

DO AUDITORS' PERCEPTIONS OF MATERIALITY CHANGE
IN RESPONSE TO APPROACHING DEADLINES?

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ABSTRACT

This study examined the impact that deadline pressures have on auditors' perceptions of materiality. I use the context of the audit of Internal Controls over Financial Reporting (ICFR) to determine whether the year-end deadline impacts auditors' assessment of control deficiencies. I also considered how the perceived cause of the increased deadline pressure (i.e., whether the timing of testing is the auditor's fault) may further affect the auditors' judgment of significance. To evaluate these decisions, I used a 3x2 between-subjects experiment, manipulating time deadline pressure (low, high, and post-deadline) and the cause of the deadline pressure (auditor fault or not). I measured the auditors' assessment of the materiality of an identified control deficiency, as well as the amount of audit evidence the auditor would consider sufficient for retesting remediated controls. Findings suggest an interactive effect on auditors' materiality assessments of errors/deficiencies when they identify the error under high deadline pressure *and* the auditor is at fault for creating the higher pressure, resulting in a lower assessment of the errors' materiality under these conditions. Further, auditors are willing to test *fewer* items when the auditor is at fault for creating deadline pressure, as well as accepting a higher deviation rate for the sample (i.e., the auditors will accept more errors/deficiencies in fewer sample items). However, auditors increased their materiality judgments of identified errors when deadline pressure was no longer present (after year-end), even though incentives to issue an unqualified opinion still exist. This study extends existing literature by examining the temporal effects on

materiality, specifically the auditor's perceptions and application of materiality. It also complements recent archival research examining consequences of adverse opinions on the audit of ICFR (e.g., Cassell et al., 2011; Hammersley et al., 2010) by considering how pressures and incentives to avoid such consequences influence the audit of ICFR.

DEDICATION

In memory of Murray.

In honor of Mom, Lindsay, and Bennett Blair.

LIST OF ABBREVIATIONS AND SYMBOLS

SEC	Securities and Exchange Commission
PCAOB	Public Company Accounting Oversight Board
ASB	Auditing Standards Board
SOX	Sarbanes-Oxley Act
AS	Auditing Standard
ICFR	Internal Controls over Financial Reporting
GAAP	Generally Accepted Accounting Principles
GAAS	Generally Accepted Auditing Standards
n	Number of responses in sample or subsample
M	Statistical mean
SD	Standard Deviation
df	Statistical degrees of freedom
Material	How “significant” the auditor considers control deficiency, “in terms of its potential impact on the financial statements”
NumbRetest	How many additional sample items the auditor would want to select for retesting
DevRate	Calculated: Dividing the number the times the control could “fail” and still consider the control effective by NumbRetest (defined above).
Likelihood	The assessed likelihood that the control deficiency will result in a misstatement
Mat	The materiality of a misstatement, if the control deficiency were to result in a misstatement

- Increase_Sub The likelihood that the auditor would increase substantive testwork related to Accounts Receivable
- Increase_Fee The likelihood that the auditor would increase the auditor's fee based on identified deficiency and additional work (e.g., additional substantive testwork; retesting of controls)

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CHAPTER I

INTRODUCTION

This study examined how auditors' judgment of materiality may be affected by increasing deadline pressures that arise toward the end of the audit. As auditors near the end of audit fieldwork, the availability of time and alternatives to resolve audit issues become more limited and the need to finalize the audit opinion becomes more salient. This paper examined whether auditors' materiality assessment of errors identified during the audit (e.g., internal control deficiencies) change toward the end of the audit as a result of higher deadline pressure. The study also evaluated whether these judgments are further impacted when the auditors are responsible for creating the heightened deadline pressures for the client and audit team (by delaying testwork). Specifically, I examined the extent to which auditors consider an internal control deficiency as material when the deficiency is identified toward the end of the audit, compared to earlier in the audit, especially when the auditor has caused the delay in control testing (i.e., increased deadline pressure).

Auditors must use professional judgment in their assessment of materiality of a particular misstatement, omission, or discrepancy. This materiality judgment impacts not only whether a financial misstatement or control deficiency is significant enough to preclude an unqualified audit opinion, but also the extent and timing of audit procedures. To consider how timing and perceived fault within the audit may affect this professional judgment, I examined the auditor's assessment of control deficiencies using the context of the audit of Internal Controls over

Financial Reporting (ICFR). Under auditing standards set forth by the Public Company Accounting Oversight Board (PCAOB), the auditor must issue an audit opinion on public clients' ICFR. This opinion is based on the auditor's assessment of the significance of identified control deficiencies' impact on the financial statements (i.e., whether the financial statements could be materially misstated due to the weakness in internal controls), which is a predominantly subjective decision. This context provides a setting in which to focus on the subjective nature of evaluating whether items noted during fieldwork are material, as well as a clear deadline by which both management's and auditors' decisions and actions are constrained (creating deadline pressure).

Auditing standards for conducting the audit of ICFR state that if a control deficiency is identified during testwork, the auditor must issue an adverse opinion if he/she considers the control deficiency a *material weakness* in ICFR and the deficiency exists *as of year-end*. If the deficiency is identified before year-end, the client has an opportunity to remediate the control prior to year-end. Once remediation is complete, the auditor can retest the control under the new control environment and issue an unqualified opinion if remediation was effective. Thus, as the timing of testwork nears year-end, the auditor faces increased deadline pressures because any remediation and retesting must take place prior to year-end to preclude an adverse opinion.

The decision as to whether a deficiency is a material weakness is a subjective decision requiring the auditor to consider the magnitude of *potential* misstatements that could arise from the deficiency, as well as the probability that a misstatement could occur. Prior audit research suggests that subjective decisions are often susceptible to pressures (e.g., client pressures), resulting in auditors being more likely to realign their decisions with related incentives (e.g., Hackenbrack & Nelson, 1996; Hatfield et al., 2011; Kadous et al., 2003). Accordingly, when the

auditor is under time pressure due to the year-end deadlines, he/she may consider a misstatement or control deficiency less significant, in order to issue an unqualified opinion. Specifically, for the audit of ICFR, the auditor may assess a control deficiency as less severe than a material weakness when the deficiency is identified near year-end, in order to avoid issuing an adverse opinion. In doing so, the auditor also avoids the remediation and retesting processes for the client and audit team when there is little time before year-end (i.e., high deadline pressure). Thus, I hypothesize that the auditor will be less likely to consider an identified control deficiency as a “material weakness” in ICFR when time pressure is high, compared to when it is low.

Deadline pressures that arise for the auditor may be the result of actions taken by the audit client or by the auditor (Anderson, 2010; Perry, 2010), creating a perception of “fault” when faced with such pressures. People often make decisions anticipating the experiences and consequences that the outcome may bring (Gigerenzer & Selten, 2002), including *anticipatory regret* when considering options that may yield negative outcomes (Landman, 1993; Kunda, 2000). Avoiding actions that lead to such outcomes can, in turn, result in avoiding blame for the consequences (Kunda, 2000). Therefore, if the auditor is responsible for postponing testwork (i.e., increasing deadline pressure), the auditor may consider the identified control deficiency as less material in order avoid blame for negative consequences (e.g., issuance of an adverse opinion).

