792
Firm size (SIZE)	5418	13.8165	27.6898	22.367024	1.3973502	.412	1.624
High Tech Firm (HIGHTECH)	5426	0	1	.34	.474	.667	-1.556
Return on Assets (ROA)	5418	-15.2404	198.6693	.213638	5.3138386	35.768	1297.346
Audit Delay Leverage (ADLEV)	5415	0.0000	116.6667	.269251	1.6022799	70.867	5146.815
Going Concern (GOCERN)	5426	0	1	.00	.019	52.072	2710.499
Extraordinary Item (EXT)	5426	0	6	.01	.132	21.618	801.629
Reporting Segments (SEGNUM)	5411	1	113	18.39	10.737	1.511	5.420
Negative Earnings (LOSS)	5426	0	1	.09	.293	2.772	5.688
Restated Financials (RESTATE)	5426	0	1	.06	.243	3.591	10.898
Audit Opinion (AOPIN)	5426	0	1	.01	.114	8.510	70.441
Valid N (listwise)	5378						

LAF Audit Delay Variable Correlation

Correlation tests the strength and direction of two variables to each other. Regardless of the strength and direction, correlation does not necessarily imply causation. Correlation coefficients range from -1.0, a perfectly negative relationship, to

+1.0, a perfectly positive relationship. A Pearson Correlation was computed to assess the relationship between the independent variables. The Pearson Correlation Matrix presented in Table 3 shows the correlation between the variables in the large accelerated filers. The independent variables with the strongest bivariate relationship to audit delay are MWIC (material weaknesses in internal controls) at 0.389 and AOPIN (audit opinion) at 0.292. The strongest correlation coefficient among the independent variables is 0.721 between MWIC (material weaknesses in internal control) and AOPIN (audit opinion). This correlation is consistent with results from prior studies that the presence of material weaknesses in internal control increases audit risk thus requiring more time to complete the audit (Ettredge et al. 2006 and Mitra et al. 2016). The next highest correlation coefficient is 0.508 between SIZE (firm size) and AUDF (the natural log of audit fees). These findings suggest that firms with material weaknesses in internal controls and larger firms experience longer audit delay and that larger firms experience higher audit fees. All correlation coefficients fall within acceptable limits of -1.0 and +1.0.

Multicollinearity and VIF

Results of multicollinearity and VIF tests are presented in Table 4. Multicollinearity refers to the correlation, or linear association, between two independent variables. When independent variables exhibit a strong mutual

correlation, it suggests one or more of the variables does not make a significant contribution in determining the dependent variable. To test for multicollinearity, two tests are performed on the independent variables. First, the tolerance of each variable is derived. Tolerance measures the strength of the linear association between the independent variables and indicates the amount of variability of a particular independent variable that is not explained by any of the other independent variables. It is calculated by subtracting the proportion of a variable's variance explained by each of the other independent variables from 1. High tolerance values, those close to 1 and indicate little collinearity whereas tolerance values closer to 0 indicate the variable is almost entirely accounted for by the other independent variables. Tolerance values range from .478 (AOPIN) to .992 (GOCERN). All independent variables except MWIC, SIZE, LAUDF, and AOPIN are above normal tolerance values of 0.70

Table 3
Pearson Correlation Matrix for Audit Delay LAF

		AUDELAY	MWIC	SIZE	HIGHTECH	ROA	ADLEV	GOCERN	EXT	SEGNUM	LOSS	RESTATE	LAUDF	AOPIN
AUDELAY	Pearson Correlation	1												
	Sig. (2-tailed)													
	N	5425												
MWIC	Pearson Correlation	.389**	1											
	Sig. (2-tailed)	.000												
	N	5425	5426											
SIZE	Pearson Correlation	-.087**	-.010	1										
	Sig. (2-tailed)	.000	.468											
	N	5417	5418	5418										
HIGHTECH	Pearson Correlation	-.007	.033*	-.029*	1									
	Sig. (2-tailed)	.610	.016	.034										
	N	5425	5426	5418	5426									
ROA	Pearson Correlation	.008	-.003	-.177**	-.020	1								
	Sig. (2-tailed)	.538	.817	.000	.132									
	N	5417	5418	5418	5418	5418								
ADLEV	Pearson Correlation	.004	.004	-.065**	-.021	-.044**	1							
	Sig. (2-tailed)	.777	.795	.000	.120	.001								
	N	5414	5415	5415	5415	5415	5415							
GOCERN	Pearson Correlation	.010	-.002	.015	.027*	-.001	.003	1						
	Sig. (2-tailed)	.448	.905	.273	.050	.954	.798							
	N	5425	5426	5418	5426	5418	5415	5426						
EXT	Pearson Correlation	-.007	-.003	.043**	-.057**	-.003	.007	.071**	1					
	Sig. (2-tailed)	.595	.811	.001	.000	.812	.584	.000						
	N	5425	5426	5418	5426	5418	5415	5426	5426					
SEGNUM	Pearson Correlation	-.034*	.010	.271**	.088**	-.035*	-.023	-.001	.005	1				
	Sig. (2-tailed)	.012	.472	.000	.000	.010	.091	.959	.699					
	N	5410	5411	5403	5411	5403	5400	5411	5411	5411				
LOSS	Pearson Correlation	.033*	.061**	-.013	.022	-.020	.056**	.027*	-.006	-.013	1			
	Sig. (2-tailed)	.015	.000	.354	.104	.138	.000	.050	.664	.349				
	N	5425	5426	5418	5426	5418	5415	5426	5426	5411	5426			
RESTATE	Pearson Correlation	.031*	.040**	.011	-.036**	-.008	.000	.034*	.005	.020	.038**	1		
	Sig. (2-tailed)	.021	.003	.404	.009	.544	.971	.011	.727	.142	.005			
	N	5425	5426	5418	5426	5418	5415	5426	5426	5411	5426	5426		
LAUDF	Pearson Correlation	-.027	.053**	.507**	.065**	-.063**	-.002	.015	.008	.326**	-.001	.023	1	
	Sig. (2-tailed)	.051	.000	0.000	.000	.000	.902	.264	.571	.000	.956	.084		
	N	5425	5426	5418	5426	5418	5415	5426	5426	5411	5426	5426	5426	
AOPIN	Pearson Correlation	.292**	.721**	-.009	.015	-.004	.003	-.002	.002	.002	.067**	.069**	.048**	1
	Sig. (2-tailed)	.000	0.000	.487	.273	.757	.825	.870	.911	.867	.000	.000	.000	
	N	5425	5426	5418	5426	5418	5415	5426	5426	5411	5426	5426	5426	5426

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

with SIZE and LAUDF extremely close with values of 0.698 and 0.697, respectively. Second, the variance inflation factor (VIF) is another measure of multicollinearity. The VIF is the inverse of the tolerance, meaning higher values of VIF indicate high correlation among variables. A standard of 4 is often used to measure VIF, suggesting VIF values less than 4.0 indicate low degrees of multicollinearity. All VIF values for audit delay independent variables in the large accelerated filer sample are below this level, again suggesting multicollinearity is not likely an issue with the LAF audit delay study.

Table 4
Multicollinearity of Independent Variables for LAF Audit Delay

	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
MWIC	.479	2.087
SIZE	.698	1.433
HIGHTECH	.976	1.025
ROA	.963	1.038
ADLEV	.987	1.013
GOCERN	.992	1.008
EXT	.990	1.011
SEGNUM	.873	1.146
LOSS	.989	1.011
RESTATE	.990	1.010
LAUDF	.697	1.435
AOPIN	.478	2.092

LAF Audit Delay Regression Analysis

Model Summary

Table 5 presents the R values and the standard error of the estimate, all values commonly presented to indicate the predictive value of the model. The R square value of 0.160 indicates how much of the variance in the dependent variable (AUDELAY) is explained by the model. Although mainly reported when a sample is considered small, the adjusted R square is presented here as well. Adjusted R square values provide a better estimate of the variance when small samples are involved. When samples are large, as in this study, little difference exists between R square and adjusted R square values. This R square suggests a weak relationship between audit delay and these control variables.

Multiple regression analysis was used to predict the dependent variable, AUDELAY (Audit Delay). Hypothesis one test the association of audit delay with multiple control variables. The R square value presented in Table 6 indicates a value of .160, which is the R value or correlation coefficient squared. Further, the adjusted R square represents a weak, although positive and linear, association between audit delay and the independent variables used in this model, as only 16.0% of the total variation in audit delay explained by the independent variables. This value is less than the value of

0.31 (31 percent) obtained by Mitra et al., 2015 in their large accelerated filer sample. However, their study performed a comparison of audit delay between periods of AS2 and AS5. The mean result of 55.11 days for the seven-year period of this study does however correspond to their result of large accelerated filers having a clean opinion of 55.88 days.

Anova

The Anova analysis provides the statistical test for the overall model fit in terms of the F ratio. The F test is a test of overall significance. That is, it determines whether a significant relationship exists between the dependent variable and all of the independent variables.

Table 5

LAF Audit Delay Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.400[a]	.160	.158	14.393

a. Predictors: (Constant), Audit Opinion (AOPIN), Extraordinary Item (EXT), Return on Assets (ROA), Reporting Segments (SEGNUM), Audit Delay Leverage (ADLEV), Going Concern (GOCERN), Restated Financials (RESTATE), Negative Earnings (LOSS), High Tech Firm (HIGHTECH), Firm size (SIZE), Log of Audit Fee (LAUDF), Material Weakness (MWIC)

b. Dependent Variable: Audit Delay (AUDELAY)

Table 6 presents the Anova table used to test if a linear relationship exists between the variables by forming an F ratio of the mean square of the regression to the

residual mean square and a test of the coefficients of regression analysis between variables. The p-value of .000 is less than the alpha of .05 and the null hypothesis is rejected. Alternatively, SPSS calculates an F statistic of 85.332. With 12 degrees of freedom in the numerator and 5386 degrees of freedom in the denominator, $F_{.05}$ equals 1.7522. The F statistic of 85.332 is greater than 1.7522, therefore the null hypothesis is rejected and I conclude that audit delay decreased following the implementation of AS5 for large accelerated filers.

Table 6
LAF Audit Delay Anova Analysis

	Sum of Squares	df	Mean Square	F	Sig.
Regression	212113.052	12	17676.088	85.332	.000[b]
Residual	1115687.046	5386	207.146		
Total	1327800.099	5398			

Regression Coefficients

In order to evaluate the relative contribution of each independent variable in predicting the dependent variable, I examine the standardized coefficients and report these results in Table 7. Standardizing the coefficients converts each independent variable to the same scale to easily compare the contribution of each. MWIC makes the strongest unique contribution to explain the dependent variable with a coefficient of

0.373 followed by SIZE with a coefficient of -0.080. With a significance value less than .05, these two independent variables make a significant unique contribution to the prediction of the dependent variable. All remaining independent variables make minimal contributions and none are significant at the .05 level.

Table 7
LAF Audit Delay Coefficient Regression Results H1

Variable	Coefficients	t-value	Significance
(Constant)		22.546	.000
MWIC	.373	20.682	.000
SIZE	-.080	-5.344	.000
HIGHTECH	-.021	-1.638	.101
ROA	-.005	-.430	.667
ADLEV	-.004	-.333	.739
GOCERN	.012	.986	.324
EXT	-.005	-.365	.715
SEGNUM	-.014	-1.077	.282
LOSS	.007	.541	.588
RESTATE	.015	1.156	.248
LAUDF	-.002	-.110	.913
AOPIN	.021	1.161	.246

R	.400
R^2	.160
F	85.332
Significance	.000

Based on the coefficient values, variables in the model explain only 0.160 or 16 percent of the audit delay for the LAF population. Since this analysis is based on models developed by earlier researchers (Ettredge et al., 2006 and Mitra et al., 2015), sequential or combinatorial approaches omitting potential noncontributing independent variables was not employed to enhance the model predictability or explanation.

LAF Audit Fees

The sample selected for large accelerated filers was used to test the hypotheses of both audit delay and audit fees over the period of the study. No further elimination processes were applied to the sample derived in the audit delay analyses for large accelerated filers and we proceed with the analyses.

Descriptive Statistics

Table 8 presents the descriptive statistics for the audit fee model variables. Unlike the audit delay model, where the number or quantity of instances of material internal control weaknesses are reported, the audit fee model reports only the presence of material internal control weaknesses through the independent variable ICW. Of the LAFs, only 0.01 exhibit ICWs throughout the entire seven-year period of the study, perhaps because most firms are quick to remediate such issues. Some 0.98 of these firms utilize the services of auditors classified as a big four auditor (BIG4). Another item of note, no firms in the sample were issued going concern opinions. Due to the large

standard deviation, the mean of audit fees as estimated by the model is presented in natural log format. Transformed into dollars, the mean of audit fees for large accelerated filers is $4,995,000.

Table 8
LAF Audit Fee Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Log of Audit Fee (LAUDF)	5426	0.0000	8.2098	6.433099	.5927829	-4.778	51.716
IC Weakness	5426	0	1	.01	.113	8.635	72.595
Big 4 Auditor (BIG4)	5426	0	1	.98	.128	-7.528	54.695
Log of Assets (LASSET)	5426	0.0000	12.0255	9.699553	.7118148	-3.434	50.360
Engaged in Merger (MERGER)	5426	0	1	.24	.425	1.243	-.455
Market to Book Ratio (MB)	5420	-22402.0550	3247.0374	3.292729	337.6263953	-52.995	3590.416
Rec and Inv percent of assets (RECINV)	5407	0.0000	453.1359	.722403	10.0107986	36.501	1429.378
Audit Fee Leverage (AFLEV)	5420	0.0000	3.1043	.779220	.2981675	.620	2.515
Special Items Reported (SPECIAL)	5426	0	1	.98	.125	-7.755	58.164
Restructure Charge (RESTRUCTURE)	5426	0	1	.39	.488	.443	-1.805
Going Concern(GC)	5426	0	1	.00	.019	52.072	2710.499
Return on Assets (ROA)	5418	-15.2404	198.6693	.213638	5.3138386	35.768	1297.346
Negative ROA (ROANEG	5418	0	1	.09	.292	2.777	5.713
Valid N (listwise)	5403						

Correlations

Pearson correlations for audit fee variables for large accelerated filers are presented in Table 9. These correlations are computed to assess the relationship between independent variables and with the dependent variable. LASSET (natural log of total assets) has the strongest bivariate relationship with the dependent variable (LAUDF). Results for the control variables are consistent with prior research wherein larger firms (LASSET), BIG 4 auditors (BIG$), firms with greater inventories and receivables (RECINV), and restructuring (RESTRUC) are associated with increases in audit fees. LASSET, AFLEV, and RESTRUCTURE correlate substantially with the dependent variable LAUDF (.426, .255, and .239, respectively). All bivariate correlations are within acceptable ranges with several independent variables showing strong correlations with other independent variables.