To examine these issues, I conducted an experiment in which participants (audit managers and partners) were provided information regarding a control deficiency (i.e., insufficient evidence that manual controls were performed by the credit manager) identified by the audit team during testwork for the audit of ICFR. The presence and/or level of deadline pressure was examined by manipulating the timing of when the control deficiency was identified

by the audit team: mid-year (low deadline pressure), near year-end (high deadline pressure), and after year-end (post-deadline; no deadline pressure). Secondly, participants were provided information describing whether the timing of control testwork was the auditors fault (i.e., whether the auditor or client requested a delay in testwork, thus resulting in testwork being conducted under the three levels of pressure described above). Dependent variables included participants' assessment of the materiality of the control deficiency as well as the amount of retesting the participant determined was sufficient for retesting the control (post-remediation).

Results indicated that deadline pressure interacts with auditor fault to impact auditor materiality assessments of the errors/deficiencies identified. When auditors cause high deadline pressure (i.e., auditor is at fault for testwork being conducted near year-end), they are more likely to assess the identified errors/discrepancies as less material. Further, when auditors have created a delay in testwork, even when deadline pressure is low, they are willing to sample fewer items for testwork compared to when the client caused the delay in testing. Additionally, within the selected sample, auditors were more willing to accept higher deviation rates (i.e., more errors) in the chosen sample size when under high deadline pressure or when the auditors were at fault for delaying testing.

In addition to examining auditor judgment prior to the deadline, I also considered how missing the deadline may impact auditors' assessments. Even though the auditor was no longer under deadline pressure once the deadline had passed, general incentives to avoid issuing an adverse audit opinion were still present. Results indicated that when the deadline has passed, the auditor assesses the control deficiencies as more material, compared to the auditor's assessment under high deadline pressure prior to year-end. In addition, once the deadline has passed, the auditor's judgment regarding the sample for retesting is different compared to before year-end

when the auditor was under deadline pressure. Specifically, the auditors chose to select a larger number of sample items, with a lower deviation rate, for retesting the remediated control, compared to when the auditor was under deadline pressure. This indicates that prior to year-end, an auditor's decision that a control has been effectively remediated may be based on less sufficient evidence (i.e., a smaller sample size with more tolerable errors). The study's findings suggest that not only will the assessment of what is considered material be impacted by deadline pressures and/or auditor fault, but the auditor's judgment of the sufficiency of audit evidence may be negatively impacted as well. Both decisions have implications for negative effects on the quality of audit workpapers, the audit opinion, and overall audit quality.

Supplemental analysis performed indicated that deadline pressure and fault also interact to influence the auditors' decisions regarding substantive testing. Specifically, when the auditor was at fault for creating a high deadline pressure near year-end, he/she was less likely to increase substantive testwork in the area in which the control deficiency was identified (i.e., Accounts Receivable), than when the auditor was not at fault for heightened deadline pressure and when deadline pressure was low. These findings suggest that in addition to selecting smaller samples sizes (with a higher deviation rate) during control testing, the auditor was less likely to "compensate" with substantive procedures. Therefore, audit risk is not reduced as a result of additional substantive procedures, which, in turn, potentially negatively impacts audit quality.

Additionally, supplemental analysis suggested that when the auditor is at fault for creating a delay in testwork, even when time deadline pressure is still relatively low (i.e., the delay was only a week), the auditor was less likely to increase audit fees as a result of the identified control deficiency (i.e., the auditor was less likely to charge for the additional work for

retesting remediated controls and/or additional substantive testwork as a result of lower reliability on controls).

This study's findings extend auditing research in two primary ways. First, this study extends the literature on auditor judgment, in particular assessments of significance and materiality, in that it examines how perceptions of significance may change based on what point in the audit the decision takes place (i.e., earlier in the audit versus late in the audit). Also, this study adds to recent research on the audit of ICFR by determining what factors may influence the judgment of control deficiencies, which, in turn, affect the audit opinion on ICFR. Findings suggest a need for further research in the areas of auditor assessment and application of materiality, such as whether auditor judgment varies in considering the significance of financial statement misstatements and/or individually immaterial items considered together in the aggregate. This study also provides initial insight into the auditor's decision to issue an adverse audit opinion on ICFR, which prior archival research suggests adversely affects audit clients (Ashbaugh-Skaife et al., 2008; Cassell et al., 2011; Ettredge et al., 2010; Hammersley et al., 2010). Findings can also provide insight for education and professional training for accounting students and current professionals in both auditors' materiality judgments during the financial statement audit and the audit of ICFR.

The remainder of this paper is organized as follows. The next chapter provides theory and hypothesis development. Chapter III describes the research method and approach of the experimental study. Chapter IV provides an analysis and discussion of results, Chapter V provides the supplemental analysis, and Chapter VI provides a discussion of findings, possible limitations of the study, and potential future research opportunities.

CHAPTER II

BACKGROUND AND HYPOTHESES DEVELOPMENT

Time Pressure

Audit research has evaluated the impact of time pressures on the audit process itself. DeZoort and Lord's (1997) review of the accounting research literature suggests that both time *budget* pressure and time *deadline* pressure influences the audit process and auditor decisions. Time *budget* pressure, as defined by DeZoort and Lord (1997), refers to those "constraints that arise, or may arise, in engagements from limitations on the resources allocable to perform tasks" (p. 53). Time *deadline* pressure differs from time *budget* pressure in that it refers to pressures in which "professionals have to complete tasks by specific points in time" (p. 53). As DeZoort and Lord outline in their review of pressure research in accounting, both deadline and budget pressures can have positive or negative impact auditor decisions, and, as a result, audit quality.

In regard to time budget pressures, research suggests that budget pressure can influence auditor decisions and judgment. For example, Kelley and Margheim (1990) found that time budget pressures can have both positive and negative effects on auditor performance. Specifically, they found that as time budget pressures increase from low to high, the number of audit quality reduction acts (e.g., underreporting time) increase. However, when the auditor "considered the time budget to have been impossible to attain," there is a dramatic decline in dysfunctional auditor behavior (Kelley & Margheim, 1990, p. 31). This inverted-U relationship between reduced audit quality acts and time pressure indicates that varying the level of pressure

results in different decisions and behaviors, and that there is not a simple, direct relationship between time pressure and negative auditor behavior.

Coram et al. (2004) also examined reduced audit quality acts when time budget pressure is imposed. They found in one of the two provided audit scenarios that when the risk of misstatement is higher, the likelihood of reduced audit quality is lower even when time budget pressure is imposed. These findings suggest that auditors react differently in certain contexts under time budget pressures, and such pressures can interact with other factors, such as the risk of material misstatement, affecting the auditors' decisions. While this may indicate different reactions or "strategies" from auditors in response to time pressures, such differences in decisions indicate that experimental findings in these certain audit contexts cannot easily be generalizable to other audit tasks or situations.

As DeZoort and Lord (1997) pointed out in their review of pressure research in accounting, time deadline pressures can also result in both desirable and undesirable outcomes in auditors' judgment and decision-making behaviors. For example, McDaniel (1990) used an experiment in order to evaluate whether time pressure impacts audit effectiveness and efficiency. In the experiment, she provided staff-level auditors an audit task (auditing completeness and valuation of inventory). She manipulated time pressure at four levels by varying the amount of time allotted to participants (between 45 and 75 minutes, depending on manipulation). She also considered whether a more structured or an "unstructured" audit program would have an impact on the staff auditors' performance under time pressure. Her results indicated that audit effectiveness, including processing accuracy and sampling adequacy, declined as time pressure increased.

However, McDaniel (1990) found there was a direct relationship between audit efficiency and time pressure (i.e., as time pressure increased, audit efficiency increased). In regard to the impact of the audit program structure, participants provided with an unstructured program, audit efficiency increased at a faster rate as time pressure increased. Overall, audit consistency (i.e., assessed by comparing variance in responses) was higher when a structured audit program was used; however, under moderately high and high time pressure, the differences were only marginally significant (p -value = 0.10). Therefore, time pressure seemed to negatively affect the positive impact of structured audit programs on audit consistency. Overall, McDaniel's results indicated that time pressure, as manipulated by the time available to complete an audit task, improved staff auditors' efficiency at the detriment to audit effectiveness on provided tasks.

Research also suggests that time pressure can have a positive effect on accounting professionals' performance. For example, Spilker (1995) examined the impact of time deadline pressure on tax professionals' ability to identify relevant key words in a given task. He manipulated time pressure by instructing participants that they either had 25 minutes (low pressure) or 11 minutes (moderate pressure) to complete the task. Also, he used different "levels" of tax professionals--masters of tax students (naïve group), graduating masters of tax students (declarative knowledge group), and experienced tax professionals (procedural knowledge group)--to manipulate participants' knowledge. He found that participants with procedural knowledge (experienced tax professionals) respond positively to moderate time pressure (an increase in the number of relevant key words identified when under higher time pressure) and responded to time pressure better than those with declarative knowledge. This interaction of knowledge and time pressure suggests that different professional levels (with varying levels of experience and knowledge) respond differently to heightened time pressure.

Audit professionals acknowledge the impact that planning (and as a result the timing of testwork) has on the auditors' work. McKenna (2009) alluded to various factors or situations that may result in disconnects between auditors' decisions *during* fieldwork and what was decided upon early in the audit during audit planning. She specifically admitted that for engagements she worked on, "the actual testing often doesn't correlate well" with planning materials explaining "what to test, how to test, and to what extent to test certain controls." This indicates that the auditor, during fieldwork, uses professional judgment that may not be "in sync" with planning decisions. McKenna further proposed that this disconnect is the result of various inadequacies, including poor planning, supervision, review, communications, and time. Specifically, she stated that "rushing" at the end of the engagement leads auditors to "ignore all instructions, do what they have time/energy/inclination to do, and then retro-justify the decision by fudging the documentation." Such statements from an experienced audit professional indicate the direct impact that end-of-engagement deadline pressures may have on control testwork.

Deadline Pressure

This study focused on the time pressure created by deadline pressure. This pressure is chosen over budget pressure for a few main reasons. Deadlines are inevitable in every engagement and may vary in type (e.g., quarterly filing deadlines, reporting deadlines, end-of-audit-engagement deadlines, etc.). Also, deadlines can be either auditor-imposed, client-imposed, or imposed from another party (e.g., reporting deadlines with the SEC). Also, missing deadlines can have a direct impact on the auditor, the audit client, and possibly investors and creditors, while budget deadlines most often only directly impact the auditor.

Deadline pressure arises from the anticipation of penalties (implicit and/or explicit) of not meeting a goal by a predetermined point in time (Hogarth, 1990). When making decisions under deadline pressure, individuals may choose different strategies (e.g., increased pace of work, ignoring certain information, lowering performance quality, etc.) in completing the task that may not always result in the “optimal outcome” and lead to lower decision quality (Goldberger & Breznitz, 1982; Zakay & Wooler, 1984).

When deadline pressure is high (i.e., little time before deadline), individuals tend to focus on the negative aspects of missing a deadline, causing increased pressure to avoid these penalties (Hogarth, 1990). Additionally, prior research suggests that when the time horizon of the consequence (the amount of time between the decision and the outcome) is short, an individual tends to focus more attention to negative consequences of the decision and be more risk adverse when making the decision (Schneider & Shanteau, 2003). Mano explained that individuals often deal with increased deadline pressure (and the increased focus on negative consequences) by amending their decisions and performance in order to meet the deadline (Hogarth, 1990). Mano further explained that having flexibility in making a decision allows for the potential to lower performance standards and/or to decrease the amount of work that is considered “sufficient” to complete the task. Although Mano noted that a higher level of performance increases payoff, a looming deadline increases the salience and likelihood of penalties if the deadline is missed.

In their evaluation of time pressure in an auditing context, Solomon and Brown (1992, p. 83) caution that early accounting research examining time pressures may overstate results due to the fact that participants are constrained in being able to anticipate and cope with the deadline pressure. This study addresses such a concern by providing information to participants regarding the pending deadline and, subsequently, examining how the auditor’s professional judgment

decisions change when coping with the deadline pressure, in terms of materiality assessments and/or the decision of audit evidence sufficiency.

Auditors' Judgment of Significance/Materiality

According to auditing standards, an auditor's assessment of whether a misstatement or discrepancy would be significant to the decisions of financial statement users (i.e., whether an item is "material" to users' decisions) is a matter of professional judgment based on both quantitative and qualitative factors (ASB, 2006). While auditors typically use client financial information to determine quantitative guidelines for materiality decisions (e.g., five percent of net income before taxes; Messier et al., 2011), the auditor should also consider qualitative factors that impact their consideration of misstatements or deficiencies during the audit (PCAOB, 2007b). Auditing Standard No. 11 provides examples of such qualitative factors: the client's intended use for the financial statements (e.g., acquiring debt), the nature of the misstatement (e.g., fraud), and the potential impact a misstatement has on other areas of the financial statements (e.g., management's earnings targets).

While examples given in AS 11 would deem it likely that an auditor would lower his/her quantitative threshold of materiality, anecdotal evidence suggests that an auditor's judgment of what is considered significant or material may be susceptible to bias, allowing items with certain qualitative factors to be considered "immaterial" to the auditor's decision (McKenna 2009).¹ For instance, certain pressures (e.g., client pressures, time pressures, client preferences and interests, financial incentives, professional reputation, etc.) may impact how material the auditor considers

¹ In addition, personal discussions with former officials of standard setting bodies (e.g., IASB, FASB) reveal their concern regarding the fluctuations in auditors' perceptions of what is considered "material," especially when faced with external pressures.

misstatements and discrepancies identified during fieldwork.² These pressures likely do not constitute the auditor documenting an explicit change to the *quantitative* threshold of materiality in the workpapers; however, it may influence what the auditor subjectively considers “consequential” when making decisions in addressing identified misstatements or discrepancies.

Auditing Internal Control over Financial Reporting

Internal control over financial reporting is management’s process to provide “reasonable assurance regarding the reliability of financial reporting and preparation of the financial statements for external purposes in accordance with GAAP” (PCAOB 2007a). Management is responsible for overseeing the proper design and implementation of an effective internal control process. According to the PCAOB AS 5 (2007b), ICFR should include the policies and procedures that,

1. pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
2. provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and
3. provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

The PCAOB explicitly states that the processes and oversight included in a company’s internal control over financial reporting does not include the external auditor’s procedures for auditing ICFR or the financial statements. The auditors’ assessment of ICFR is independent of management’s internal controls and monitoring of those controls. The PCAOB also notes that the

² For example, a post on the “Life of An Auditor” blog (lifeofanauditor.blogspot.com) by an auditor working for one of the “Big Four” firms implies that auditor materiality can be influenced by external pressures and biases.