Table 9
Pearson Correlation for LAF Audit Fee Variables

		LAUDF	BIG4	LASSET	MERGER	MB	RECINV	AFLEV	SPECIAL	RESTRUCTURE	GC	ROA	ROANEG	ICW
LAUDF		1												
	Sig. (2-tailed)													
	N	5426												
BIG4		.102**	1											
	Sig. (2-tailed)	.000												
	N	5426	5426											
LASSET		.426**	.051**	1										
	Sig. (2-tailed)	.000	.000											
	N	5426	5426	5426										
MERGER		.129**	.032*	.083**	1									
	Sig. (2-tailed)	.000	.018	.000										
	N	5426	5426	5426	5426									
MB		-.015	.000	-.048**	.013	1								
	Sig. (2-tailed)	.268	.988	.000	.344									
	N	5420	5420	5420	5420	5420								
RECINV		-.045**	.007	-.098**	-.024	.087**	1							
	Sig. (2-tailed)	.001	.631	.000	.080	.000								
	N	5407	5407	5407	5407	5405	5407							
AFLEV		.255**	.059**	.241**	.194**	-.027*	-.023	1						
	Sig. (2-tailed)	.000	.000	.000	.000	.043	.098							
	N	5420	5420	5420	5420	5418	5407	5420						
SPECIAL		-.046**	-.017	-.068**	.015	.001	.006	-.012	1					
	Sig. (2-tailed)	.001	.222	.000	.271	.968	.665	.381						
	N	5426	5426	5426	5426	5420	5407	5420	5426					
RESTRUCTURE		.239**	.058**	.114**	.201**	.001	.002	.239**	.011	1				
	Sig. (2-tailed)	.000	.000	.000	.000	.921	.892	.000	.409					
	N	5426	5426	5426	5426	5420	5407	5420	5426	5426				
GC		.015	.003	.013	-.011	.000	-.001	.017	.002	.024	1			
	Sig. (2-tailed)	.264	.853	.336	.432	.989	.939	.217	.858	.078				
	N	5426	5426	5426	5426	5420	5407	5420	5426	5426	5426			
ROA		-.063**	.004	-.177**	-.017	.209**	.302**	-.059**	.004	-.025	-.001	1		
	Sig. (2-tailed)	.000	.796	.000	.211	.000	.000	.000	.784	.065	.954			
	N	5418	5418	5418	5418	5416	5405	5418	5418	5418	5418	5418		
ROANEG		-.001	-.022	-.013	-.001	.003	-.013	.063**	.011	.100**	.027*	-.020	1	
	Sig. (2-tailed)	.953	.110	.335	.929	.828	.326	.000	.432	.000	.050	.138		
	N	5418	5418	5418	5418	5416	5405	5418	5418	5418	5418	5418	5418	
ICW		.049**	.002	-.006	.006	.001	.046**	.032*	-.038**	.022	-.002	-.004	.069**	1
	Sig. (2-tailed)	.000	.871	.644	.676	.970	.001	.019	.005	.106	.872	.759	.000	
	N	5426	5426	5426	5426	5420	5407	5420	5426	5426	5426	5418	5418	5426

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Multicollinearity and VIF

Collinearity statistics are presented in Table 10. All independent variables are above normal tolerance values of 0.70. All VIF values for audit fee independent variables in the LAF sample are below 4.0, suggesting that neither VIR or tolerance values indicate no multicollinearity issues present in the independent variables.

Table 10
LAF Audit Fee Collinearity Statistics

	Tolerance	VIF
(Constant)		
ICW	.988	1.012
BIG4	.991	1.009
LASSET	.867	1.153
MERGER	.929	1.076
MB	.955	1.047
SEGSQRT	.807	1.240
FOREIGN	.877	1.140
RECINV	.903	1.108
AFLEV	.867	1.154
SPECIAL	.988	1.012
RESTRUCTURE	.832	1.201
GC	.998	1.002
ROA	.854	1.171
ROANEG	.978	1.023

Model Summary

Table 11 presents the R results of the audit fee model for LAFs. The R square value of .289 indicates how much of the variance in the dependent variable LAUDF (natural log of audit fees) is explained by the model. Although not an especially strong R square value, .289 represents a positive and linear relationship between LAUDF and the independent variables used in this model. This R square value is less than that obtained in the Krishnan et al. (2011) study, their R squares of .79 and .81 result from a different configuration of the sample. They combined all LAF and AF firms into one sample then separated out a subset sample of firms having clean audit opinions as they were testing more for the effect of the audit opinion on firms, whereas this study uses virtually the same model but separates the sample into LAFs and AFs.

Table 11

LAF Audit Fee Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538[a]	.289	.288	.5003566

Anova

The Anova analysis provides the statistical test for the overall model fit in terms of the F ratio. The F test is a test of overall significance. That is, it determines whether a

significant relationship exists between the dependent variable and all of the independent variables.

Table 12 presents the Anova table used to test if a linear relationship exists between the variables by forming an F ratio of the mean square of the regression to the residual mean square and a test of the coefficients of regression analysis between variables. Using the p-value approach, the rejection rule is to reject H3 if the p-value is less than or equal to 0. The p-value of .000 is less than the alpha of .05 and the null hypothesis is rejected. Alternatively, SPSS calculates an F statistic of 155.565. With 14 degrees of freedom in the numerator and 5348 degrees of freedom in the denominator, $F_{.05}$ equals 1.6950. The F statistic of 155.565 is greater than 1.6950, therefore the null hypothesis is rejected and conclude that audit fees decreased following the implementation of AS5 for large accelerated filers.

Table 12

LAF Audit Fee ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	545.254	14	38.947	155.565	.000[b]
	Residual	1338.908	5348	.250		
	Total	1884.161	5362			

Coefficient of Regressions Results H2

Regression coefficients provide a way to evaluate the relative contribution of each independent variable in predicting the dependent variable. Coefficients are standardized or converted to the same scale to make easy comparison. LASSET (natural log of assets), with a coefficient of .334, makes the strongest unique contribution to explaining the dependent variable. Other independent variables making contributions include SEGSQRT (square root of number of entity reporting segments) with a coefficient of .202 and AFLEV (the entity's total debt divided by its total assets) with a coefficient of .129. With a significance value less than .05, each of these independent variables make a significant unique contribution of the dependent variable. All other remaining variables make minimal contributions.