ICFR process involves human “diligence and compliance” and can be subject to “lapses in judgment and breakdown resulting from human failures” (e.g., circumvention in controls) (PCAOB 2007a). Such vulnerability in the ICFR process increases the risk that material misstatements may not be prevented or detected. Thus, the need to identify weaknesses in internal controls, especially ones that could result in a material misstatement in the financial statements is important to ensure financial statement reliability.

According to AS 5, an external auditor’s objective in auditing ICFR is “to express an opinion on the effectiveness of the company’s internal control over financial reporting” (PCAOB 2007a). If a material weakness in internal controls over financial reporting exists, the company’s internal controls cannot be considered effective. Additionally, if one or more material weaknesses in internal controls exist as of fiscal year-end, the auditor cannot issue a qualified opinion on the audit of ICFR. Instead, the auditor must issue an adverse opinion on the ICFR audit. Similar to a financial statement audit, the auditing standards require the auditor to “plan and perform the audit to obtain appropriate evidence that is sufficient to obtain reasonable assurance about whether material weaknesses exist” (PCAOB 2007a).

During the audit, an auditor’s determination of what is considered “material” is essential not only to financial misstatements, but also to identified control deficiencies. The PCAOB defines a deficiency in internal control over financial reporting as a weakness in the “design or operation of a control” that precludes “management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis” (PCAOB 2007). PCAOB AS 5 (2007) further defines deficiencies in design and operation in the following manner:

A deficiency in *design* exists when (a) a control necessary to meet the control objective is missing or (b) an existing control is not properly designed to do that, even if the control operates as designed, the control objective would not be met.

A deficiency in *operation* exists when a properly designed control does not operate as designed, or when the person performing the control does not possess the necessary authority or competence to perform the control effectively.

In considering the impact of control risk on audit risk, the auditor must determine whether control deficiencies identified are significant enough to preclude reliance on the controls. Further, for public companies, the PCAOB requires the auditor to provide an audit opinion on the effectiveness of Internal Controls over Financial Reporting (ICFR). While there is not an explicit quantitative threshold such as planning materiality in which to compare the control deficiencies, PCAOB AS No. 5 (2007a) states that an auditor should “use the same materiality considerations he or she would use in planning the audit of the company’s annual financial statements” when auditing ICFR. During the audit of ICFR, the auditor must assess the significance of control deficiencies identified and classify the deficiencies. The classification is based primarily on the *likelihood* that the deficiency could result in a misstatement in the financial statements and the *magnitude* of such a misstatement. Due to the subjective nature of this assessment/classification of control deficiencies, the audit of ICFR provides a setting in which qualitative judgments of materiality decisions can be evaluated without the “distraction” of an explicit, quantitative planning materiality threshold.

According to PCAOB AS 5 (2007a), there are three categories of control deficiencies: deficiencies, significant deficiencies, and material weaknesses.³ PCAOB AS 5 (2007b) defines significant deficiencies and material weaknesses in the following manner:

³ It should be noted that the Auditing Standards Board (ASB) guidance for non-public companies (non-issuers) on the evaluation of Internal Controls uses the same classifications and criteria in defining each type of deficiency (ASB 2010).

A **significant deficiency** is a deficiency, or a combination of deficiencies, in internal control over financial reporting that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of the company's financial reporting.

A **material weakness** is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.

The PCAOB's definition of a material weakness states that the likelihood of the deficiency resulting in a material weakness must be reasonably possible, but that a material misstatement is not required. Therefore, it should be noted, as indicated in the definition above, that a material weakness may exist even if the financial statements are free from material misstatement.

In addition to the type of audit opinion issued, the classification of the deficiency determines whether the deficiency is to be communicated to the audit committee and if an adverse opinion on the audit of ICFR should be issued. A "material weakness" is defined as a control deficiency in which there is a reasonable possibility that a material misstatement could occur in the financial statements as a result of the deficiency (PCAOB 2007a). Comparatively, a "significant deficiency" is a deficiency that merits attention from management but is considered "less severe" than a material weakness in terms of the possible consequences to the financial statements. Even though the client's controls operate and affect transactions throughout the year, under current guidance, if the auditor determines there is a material weakness in the client's ICFR *as of fiscal year-end*, the auditor should issue an adverse opinion on ICFR.

Impact of Control Deficiencies and Adverse Audit Opinions on ICFR

As with issuing an adverse opinion on the financial statement audit, prior research suggests there are subsequent consequences to both auditors and audit clients when an adverse opinion on ICFR is issued.

For example, prior research suggests that after the passage of SOX, companies reporting material weaknesses in ICFR are more likely to have more auditor changes (Ettredge et al. 2010; Krishnan & Visvanathan, 2007) and restatements of financial statements than those companies not reporting material weaknesses (Krishnan & Visvanathan, 2007). Also, Krishnan and Visvanathan (2007) found firms reporting material weaknesses have audit committees that meet more frequently and have a lower proportion of directors that are “financial experts” (as defined by the SEC).

Hammersley et al. (2010) found that companies that fail to remediate material weaknesses in internal controls pay higher audit fees. More specifically, companies that have more material weaknesses have higher increases in audit fees. The authors also found that companies that fail to remediate material weaknesses are more likely to receive going concern opinions. Also, similar to the findings of Krishnan and Visvanathan (2007), those firms failing to remediate material weaknesses have auditors who are more likely to resign from the audit engagement.

Also, Hammersley et al. (2010) found that non-remediating firms are more likely to miss filing deadlines and suffer increased costs of debt capital. These findings are similar to additional research supporting a relationship between receiving an adverse opinion on ICFR and higher costs of equity (Ashbaugh-Skaife et al., 2008; Cassell et al., 2011; Ettredge et al., 2010; Hammersley et al., 2010). However, while there are ramifications stemming from the auditor and

debt markets, companies that fail to remediate control weaknesses do not have higher CEO or CFO turnover, nor do they suffer a decline in stock price.

However, according to Kinney and Shepardson (2010), requiring an audit of ICFR for smaller public companies (now exempt under Dodd-Frank Wall Street Reform and Consumer Protection Act) may not be the most cost-effective mechanism for investors to learn of material weaknesses in internal control. By examining the changes in disclosure rates and audit fees when different mandates of ICFR disclosures are required by the SEC, they evaluated the benefit of required audits of ICFR. In their study, results indicate that smaller firms that have not yet been required to implement SOX internal control audits may benefit from more transparent management and audit reports (i.e., more detailed) that disclose the source of misstatements (i.e., weaknesses in internal control), rather than implementation of an audit of ICFR. Thus, they proposed the need for internal control evaluation and disclosure is valued, but could be done in a more cost-effective manner than an audit of ICFR.

Impact of Year-End Deadline on Audit of ICFR

The explicit requirement of opining on the client's ICFR "as of year-end" provides management the opportunity to correct/remediate control deficiencies identified during the year before fiscal year-end. If management is able to successfully remediate deficiencies before year-end, the auditor can retest controls and issue an unqualified opinion on the audit of ICFR. Appendix A outlines auditor judgments and the ramifications of those judgments relating to the assessment of control deficiencies. However, if there is little time between identifying a control deficiency and the client's year-end, the client may not be able to remediate the control before year-end and/or the auditor may not be able to gather sufficient audit evidence in the corrected

control environment between the remediation of the deficiency and year-end. Accordingly, if the auditor cannot gather sufficient evidence to support an unqualified opinion, the auditor should issue an adverse opinion. Yet, as stated previously, the amount of evidence needed to be considered “sufficient” in retesting the control is a matter of auditor professional judgment (PCAOB 2010).

The auditor has incentives to deem a control deficiency as “less than” a material weakness, in order to avoid negative consequences of issuing an adverse audit opinion on the client’s ICFR. If the auditor is under increased deadline pressure due to the timing of testwork (i.e., testing nearer to year-end), the negative consequences incurred by the auditor and/or client may be more salient (Hogarth, 1990). In addition to the negative impact to the audit client and audit firm’s businesses (discussed previously), the identification of a control deficiency that is considered “material” increases the amount and timing of work that both the client and the auditor must perform subsequent to the discovery of a material weakness. Therefore, the auditor has an additional incentive to assess a control deficiency as immaterial, in order to avoid causing the client more work in promptly remediating the control and the amount of work the audit team must do in retesting the control process in place before year-end.

The level of deadline pressure to complete both processes depends on the amount of time before the client’s year-end (i.e., deadline pressure increases closer to year-end). Thus, the auditor can avoid these undesirable outcomes (for both the client and the audit team) if he/she considers the control deficiency less important than a material weakness, in order to issue an unqualified opinion. Thus, I hypothesize the following:

H1: Auditors will consider internal control deficiencies less material when time deadline pressure is high (i.e., near year-end) than when time deadline pressure is low (i.e., mid-year).

As stated previously, if a control deficiency is identified *before* year-end, the auditor has two primary alternatives available that would allow him/her to avoid issuing an adverse opinion. One option is for the auditor to deem the control deficiency as “less than material,” which precludes an adverse opinion and eliminates the need for additional work on the part of the client and audit team (i.e., remediating the control and retesting the control, respectively). Additionally, the auditor can decide that the audit team can select fewer sample items to test after the control is remediated than he/she would under less compressed time (i.e., if the testing took place mid-year). In other words, the auditor may decide that fewer items will be sufficient to retest the control when deadline pressure is high at year-end. Thus, I hypothesize the following:

H2: The auditor will choose to sample fewer items for retesting a control deficiency when time pressure is high (i.e., near year-end), compared to when deadline pressure is low (i.e., mid-year).

Perceived Fault

In attributing the cause of the deadline pressure to a particular person’s decision, one may perceive the ramifications of subsequent decisions made under the deadline pressure as an extension of the original cause. Yates (1990) explained that decisions are not made without consideration of the alternative options and respective outcomes for each option. If one’s own decisions resulted in the current deadline pressure, he/she may weigh the options and future outcomes in order to minimize negative consequences. Landman (1993) described that decisions

“are often made with the help of a process of imagination in which we try to experience outcomes ‘before the fact’” (Gigerenzer & Selten, 2002).

Additionally, in evaluating the options, one may experience *anticipatory regret* when considering those options that may yield negative outcomes (Kunda, 2000; Landman, 1993). Such anticipatory regret of negative outcomes can cause avoidance of actions that lead to such outcomes (Kunda, 2000) and “select the option with the greater expected utility, modified by anticipated regret” (Gigerenzer & Selten, 2002). In making decisions that avoid subsequent negative consequences, one also minimizes the likelihood of receiving blame for creating a deadline pressure that resulted in negative outcomes.

As with deadline pressure, perceived fault increases the salience of negative outcomes resulting from decisions and performance. Decisions to avoid negative circumstances are self-serving in that they help preserve a positive self-image and are affectively rewarding for the individual (Koehler & Harvey, 2004). Therefore, an individual faced with a decision and future consequences that may be attributed to the current situation, in addition to increased deadline pressure when making the decision, will be more likely to choose an option that minimizes the likelihood of future negative outcomes, in order to avoid the anticipatory regret and the negative consequences stemming from the decision.

In the planning phase of the audit, the auditor and the audit client must decide when certain testwork will take place (e.g., tests of controls). In doing so, the auditor must coordinate the scheduling and timing of testwork with client management (Anderson, 2010). However, instances may arise when the planned audit schedule must change. Such changes can be due to either the auditor’s or the client’s needs to reschedule due to scheduling conflicts (Perry, 2010). Often these amendments to the schedule result in the client and/or the auditor having less

time to complete needed work on the audit. Such reductions in time can create situations in which the auditor has increased deadline pressure to finish testwork and, as a result, must adjust his/her audit plan (Perry 2010). This adds a dimension of *perceived cause or fault* to the deadline pressures discussed above, which may further impact the effects of deadline pressure.

As stated previously, the increased deadline pressure increases the salience of the negative consequences and may lead the individual to avoid such consequences. For auditors assessing control deficiencies during the audit of ICFR, if the auditor has increased deadline pressure (e.g., by requesting that interim control testwork be postponed until later in the year), the auditor could be more aware of the negative consequences imposed by the deadline *and* related anticipatory regret for creating this time limitation on remediation and retesting. In addition, the auditor may also be aware of the *client's* perception that the auditor is culpable for the heightened deadline pressure, thus adding another consequence of the auditor's actions (and an incentive to avoid damage to the auditor-client relationship). Thus, when the auditor has caused an increase in deadline pressure, the auditor may be even more aware of the negative consequences of issuing an adverse opinion, resulting in a lower materiality assessment of the control deficiency.

Thus, my third hypothesis predicts an interactive effect of deadline pressure and perceived fault, stated as the following:

H3: Auditors will consider internal control deficiencies less material when the auditor has caused high deadline pressure, compared to when deadline pressure is low and the auditor is not responsible for deadline pressure.

Figure 1 provides the hypothesized main effects and interaction effects predicted in Hypothesis 1 and Hypothesis 3.

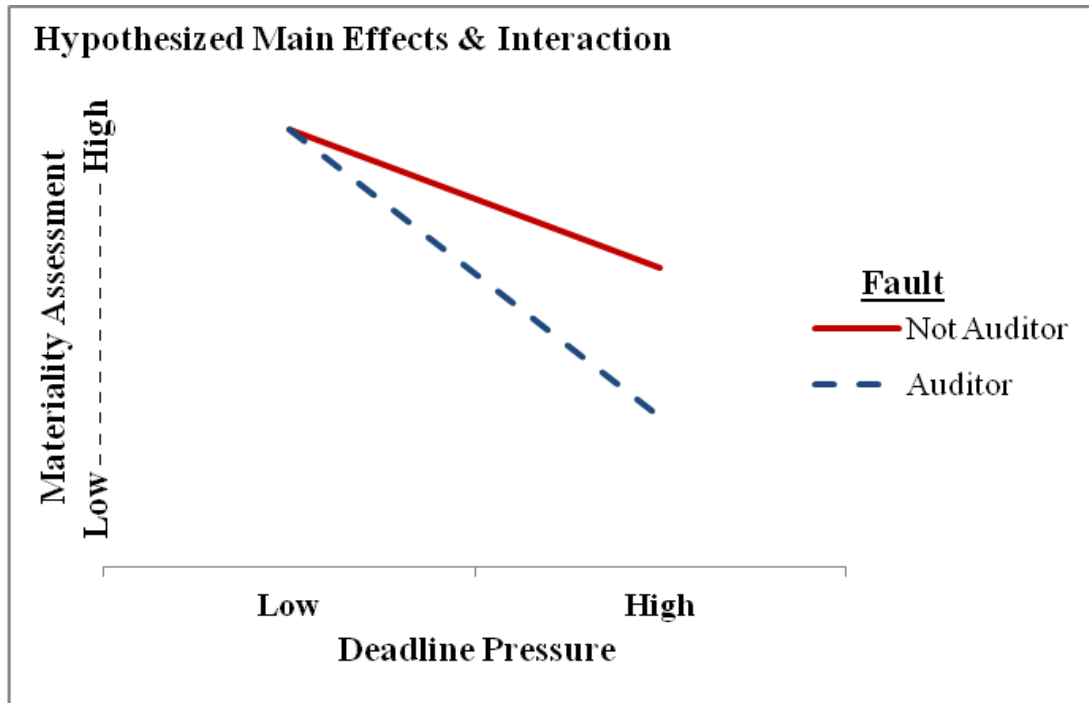


Figure 1. Hypothesized effects on materiality assessment (H1 and H3).