Table 13
LAF Audit Fee Regression Analysis

Variable	Coefficients	t-value	Significance
(Constant)		22.766	.000
ICW	.040	3.487	.000
BIG4	.058	4.992	.000
LASSET	.334	27.006	.000
MERGER	.031	2.604	.009
MB	.002	.168	.867
SEGSQRT	.202	15.772	.000
FOREIGN	.074	6.039	.000
RECINV	-.016	-1.280	.201
AFLEV	.129	10.422	.000
SPECIAL	-.005	-.466	.641
RESTRUCTURE	.089	7.081	.000
GC	.007	.614	.539
ROA	.020	1.637	.102
ROANEG	-.010	-.832	.405

R = .538
R^2 = .289
F = 155.565
Significance = .000

Based upon the coefficient values, the variables in the model explain only 0.289 or 28.9 percent of the audit fee population for large accelerated filers. Since this analysis is based on models developed by earlier researchers (Krishnan et al., 2011) sequential or combinatorial approaches omitting potential noncontributing independent variables was not employed to enhance the model predictability or explanation.

Accelerated Filers

Policymaking organizations, in particular the PCAOB, expected AS5 to have a greater benefit on smaller, less complex firms as compared to larger, more complex firms. The primary reason for this expectation was the ability of the auditors to scale the audit under the more relaxed provisions of AS5.

Sample Selection

The selection process used to derive the sample for accelerated filers analyses followed the same steps as those used to derive the sample for large accelerated filers with one exception. The Audit Analytics database search criteria could not be set to directly select firms classified as accelerated filers using market capitalization dollar amounts. Audit Analytics stratified its dollar amounts at greater than $70M or greater than $80M, whereas the SEC defines an accelerated filer as having a market capitalization of greater than $75M. Therefore, it was necessary to initially select firms having market caps as low as $70M and then using the sort procedure in Excel to identify those firms having a market cap of less than $75M and remove them from the sample. Otherwise, the sample selection process was identical to that used for large accelerated filers. Table 14 presents the sample selection process.

Table 14
Sample Selection

Initial Sample of LAF Companies	1,195
Less: Companies not having data in Audit Analytics for each year of study, 2007-2013	-294
Less: Companies not having necessary financial statement data in Compustat	-206
Less: Companies having financial sector SIC codes	-258
Less: Companies changing external auditors during any year of the study, 2007-2013	-194
Less: Companies not meeting minimum capitalization requirement for AF	-9
Final Full Sample for AFs (Unique Companies)	234

AF Descriptive Statistics

Table 15 presents the descriptive statistics for the accelerated filer sample for the seven-year period of the study. Mean audit delay for these smaller firms is 69.29 days which again, is consistent with the findings of Mitra et al, (2015). Forty-seven percent of the AF firms are classified as high-tech, compared to thirty-four percent of LAF firms. Whereas only nine percent of the LAF firms report losses, thirty-two percent of AF firms report losses. Leverage, computed as total debt divided by total assets, is

less with AF firms (17.8%) compared to LAF firms (26.9%), indicating less reliance on debt in the capital structure.

Table 15

AF Audit Delay Model Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Audit Delay (AUDELAY)	1639	23	369	69.29	23.567	7.396	72.037
Material Weakness (MWIC)	1639	0	1	.05	.209	4.352	16.957
Firm Size (SIZE)	1632	15.0926	24.7315	19.515758	1.0155286	.391	3.829
HighTech Firm (HIGHTECH)	1639	0	11	.47	.562	4.102	73.065
Return on Assets (ROA)	1632	-2.6986	7.7238	.015153	.3701398	10.893	200.711
Audit Delay Leverage (ADLEV)	1632	0.0000	10.7217	.178168	.4885494	12.316	219.548
Going Concern (GOCERN)	1639	0	1	.00	.049	20.187	405.994
Extraordinary Item (EXT)	1639	0	1	.00	.035	28.601	816.995
Reporting Segments (SEGNUM)	1626	0	80	12.25	8.684	2.180	10.625
Negative Earnings (LOSS)	1639	0	1	.32	.465	.789	-1.379
Restated Financials (RESTATE)	1639	0	1	.04	.194	4.764	20.717
Audit Opinion (AOPIN)	1639	0	1	.02	.147	6.529	40.678
Valid N (listwise)	1619						

AF Audit Delay Variable Correlation

A Pearson correlation was computed to assess the relationship between the independent variables. Correlations between the variables for the AFs are presented in Table 16. As with the LAFs, the independent variable with the strongest bivariate

relationship to audit delay is MWIC (material weaknesses in internal controls, although the correlation for AFs was half as strong (.192 to .389). As with the LAFs, MWIC and AOPIN exhibit the strongest relationship among independent variables at .664. Other strong correlations exist between AOPIN and RESTATE at .163 and AOPIN and COCERN at .161. These results suggest that AFs having material weaknesses in internal controls also tend to restate their financial statements and have going concern issues.

Table 16
AF Audit Delay Pearson Correlation Matrix

Variable		AUDELAY	MWIC	SIZE	HIGHTECH	ROA	ADLEV	GOCERN	EXT	SEGNUM	LOSS	RESTATE	AOPIN
AUDELAY		1											
	Sig. (2-tailed)												
	N	1639											
MWIC		.192**	1										
	Sig. (2-tailed)	.000											
	N	1639	1639										
SIZE		-.004	.003	1									
	Sig. (2-tailed)	.877	.906										
	N	1632	1632	1632									
HIGHTECH		-.041	.016	-.236**	1								
	Sig. (2-tailed)	.099	.529	.000									
	N	1639	1639	1632	1639								
ROA		.015	-.035	-.102**	-.079**	1							
	Sig. (2-tailed)	.551	.163	.000	.001								
	N	1632	1632	1632	1632	1632							
ADLEV		.094**	.124**	.007	-.129**	.011	1						
	Sig. (2-tailed)	.000	.000	.789	.000	.643							
	N	1632	1632	1632	1632	1632	1632						
GOCERN		.013	.048	-.012	.003	-.067**	.023	1					
	Sig. (2-tailed)	.598	.050	.617	.906	.007	.358						
	N	1639	1639	1632	1639	1632	1632	1639					
EXT		.002	-.008	.007	.002	.005	.016	-.002	1				
	Sig. (2-tailed)	.942	.757	.773	.933	.852	.522	.944					
	N	1639	1639	1632	1639	1632	1632	1639	1639				
SEGNUM		.021	.012	.092**	.153**	-.017	-.025	-.020	.045	1			
	Sig. (2-tailed)	.386	.629	.000	.000	.502	.308	.419	.067				
	N	1626	1626	1619	1626	1619	1619	1626	1626	1626			
LOSS		.003	.064**	-.116**	.090**	-.346**	.041	.073**	-.024	-.017	1		
	Sig. (2-tailed)	.907	.009	.000	.000	.000	.100	.003	.336	.505			
	N	1639	1639	1632	1639	1632	1632	1639	1639	1626	1639		
RESTATE		.009	.167**	-.007	.012	-.065**	.020	.054*	-.007	-.003	.059*	1	
	Sig. (2-tailed)	.703	.000	.786	.630	.009	.414	.029	.776	.899	.017		
	N	1639	1639	1632	1639	1632	1632	1639	1639	1626	1639	1639	
AOPIN		.050*	.664**	.016	.001	-.032	-.004	.161**	-.005	-.040	.068**	.163**	1
	Sig. (2-tailed)	.044	.000	.517	.953	.190	.874	.000	.832	.103	.006	.000	
	N	1639	1639	1632	1639	1632	1632	1639	1639	1626	1639	1639	1639

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Multicollinearity and VIF

In Table 17, we see tolerance values range from .527 to .997 with all independent variables except MWIC, SIZE, LAUDF, and AOPIN having values above 0.70. All VIF values are less than 4.0. Together, the results of these two tests suggest multicollinearity is not an issue with the AFs audit delay model.