Passing of Deadline

Before the year-end deadline, any identified control deficiencies can be remediated and retested in order for the control to be considered “effective” at year-end (given that there is ample time to both remediate and retest before year-end). However, some control deficiencies are not identified until after year-end (e.g., deficiencies identified through substantive testwork; control testwork is delayed until after year-end; etc.), creating a situation in which management does not have the opportunity to remediate the identified control deficiency before year-end (Bedard & Graham, 2011). Therefore, the auditor’s decision of whether or not the deficiency is a material weakness directly impacts the audit opinion, since the option of remediation and retesting before year-end is no longer available.

While the incentive to avoid an adverse opinion may still be present, deadline pressure is no longer present since the deadline has passed. While the auditor still has incentives to assess the deficiency as less than a material weakness due to the consequences of issuing an adverse opinion, once the deadline (i.e., year-end) has passed the deadline pressure is no longer present. Yet, the auditor may still feel a sense of anticipatory regret if he/she caused the missed deadline (by delaying testwork). Therefore, I ask an exploratory research question to consider any impact of missing the deadline on auditors' materiality decisions.

Research Question: Does the absence of deadline pressure (post-deadline) cause the auditor to change his judgment of materiality given that the incentives to avoid an adverse opinion are still present, especially when the auditor is at fault for missing the deadline?

CHAPTER III

RESEARCH DESIGN

One hundred twenty-three participants responded, consisting of 102 partners, 18 senior managers and managers, and 3 identified as “other.”⁴ Responding participants had, on average, 25.65 years of auditing experience. Managers and partners were identified as appropriate subjects, due to their experience level and the materiality decision that is being evaluated (the materiality judgment of a control deficiency). Table 1 details participants’ reported demographic information, as well as a breakdown of the size firm with which participants reported being associated.

Experimental Audit Case

Participants were provided a case study in which they were asked to review information regarding a hypothetical audit engagement and related control testwork. The case was approximately seven pages and was mailed to potential participants. Enclosed return envelopes were provided with case materials, in which participants returned completed materials. See Figure 2 for a summary of the information flow provided to participants in the experimental instrument.

⁴ The response rate of the mailout was approximately 6.2 percent, based on the number of instruments mailed out to managers and partners, excluding the ones that were returned due to inaccurate or “stale” addresses.

Table 1

Participant Demographics

	Partner	Sr Manager	Manager	Other	All
n	102	7	11	3	123
Audit Experience (SD)	27.3 (8.1)	15.3 (3.4)	7.5 (2.3)	29.0 (12.3)	24.9 (9.4)
ICFR Experience (SD)	6.5 (2.5)	4.5 (2.4)	5.0 (2.6)	5.7 (3.1)	6.3 (2.5)
Females	19	3	4	2	28
Males	83	4	7	1	95
Firm Size					
	Big Four	59			
	International	12			
	National	10			
	Large Regional	30			
	Local	9			
	Other	3			
	Total	123			

The provided case materials began with an overview of the instructions for the case, including the participant's role as audit manager in the case. Figure 3 provides the information given to participants. Additionally, the participant was also given a brief synopsis of the requirements in auditing ICFR, to ensure that all participants have the same "baseline" knowledge going into the case (e.g., audit of ICFR terminology, requirements under PCAOB, the impact of assessments on the auditors' opinion, required communications with management and the audit committee, etc.). See Figure 4 for the information provided to participants regarding the audit of ICFR.

Figure 2
General Description of Instrument Content & Process

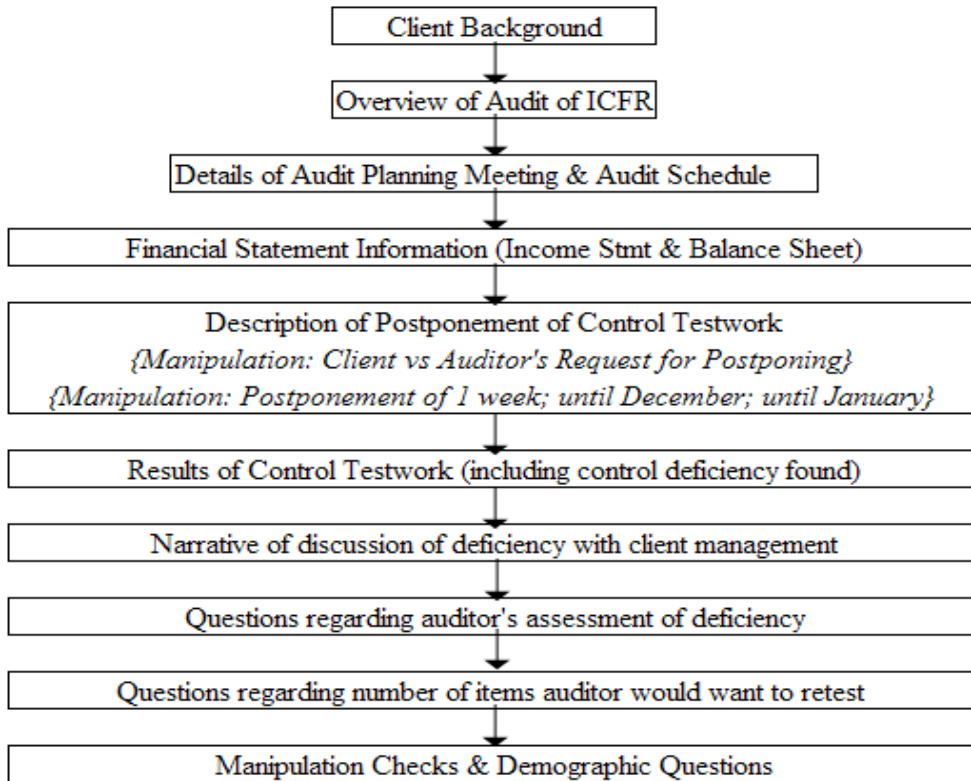


Figure 2. General description of instrument content and process.

Instructions

Thank you for your participation. For purposes of this audit case, please assume the role of **audit manager** on the engagement (a 12/31/2010 year-end). The case provides information about a hypothetical audit client and a related audit task. At the end of the case, there will be a series of questions regarding your professional opinion regarding the audit. All responses will remain anonymous and there will be no attempt to identify you or your firm.

We could not anticipate everyone's information needs but, because we *know your time is extremely valuable*, we have tried to provide as much relevant information as possible, without making the case too long.

Once completed, please return the case materials in the enclosed envelope.

Again, thank you for your participation.

Figure 3. Research instrument instructions to participants.

Overview: Audits of Internal Controls over Financial Reporting

This case involves tasks related to an audit of internal controls over financial reporting (ICFR). The following provides a brief overview of the requirements for auditing ICFR.

In auditing ICFR, auditors must consider the effectiveness of internal controls and any potential impact that control deficiencies (i.e., weaknesses) might have on the financial statements. If there is a “reasonable probability” that the deficiency could result in a material misstatement, then the deficiency should be considered a *material weakness*.

PCAOB auditing standards state that auditors should assess whether controls are effective *as of year-end*. Therefore, if a control deficiency is identified during the year by the auditor (or by the client), management may have an opportunity to remediate the control *before year-end*. The auditor should sufficiently retest the control to determine if the control is effective as of year-end as a basis for his/her opinion.

If the control deficiency exists at year-end and is considered a *material weakness*, the auditor should issue an adverse opinion on the audit of ICFR.

Figure 4. Research instrument information provided to participants regarding audit of ICFR.

Participants were then provided client background information and the auditors’ historical experience with the client (see Figure 5). In addition, participants were given a brief description of when interim testwork (including control testwork) was agreed upon by management and the auditor (i.e., early October). Selected comparative financial statement information (current year annualized versus prior year audited financial information) was also provided for participants’ use and needs (e.g., assessing materiality thresholds; current year trends compared to prior year). Figure 6 outlines the narrative regarding the initial scheduling for interim testwork, as well as the comparative financial information.

Edison Tech, Inc.

Client Background Information

Edison Tech, Inc. is a publicly-traded manufacturer of computer peripheral equipment (e.g., electronic keyboards, computer monitors, speakers) based in the United States and traded on the New York Stock Exchange.

Your firm has audited Edison Tech for the past five (5) years. You have served as the manager on this audit for the past three (3) years, and you are serving as the audit manager on this year's engagement. Because Edison Tech is publicly-traded, your audit team also will perform an integrated audit of the financial statements and internal controls over financial reporting (ICFR) for the year ended 12/31/2010.

Edison Tech's Customer Base

In evaluating Edison Tech's current year revenue increase, your team notes that Edison Tech has been focusing efforts on increasing revenues by expanding its customer base. Edison Tech's products are sold throughout the U.S. to a variety of electronics equipment manufacturers, large retailers, and smaller local businesses. Therefore, the size of customer orders and sales varies by customer.

Throughout the current year, Edison Tech's salespeople have been working to obtain new customers, as well as maintain strong relationships with current customers, to increase revenues and the number of customers. Management uses a percentage of revenues as the basis for determining the Allowance for Uncollectible Accounts. Since your firm began auditing Edison Tech, management consistently has estimated the allowance at ½ percent (0.5%) of annual gross revenues; Edison has used the same percentage for the current year. In prior years, the allowance has been fairly stated; no audit adjustments have been proposed based on the auditors' evaluation of the allowance.

Figure 5. Research instrument client background information provided.

After participants were informed and initially agreed to testing controls as of an interim date (i.e., early October), the planning financial information was provided (see Figure 6.)

Participants were then informed that one party (either the auditor or the client, depending on the fault manipulation) had a conflict arise prior to the interim testwork taking place, causing that party to request delaying control testwork to a subsequent date (delay of one week, delay closer to year-end, and a delay until after year-end, depending on the deadline pressure manipulation).

Figures 7 through 12 provide the detailed narrative for each of the six conditions.

Audit Planning

In an audit committee meeting, the audit partner and CFO discussed scheduling control testing in early October. Testing controls then would provide the audit team and management sufficient time to identify, evaluate, and remediate any control deficiencies before year-end. Both parties agreed to the proposed schedule, and the Audit Committee approved the timing of control testing.

The following financial information was provided for planning purposes prior to the meeting.

(For purposes of this case, only summarized balance sheet and income statement information relevant to your judgments are provided.)

<i>(Amounts are in thousands of \$US)</i>	<u>9/30/2010*</u>	<u>12/31/2009</u>
	(Unaudited)	
<u>Summary of Operations (Annualized for 2010)</u>		
Revenue (gross)	683,548	598,406
Operating income	41,378	35,211
Net income	36,767	33,177
<u>Balance Sheet Data</u>		
Cash, cash equivalents	18,176	14,426
Account Receivables	107,278	83,371
Allowance for Uncollectibles	<u>3,420</u>	<u>3,000</u>
Net Account Receivables	103,858	80,371
Total assets	519,697	454,989
Working capital	112,425	95,451
Current debt	7,561	6,767
Total debt	119,425	120,484
<p>* The income statement information provided has been annualized for planning purposes, using information available for the nine months ending 9/30/2010.</p>		

Figure 6. Research instrument audit planning information.

Update: Timing of Control Testing

Due to an unforeseen circumstance at another audit client that required staff resources to be reassigned (i.e., the staff assigned to Edison Tech were assigned to finish work on another audit client's year-end fieldwork), you requested that the timing of Edison Tech's interim audit testing be postponed.

Because of your request, the interim work (including control testing) that was scheduled for early October was rescheduled to begin a week later than originally planned – in **mid-October**.

Figure 7. Research instrument manipulation of fault and timing: Auditor fault, low deadline pressure condition.

Update: Timing of Control Testing

Due to an unforeseen circumstance at another audit client that required staff resources to be reassigned (i.e., the staff assigned to Edison Tech were assigned to finish work on another audit client's year-end fieldwork), you requested that the timing of Edison Tech's interim audit testing be postponed.

Because of your request, the interim work (including control testing) that was scheduled for early October was rescheduled to begin in **early December**.

Figure 8. Research instrument manipulation of fault and timing: Auditor fault, high deadline pressure condition.

Update: Timing of Control Testing

Due to an unforeseen circumstance at another audit client that required staff resources to be reassigned (i.e., the staff assigned to Edison Tech were assigned to finish work on another audit client's year-end fieldwork), you requested that the timing of Edison Tech's interim audit testing be postponed.

Because of your request, the interim work (including control testing) that was scheduled for early October was rescheduled to begin in **early January**.

Figure 9. Research instrument manipulation of fault and timing: Auditor fault, post-deadline condition.

Update: Timing of Control Testing

The CFO contacted your audit firm a few weeks before interim testing was scheduled. He requested that the timing of interim testing (including control testing) be postponed due to an unforeseen circumstance associated with a delay in the accounting department's move to new office space (i.e., the accounting department was not fully ready to move because of month-end closing).

Because of the CFO's request, the interim work (including control testing) that was scheduled for early October was rescheduled to begin a week later than originally planned – in **mid-October**.

Figure 10. Research instrument manipulation of fault and timing: Client fault, low deadline pressure condition.

Update: Timing of Control Testing

The CFO contacted your audit firm a few weeks before interim testing was scheduled. He requested that the timing of interim testing (including control testing) be postponed due to an unforeseen circumstance associated with a delay in the accounting department's move to new office space (i.e., the accounting department was not fully ready to move because of month-end closing).

Because of the CFO's request, the interim work (including control testing) that was scheduled for early October was rescheduled to begin in **early December**.

Figure 11. Research instrument manipulation of fault and timing: Client fault, high deadline pressure condition.