Table 17
AF Audit Delay Collinearity Statistics

	Tolerance	VIF
(Constant)		
MWIC	.532	1.881
SIZE	.612	1.634
HIGHTECH	.872	1.147
ROA	.847	1.181
ADLEV	.948	1.055
GOCERN	.959	1.043
EXT	.997	1.003
SEGNUM	.906	1.104
LOSS	.826	1.211
RESTATE	.961	1.041
LAUDF	.614	1.628
AOPIN	.527	1.899

Model Summary

Table 18 presents the R values and standard error of the estimate. The R square value indicates only 5.5 percent of the variance in the dependent variable AUDELAY is explained by this set of independent variables. Similar to the result for LAFs, this result is somewhat weak (<.30). However, the results are consistent with those of Mitra et al., 2015, who report R squares of 0.31 and 0.21, respectively, in their LAF and AF samples.

Table 18

AF Audit Delay Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.234[a]	.055	.047	23.001

a. Predictors: (Constant), Audit Opinion (AOPIN), HighTech Firm (HIGHTECH), Extraordinary Item (EXT), Return on Assets (ROA), Audit Delay Leverage (ADLEV), Reporting Segments (SEGNUM), Going Concern (GOCERN), Restated Financials (RESTATE), Firm Size (SIZE), Negative Earnings (LOSS), Log of Audit Fees (LAUDF), Material Weakness (MWIC)

b. Dependent Variable: Audit Delay (AUDELAY)

Anova

The Anova analysis provides the statistical test for the overall model fit in terms of the F ratio. The F test is a test of overall significance. That is, it determines whether a significant relationship exists between the dependent variable and all of the independent variables.

Table 19 presents the Anova table used to test if a linear relationship exists between the variables by forming an F ratio of the mean square of the regression to the residual mean square and a test of the coefficients of regression analysis between variables. Using the p-value approach, the rejection rule is to reject H2 if the p-value is less than or equal to 0. The p-value of .000 is less than the alpha of .05 and the null hypothesis is rejected. Alternatively, SPSS calculates an F statistic of 7.694. With 12 degrees of freedom in the numerator and 1600 degrees of freedom in the denominator, $F_{.05}$ equals 1.7522. The F statistic of 7.694 is greater than 1.7522, therefore the null hypothesis is rejected and I conclude that audit delay decreased following the implementation of AS5 for accelerated filers.

Table 19

AF Audit Delay ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48843.743	12	4070.312	7.694	.000[b]
	Residual	846491.022	1600	529.057		
	Total	895334.765	1612			

a. Dependent Variable: Audit Delay (AUDELAY)

b. Predictors: (Constant), Audit Opinion (AOPIN), HighTech Firm (HIGHTECH), Extraordinary Item (EXT), Return on Assets (ROA), Audit Delay Leverage (ADLEV), Reporting Segments (SEGNUM), Going Concern (GOCERN), Restated Financials (RESTATE), Firm Size (SIZE), Negative Earnings (LOSS), Log of Audit Fees (LAUDF), Material Weakness (MWIC)

AF Audit Delay Coefficient of Regressions Results $H2_a$

Table 20 presents the standardized coefficients of each independent variable. As with the LAFs, MWIC makes the strongest unique contribution to explaining the dependent variable with a standardized coefficient of .275. Thus, as audit delay increases in the AFs, the presence of MWIC would increase as well. AOPIN, with a negative standardized coefficient of -.134, also makes a strong unique contribution, suggesting as audit delay increases, the likelihood of an adverse audit opinion increases.

Table 20
AF Audit Delay Coefficient of Regression Results H1

Variables	Coefficients	t-value	Significance
(Constant)		5.119	.000
MWIC	.275	8.240	.000
SIZE	-.029	-.923	.356
HIGHTECH	-.046	-1.771	.077
ROA	.016	.618	.537
ADLEV	.055	2.190	.029
GOCERN	.022	.879	.380
EXT	.002	.065	.948
SEGNUM	.018	.694	.488
LOSS	-.004	-.167	.867
RESTATE	-.016	-.664	.507
LAUDF	.027	.871	.384
AOPIN	-.134	-4.005	.000

R = .234
R^2 = .055
F =7.694
Significance = .000

Based upon the coefficient values, the variables in the model explain only 0.055 or 5.5 percent of the audit delay for the accelerated filer population. Since this analysis is based on models developed by earlier researchers (Ettredge et al. 2006 and Mitra et al. 2016), sequential or combinatorial approaches omitting potential noncontributing independent variables was not employed to enhance the model predictability or explanation.

Accelerated Filers

Audit Fee

Following the model established by Krishnan et al., (2011), we test to determine if audit fees decreased during the period 2007-2013. Unlike Krishnan et al (2011), we do not focus on how the presence of internal control weaknesses (ICW) impact audit fees by dividing our sample into a "full" sample, one containing firms with and without ICW and a "clean" sample, one without ICW. Instead, our approach seeks to determine the effect of AS5 using just the "full" sample approach. Also, by maintaining the firm-auditor relationship over the period of the study, the effect of AS5 is isolated as the relationship serves as its own control. Other independent variables serve as proxies for factors identified in prior studies that represent audit effort, such as firm complexity, firm performance, and auditor type. FOREIGN and SEGSQRT proxy for firm complexity

(Francis et al., 2005) whereas BIG4 serves as a proxy for auditor reputation (Palmrose, 1986).

Descriptive Statistics

Descriptive statistics for accelerated filers audit fees are presented in Table 21. Usual statistics are presented such as means, minimum and maximum values, standard deviation, skewness, and kurtosis. Due to the large standard deviation, the mean of audit fees as estimated by the model is presented in natural log format. Transformed into dollars, the mean of audit fees for accelerated filers is $1,034,000. Seventy-four percent of AFs hire a big accounting firm to conduct their annual audit. Fifty-three percent report special items and thirty-one percent report negative return on assets.

Table 21

AF Audit Fee Model Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
LAUDF	1630	10.9662	17.9379	13.457206	.6783221	-.146	2.214
ICW	1643	0	1	.04	.203	4.497	18.245
BIG4	1643	0	1	.74	.441	-1.067	-.862
LASSET	1636	15.0926	24.7315	19.516319	1.0261175	.395	3.936
MERGER	1643	0	1	.16	.364	1.887	1.563
MB	1621	-9894.8064	4783.2792	8.010972	332.8144264	-10.655	554.258
SEGSQRT	1643	0.0000	8.9443	3.253340	1.2498788	.046	1.511
FOREIGN	1643	0	1	.19	.396	1.548	.396
RECINV	1634	0.0000	20.8960	.264991	.8296343	19.073	417.376
AFLEV	1636	.0051	2.7998	.614129	.3261175	.796	1.902
SPECIAL	1643	0	1	.53	.499	-.140	-1.983
RESTRUC	1643	0	1	.22	.413	1.372	-.117
GC	1643	0	1	.01	.082	12.109	144.814
ROA	1636	-2.6986	7.7238	.017470	.3801448	10.522	184.200
ROANEG	1636	0	1	.31	.464	.804	-1.355
Valid N	1614						

Correlations

Pearson Correlations for accelerated filers audit fees are presented in Table 22. LASSET, AFLEV, and SPECIAL correlate substantially with the dependent variable LAUDF (.542, .308, and .266, respectively). All bivariate correlations are within acceptable ranges with several independent variables showing strong correlations with other independent variables. AFLEV, a measure of firm's total debt divided by its total assets, and LASSET, the natural log of total assets, have a correlation coefficient of .256.

SPECIAL (firm reports special items in Computstat – SPI) and MERGER report a .386 correlation coefficient. GC (going concern) and ICW report a .276 correlation coefficient. These correlations are all positive, meaning as one independent variable increases so does the other. Many other variables show significant correlations at either the .01 or .05 level.

Table 22

AF Audit Fee Model Pearson Correlations

		LAUDF	ICW	BIG4	LASSET	MERGER	MB	RECINV	AFLEV	SPECIAL	RESTRUC	GC	ROA	ROANEG
LAUDF		1												
	Sig. (2-tailed)													
	N	1626												
ICW		.091**	1											
	Sig. (2-tailed)	.000												
	N	1626	1639											
BIG4		.040	-.008	1										
	Sig. (2-tailed)	.108	.751											
	N	1626	1639	1639										
LASSET		.542**	-.005	.025	1									
	Sig. (2-tailed)	.000	.831	.317										
	N	1621	1632	1632	1632									
MERGER		.144**	-.026	-.025	.057*	1								
	Sig. (2-tailed)	.000	.290	.316	.022									
	N	1626	1639	1639	1632	1639								
MB		-.079**	-.001	-.043	-.087**	-.006	1							
	Sig. (2-tailed)	.001	.969	.087	.000	.823								
	N	1612	1617	1617	1617	1617	1617							
RECINV		-.024	.107**	-.014	-.057*	.006	.036	1						
	Sig. (2-tailed)	.332	.000	.569	.022	.794	.153							
	N	1619	1630	1630	1630	1630	1615	1630						
AFLEV		.308**	.001	.000	.256**	.136**	.004	-.064**	1					
	Sig. (2-tailed)	.000	.973	.989	.000	.000	.871	.010						
	N	1621	1632	1632	1632	1632	1617	1630	1632					
SPECIAL		.266**	-.006	-.034	.105**	.386**	-.012	.060*	.129**	1				
	Sig. (2-tailed)	.000	.810	.170	.000	.000	.635	.015	.000					
	N	1626	1639	1639	1632	1639	1617	1630	1632	1639				
RESTRUC		.232**	-.010	.002	.009	.162**	-.006	.018	.050*	.479**	1			
	Sig. (2-tailed)	.000	.676	.948	.714	.000	.799	.456	.044	.000				
	N	1626	1639	1639	1632	1639	1617	1630	1632	1639	1639			
GC		.006	.276**	-.018	-.066**	-.036	.000	-.012	.017	-.028	-.025	1		
	Sig. (2-tailed)	.820	.000	.459	.008	.151	.988	.614	.488	.253	.308			
	N	1626	1639	1639	1632	1639	1617	1630	1632	1639	1639	1639		
ROA		-.164**	-.035	-.034	-.102**	-.003	.360**	.043	.022	-.071**	-.079**	-.085**	1	
	Sig. (2-tailed)	.000	.161	.169	.000	.914	.000	.080	.369	.004	.001	.001		
	N	1621	1632	1632	1632	1632	1617	1630	1632	1632	1632	1632	1632	
ROANEG		.104**	.059*	-.008	-.116**	-.004	-.010	-.033	.055*	.095**	.131**	.089**	-.346**	1
	Sig. (2-tailed)	.000	.018	.756	.000	.872	.695	.177	.027	.000	.000	.000	.000	
	N	1621	1632	1632	1632	1632	1617	1630	1632	1632	1632	1632	1632	1632

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Multicollinearity and VIF

Tolerance values for the AF audit fee independent variables range from .635 to .995. Only SPECIAL and ROA have tolerance values below 0.70, the value considered to be the acceptable lower limit, at .635 and .698, respectively. VIF values are all below the normally accepted standard of 4.0. These results provide strong support that multicollinearity is not a issue for this model.

Table 23
AF Audit Fee Collinearity Statistics

	Tolerance	VIF
(Constant)		
ICW	.908	1.101
BIG4	.995	1.005
LASSET	.854	1.172
MERGER	.828	1.207
MB	.814	1.229
SEGSQRT	.837	1.195
FOREIGN	.871	1.148
RECINV	.968	1.033
AFLEV	.888	1.126
SPECIAL	.635	1.575
RESTRUC	.748	1.336
GC	.906	1.104
ROA	.698	1.433
ROANEG	.815	1.228

AF Audit Fee Regression Analysis

Model Summary

Table 24 presents the R values and standard error of the estimate, all values commonly presented to indicate the predictive value of the model. The R square value of .445 indicates how much of the variance in the dependent variable (LAUDF) is explained by the model. The small difference between the R square and the adjusted R square is due to the sample being sufficiently large.

The R square value of .445 suggests a moderately strong relationship between the dependent variable and the model's independent variables. This value is less than the R squares of 0.79 and 0.81 obtained by Krishnan et al., 2011, in their full and clean samples, respectively.

Table 24

AF Audit Fee Regression Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667[a]	.445	.440	.5075344

a. Predictors: (Constant), Negative ROA (ROANEG), Engaged in Merger (MERGER), Market to Book Ratio (MB), Big 4 Auditor (BIG4), Rec and Inv percent of assets (RECINV), Going Concern (GC), Foreign Operations (FOREIGN), Audit Fee Leverage (AFLEV), Restructure Charge (RESTRUC), IC Weakness (ICW), Company Size (LASSET), Segment Sq Root (SEGSQRT), Return on Assets (ROA), Special Iterms Reported (SPECIAL)

b. Dependent Variable: Log of Audit Fees (LAUDF)

Anova

The Anova analysis provides the statistical test for the overall model fit in terms of the F ratio. The F test is a test of overall significance. That is, it determines whether a significant relationship exists between the dependent variable and all of the independent variables.

Table 25 presents the Anova table used to test if a linear relationship exists between the variables by forming an F ratio of the mean square of the regression to the residual mean square and a test of the coefficients of regression analysis between variables. Using the p-value approach, the rejection rule is to reject H4 if the p-value is less than or equal to 0. The p-value of .000 is less than the alpha of .05 and the null hypothesis is rejected. Alternatively, SPSS calculates an F statistic of 91.699. With 14 degrees of freedom in the numerator and 1601 degrees of freedom in the denominator, $F_{.05}$ equals 1.6950. The F statistic of 91.699 is greater than 1.6950, therefore the null hypothesis is rejected and I conclude that audit fees decreased following the implementation of AS5 for accelerated filers.

Table 25

AF Audit Fee ANOVA Analysis[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	330.692	14	23.621	91.699	.000[b]
	Residual	412.403	1601	.258		
	Total	743.095	1615			

a. Dependent Variable: Log of Audit Fees (LAUDF)
b. Predictors: (Constant), Negative ROA (ROANEG), Engaged in Merger (MERGER), Market to Book Ratio (MB), Big 4 Auditor (BIG4), Rec and Inv percent of assets (RECINV), Going Concern (GC), Foreign Operations (FOREIGN), Audit Fee Leverage (AFLEV), Restructure Charge (RESTRUC), IC Weakness (ICW), Company Size (LASSET), Segment Sq Root (SEGSQRT), Return on Assets (ROA), Special Iterms Reported (SPECIAL)

Regression Coefficients

The standardized regression coefficients are presented in Table 26. LASSET makes the strongest unique contribution to explaining the dependent variable (LAUDF) with a standardized coefficient of .497. AFLEV, RESTRUC, and FOREIGN also make unique contributions, with each significant at the .05 level.

Table 26
AF Audit Fee Regression Coefficients

Variables	Coefficients[a]	t-value	Significance
(Constant)		25.151	.000
ICW	.087	4.452	.000
BIG4	.031	1.684	.092
LASSET	.497	24.656	.000
MERGER	.019	.917	.360
MB	-.012	-.586	.558
SEGSQRT	.106	5.226	.000
FOREIGN	.120	6.010	.000
RECINV	-.004	-.188	.851
AFLEV	.169	8.575	.000
SPECIAL	.056	2.417	.016
RESTRUC	.127	5.911	.000
GC	.006	.318	.750
ROA	-.066	-2.944	.003
ROANEG	.097	4.681	.000

a. Dependent Variable: Log of Audit Fees (LAUDF)

R = .667
R^2 = .445
F = 91.699
Significance = .000

Based upon the coefficient values, the variables in the model explain only 0.445 or 44.5 percent of the audit fees for the accelerated filer population. Since this analysis is based on a model developed by an earlier researcher (Krishnan et al., 2011), sequential or combinatorial approaches omitting potential noncontributing independent variables was not employed to enhance the model predictability or explanation.

Trends in Audit Delay and Audit Fees

The models for audit delay and audit fees were tested in SPSS using the samples for large accelerated filers and accelerated filers. Multiple regression analyses were conducted on each model and sample using the combined observations for the seven-year period of the study. Results were carefully analyzed to determine if problems existed in the data or the model. After review of each model using its associated large accelerated filer sample and accelerated filer sample, results obtained verified the validity of the model, the normal assumptions regression analysis, and the validity of the data. In order to determine the trend during the seven-year period, each model and sample was analyzed year to year. A discussion of those findings follows.

Table 28, Panel A, presents the mean of audit delay by calendar year as well as the mean for the entire seven-year period of the study. Firms are divided into large accelerated filers and accelerated filers. The mean audit delay for the large accelerated filers of 58.3 days for the first year of the study, 2007, represents a significant decrease for the first year of audit delay under AS5 compared to the 2006 mean audit delay of 70 days Ettredge et al. (2006) find for the last year of AS2 and 64.23 days Mitra et al. (2015) find in their full sample of clean firms. Comparing results from 2007, Mitra el al. (2015) find mean audit delay of 62.48 days under AS5 for their sample

of clean firms. It would appear that audit delay decreased significantly during the first year of AS5. However, looking at the year-to-year results, although audit delay again decreased during 2008-2010, in 2011 audit delay increased slightly (0.5 day), the decreased 0.7 days in 2012, and increased once again in 2013 by 0.9 days. While audit delay in the large accelerated filer group decreased from 58.3 days to 54.8 days from 2007 to 2013, mean audit delay from 2008 to 2013 was consistent from year to year, without significant change and, in fact, increased in the final year of this study.

Accelerated filer results for mean audit delay from 2007 to 2013 are presented in Panel A as well. The mean audit delay behaved quite dissimilarly to results obtained by Mitra el al. (2015). In their sample of clean accelerated filers, their trend shows a steady year-to-year decrease from 2007 to 2010, with a small increase in 2011 (the last year of their study). Mean audit delay decreased each year from results of the prior year, with audit delay declining from 67.75 days in 2007 to 65.73 days in 2010. Similar to results obtained in this study, they too report a small increase from 2010 to 2011 in each filer group.

Table 27, Panel B, presents the mean of audit fees by calendar year as well as the mean for the entire seven-year period of the study. As in Panel A, firms are divided into two groups, large accelerated filers and accelerated filers. The panel shows the overall mean audit fee for large accelerated filers to be $4,995,000. The purpose of this study

was to determine if audit fees declined following the implementation of AS5 and the period of the study begins with 2007 and ends with 2013. During this seven-year period, Panel B reveals audit fees increased in 2008 compared to 2007, followed by consecutive decreases in 2009 and 2010. Starting with 2011, audit fees began to increase each year, with 2013 results nearly $500,000 more than the seven-year mean. Such increases are likely caused by the economic recovery experienced nationally and globally beginning with 2010 and the likelihood audit firms were not as concerned about price sensitivity has they were in the earlier years of the this study.

Results for accelerated filers differ slightly from those of the large accelerated filer group. Mean audit fees show a steady decrease from 2007 through 2010, followed by two consecutive years of increases, ending with a small decrease in 2013.

No consistent declining trends in audit delay or audit fees can be shown from results obtained in this study. At best, results are inconsistent, with some years increasing from prior years, followed by decreases in subsequent years. At worst, results tend to indicate a relative ineffectiveness of AS5 in moderating audit delay and audit fees.

Table 27
Trends in Audit Delay and Audit Fees

Panel A: Audit Delay Mean (in days) by Calendar Year

	2007	2008	2009	2010	2011	2012	2013	Overall
Large Accelerated Filers	58.3	55.6	54.3	54.1	54.6	53.9	54.8	55.11
Accelerated Filers	72.9	68.7	71.4	66.4	68.2	68.7	68.8	69.3

Panel B: Audit Fees Mean (in $M) by Calendar Year

	2007	2008	2009	2010	2011	2012	2013	Overall
Large Accelerated Filers	$4.926	$5.014	$4.817	$4.796	$4.916	$5.103	$5.4	$4.995
Accelerated Filers	1.027	1.017	0.952	0.926	0.943	1.254	1.114	1.034

CHAPTER V

CONCLUSIONS

In this study, the impact of Auditing Standard No. 5 (AS5) on audit delay and audit fees on both large accelerated filers and accelerated filers is investigated. This chapter presents a summary of the study and associated research findings. Limitations of the research are discussed as well as areas of interest for future research. This study extends the body of research on audit delay and audit fees in the AS5 era. Finally, implications for researchers, practitioners, and regulators are discussed briefly.

Research Findings

AS5 replaced Auditing Standard No. 2, a standard replete with new reporting requirements following the many accounting scandals and failures that occurred in and around the year 2000. The PCAOB in its administrative and enforcement role established these standards in an effort to restore confidence in the accounting profession and the investing public in the integrity of publicly disclosed financial reports. Unintended consequences of this new auditing standard included audit fees substantially above those projected by the SEC and increased audit delay, most likely due to the additional reporting requirements imposed on external auditors. Due to the heavy criticism of AS2 by not only public corporation executives and business organizations, the PCAOB responded by replacing it with AS5, effective in 2007. The primary goal of AS5 was to streamline the audit process through several changes to the auditing standards and thus, reduce audit delay and audit fees. Both large accelerated filers and accelerated filers were expected to benefit from this new standard, but it was expected that AS5 would have a greater effect on smaller firms, primarily due to the scalability of the audit procedures.

Following well-established models for both audit delay and audit fees, I test to determine if, following implementation of AS5, reductions occurred to either or both

audit delay and audit fees. Although the findings were inconsistent in both filer groups, audit delay in the large accelerated filer sample providing a consistent but not declining trend during the period of the study. Other findings include a significant decrease in audit delay between years 2007 and 2008 in the accelerated filer group. Unlike the large accelerated filers, audit delay sharply increased in 2009 followed by a sharp decrease (5.0 days) in 2010, then increased each year to the conclusion of the study period. Findings for audit fees showed inconsistent result in both groups throughout the period of the study, with one exception. Beginning in 2010, both groups exhibit increases in mean audit fees which are sustained throughout the period.

Implications

Several conclusions can be drawn from the results presented in Chapter IV. Both audit delay and audit fees exhibit strong relationships with the presence of internal control weaknesses, size of the firm, and complexity of the firm. For firms wishing to disclose annual results ahead of auditor reports, the absence of internal control weaknesses would seem to provide the best avenue to this goal. Firm size and complexity add extra dimensions to the audit, increasing time to complete as well as cost. From a regulatory point of view, it appears AS5 has not yet met the intended reductions to audit delay and audit fees. The PCAOB needs to remain vigilant in its

efforts to reduce the financial burden on publicly traded firms imposed by audit delay and audit fees.

Limitations of this Study

As with most any study, certain limitations are inherent in this study. First, not all firms identified in the Audit Analytics database as either a large accelerated filer or accelerated filer had data for all years of the study. Second, not all firms identified in the Audit Analytics database as either a large accelerated filer or accelerated filer had the necessary financial statement data in the Compustat database. Third, the requirement that all firms included in each sample have the same auditor, while acting as a strong control, eliminated some firms from the study which otherwise would have been included. Fourth, although well-established models for both audit delay and audit fees were chosen from prior research, several of the independent variables in each part of the study failed to make any significant contributions in
the regression analyses, leading to a possible conclusion that other variables may exist which could add better explanation to the models. Finally, firms smaller than accelerated filers were not examined in this study. As the scaling effect of AS5 was expected to have greater effect on small firms, the impact of AS5 on these firms is less well known.

Future Research Opportunities

These inconsistencies in findings should encourage further research into audit delay and audit fee behavior. As long as neither can be shown to be decreasing, it is questionable whether AS5 achieved its objective of increasing efficiencies in the audit process or if efficiencies resulted in savings passed on to firms. Based on the results obtained in this study, it is difficult to assert AS5 has reduced audit delay and audit fees.

Future researchers should continue to examine AS5 effectiveness. Further studies replicating the samples of prior studies while increasing the period of the study would possibly reveal long term trends. So far, researchers have chosen to examine AS5 effects using either different sample configurations or different model criteria. Although some findings suggest AS5 effectiveness in one area, other findings provide inconsistent results, leaving the field open to further research.

Future research should explore other independent variables for possible drags on audit delay and audit costs. Many independent variables in this study made weak or insignificant contributions in explaining audit delay and audit fees. However, with results as inconsistent as these, it would appear other factors are contributing to the up and down results seen in the year-to-year trend analysis.

Changes to SEC 10-K filing deadlines for large accelerated filers might also provide another rich area of audit delay study. These firms became subject to a 60-day

Form 10-K annual report filing deadline, beginning with the annual report filed for its first fiscal year ending on or after December 15, 2006. Such a change, just ahead of the change to AS5, might have contributing effects on increased audit delay that are discernable from AS5 implementation alone.

Audit delay and audit fee behavior provide an opportunity for management to signal the success of their companies in the marketplace. Future research might incorporate how signaling theory can be tied with agency theory in describing management behavior and attitudes towards reductions in audit delay and audit fees. Implications to financial statements and investor confidence to missed SEC 10-K and 10-Q deadlines present another rich area for audit delay and/or audit fee study.

Additionally, with no clear, unambiguous results in this study, further study of audit delay and audit fee behavior remains necessary. While the general economy seems to have recovered from the devastating effects of the accounting debacles that led to the downfall of many well-known and trusted U.S. companies and thus these changes to the regulatory oversight, the threat to the financial marketplace remains. Assessment must remain the watchword in determining how well regulations are performing in the quest to bring timely and accurate information to the market.

Research Contribution

The purpose of this research was to examine the effectiveness of AS5 in reducing audit delay and audit fees as a goal of the PCAOB and SEC. In order to determine its effectiveness, audit delay and audit fees of U.S. publicly traded firms were examined over the period 2007 through 2013. Using well-established models for both audit delay and audit fees, initial decreases in both audit delay and audit fees was shown to occur immediately following the implementation of AS5 in both large accelerated filers and accelerated filers. However, results for the entire period of the study were inconsistent and thus it is not possible to assert that AS5 has met its primary objective of simplifying the audit process and thus reducing audit delay and audit fees.

This study adds to the body of research into audit delay and audit fee behavior. It contributes to the existing literature by examining audit delay and audit fees for an extended period of the AS5 era. No other studies have looked beyond simple comparisons of the last two years of AS2 to the first two years of AS5. No other studies have provided a trend analysis over a seven-year period. As with any research, there is still more which can be understood about audit delay and audit fee behavior. Perhaps future researchers will address issues identified above. Although the results of this study yielded inconsistent results as to the effectiveness of AS5, the contribution of this study is still positive and adds to the literature in this area. Additional research based

on the findings of this study and suggestions for future research will aid in determining regulatory changes aimed at improving the audit function.

APPENDIX

TERMINOLOGY

Definition of Terms

Accelerated filer -A term used by the Securities and Exchange Commission to describe a firm issuing reports (i.e., Forms 10-K, 10-Q) by both its size and obligation to meet accelerated filing deadlines for these reports. Large accelerated filers are firms with a public equity float of $700 million or more. Accelerated filers are firms with a public equity float between $70 million and $700 million. Non-Accelerated filers are firms that are neither large accelerate filers or accelerated filers

Audit delay - the time from the end of the accounting year to the time external auditors sign off on their audit reports. Audit delay is also referred to as audit report lag or audit lag.

Audit fees – The fees charged by auditors for the SOX Section 404 audit of internal controls

*Audit related fe*e – The audit fee attributed to the incremental audit procedures required to audit an issuer's internal control over financial reporting as required by SOX 404

External auditor-auditors who are external to, and independent of, the firm being audited, both in fact and appearance, having no financial and/or managerial interest in the entity being audited

SOX-Sarbanes-Oxley Act of 2002 – main goal was to improve the quality of financial reporting and to increase investor's confidence.

SOX-Section 404 – mandates that external auditors 'attest' to management's assessment of the company controls. Costs classified into three categories; additional audit fees, internal labor costs, and external consulting/technology expenses.

PCAOB – Public Company Accounting Oversight Board. The PCAOB is a nonprofit corporation established by Congress to oversee the audits of public companies. The Sarbanes-Oxley Act of 2002, which created the PCAOB, required that auditors of U.S. public companies be subject to external and independent oversight for the first time in history.

Public float – the part of equity not held by management or large shareholders as reported on the first page of the company 10K. The portion of a company's outstanding shares that is in the hands of public investors, as opposed to company officers, directors, or controlling-interest investors.

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