Update: Timing of Control Testing

The CFO contacted your audit firm a few weeks before interim testing was scheduled. He requested that the timing of interim testing (including control testing) be postponed due to an unforeseen circumstance associated with a delay in the accounting department's move to new office space (i.e., the accounting department was not fully ready to move because of month-end closing).

Because of the CFO's request, the interim work (including control testing) that was scheduled for early October was rescheduled to begin in **early January**.

Figure 12. Research instrument manipulation of fault and timing: Client fault, post-deadline pressure condition.

For participants who were presented with the “client fault” manipulation, the experimental narrative described the cause of the delay in control testwork to be due to a delay in the company’s move of the accounting department to another facility. In pilot testing and discussion with professionals and former auditors, this scenario did not raise any issues in terms of heightened audit risk or fraud risk due to the client not being “ready” for the auditor as originally scheduled. A “delay” of control testwork was included for all three conditions, primarily to enhance the salience of the “fault” manipulation. The delay was presented in the materials in one of three ways: a week, two months, or three months; resulting in the audit team’s control testwork (and identification of control deficiencies) taking place in mid-October, early December, or mid-January, respectively.

Thus, the timing of when control testwork is conducted (and subsequently, the identification of the internal control deficiency) varies between participants, depending on the experimental condition. The conditions include testing in (1) mid-October (low deadline pressure), (2) early December (high deadline pressure), or (3) mid-January (after year-end; post-deadline).

The participant was then presented with the results of one area of control testwork conducted in which a control “failed” the audit team’s control testwork (i.e., failure of the credit manager to properly run credit checks before sales commenced). The participant was provided with the audit program used for testwork, which included the assertions and financial statement accounts impacted by the control, a description of the design of the control, and the planned sample size for testing the control. Subsequent to the audit program step was a description of the audit team’s findings related to the control deficiency, including the number of times the control failed and the description of how the control failed (i.e., for three of the sampled days, there is no

evidence in the customer file that the credit manager conducted credit checks on new customers before sales were approved). Figure 13 outlines the instructions to the audit team regarding control deficiencies, as well as the audit program steps the team was testing in regard to the assertion of the identified financial statement item (i.e., valuation of Accounts Receivable).

The audit team was instructed to bring any controls identified as “ineffective” to the attention of the audit manager in a timely manner. If an ineffective control is considered to be a “material weakness” (i.e., present a reasonable probability that the deficiency could result in a material misstatement), the audit manager will need to inform client management promptly of the deficiency.

As part of its audit of ICFR, your audit team tested the credit approval process regarding new customers (which impacts the valuation of accounts receivable and the allowance for doubtful accounts). A portion of the audit program regarding that control appears below.

Assertion & Account Tested: Valuation; Accounts Receivable (Allowance for Uncollectibles)
Volume of Transactions: Individual sales transactions in 2010 range from \$50,000 to \$500,000, depending mainly on customer size and specific product needs (e.g., types of products ordered).
NOTE: Potential customers can vary dramatically in terms of size (i.e., local businesses to large, national office supply chains), and therefore have a wide range of both volume of transactions and creditworthiness.
Audit Risks: Accounts Receivable could be overstated (Allowance for Doubtful Accounts understated) if sales are made without thorough credit checks and approvals.
Control (as designed): Salespeople obtain a completed credit application from the potential customer and send it to the credit risk manager. The credit manager reviews credit applications and, once reviewed, will “approve” or “deny” credit in the Revenue System Module. Once “approved,” the salesperson can proceed with completing credit orders for the approved customer. The customer’s credit limits are entered at the time of approval.
Control Test: Select 30 new customers from throughout the year. Verify that a credit application was properly reviewed and approved for each customer. Request the credit files (the customer’s credit application and accompanying documentation related to credit approval), and verify that the credit approval process was conducted and completed prior to sales to customer. If documentation is missing, consider control as “deficient” for sample item.
Sample Size: 30
Tolerable/Acceptable Deviation Rate: 1 of 30
Related controls/mitigating controls: None currently identified.
Test Results: During testing, the audit team noted that the credit review control *failed for 3 of the 30* customers tested. Because the deviation rate is greater than the tolerable/acceptable deviation rate, the control is considered to be “**ineffective.**”

Figure 13. Research instrument description of control testing and results of testing.

Following the description of the control and deficiency noted by the audit team, a narrative between the auditor and client management (i.e., the credit manager) follows (detailed in Figure 14), in which the participant is provided more details on how this deficiency occurred, as well as management's evaluation of the finding. In general, management describes the failures found as anomalies, and he (the credit manager) downplays the significance of the impact(s) the control deficiency may have on the financial statements. The participant is also informed that the CFO stated that the control deficiency can be addressed and remediated promptly (i.e., within the week), if needed.

Discussion with Management
<p>After reviewing the workpapers, you set up a meeting with the credit manager to discuss the findings. The following is part of the conversation between you and the credit manager (John):</p> <p>You: John, I have a question about the credit approvals for new customers that the audit team selected for testing. It appears that, for three of these customers, orders were placed without conducting a credit check.</p> <p>John (Credit Manager): Your staff that conducted the testing brought these to my attention; I expected that you would want to discuss it. I'm not sure why the credit approval paperwork isn't in these files. It doesn't happen a lot, but sometimes I get behind on conducting credit checks, especially if I have been out of the office. These credit checks must have been submitted on days that I was out of the office.</p> <p>This year, the salespeople have been encouraged to bring in new customers and accounts, and they are very eager to "seal the deal" with potential customers. They often call me to hurry the process along so they won't lose the sale. I know that it might look like I'm not on top of things, but these are random occurrences--it doesn't happen a lot. I checked these three customers on this month's Accounts Receivable Aging Report; you can verify that all 3 are less than 60 days past due on their accounts, which is not unusual for new customers.</p> <p>You: Is there anyone else who has the ability to access the credit approval module in the system and grant approval in your absence?</p> <p>John: The CFO can grant credit approval in the event that I have an extended absence. He hasn't ever had to do that though. I didn't ask him to "fill in" on these days. But, like I said, if I had an extended absence planned, then he and I would discuss how he would run the credit checks himself or who could fill in for me while I was absent.</p> <p>You: Ok, thanks John. I might have additional questions. Thanks for your time.</p>

Figure 14. Research instrument manipulation of fault and timing: Narrative of discussion with management regarding control deficiency.

Participants are again reminded of the timing of testwork, which varied by manipulation, as well as the number of weeks left before year-end in which to address the control deficiency (i.e., have the client remediate and the auditor retest the control in which to make an assessment). See Figures 15 through 20 for the various narratives, by condition, provided in the experimental instrument due to the manipulation of both deadline pressure (i.e., the timing of testwork) and fault of the delay of testwork.

<p>Current Date: Due to your need to reschedule interim testing, the control testing took place in mid-October. The current date is October 14th, approximately 12 weeks before year-end.</p>

Evaluation of Control Deficiency

Even though the control failed in the audit sample, the potential impact that the control deficiency may have on the financial statements is undetermined. As the audit manager, you need to consider its potential impact for the audit of ICFR.

The CFO asserts that the control deficiency can be promptly addressed and remediated. If retesting the control(s) is necessary, consider that your audit team estimates that the credit manager evaluates 4 potential customers, on average, each week.

Figure 15. Research instrument manipulation of fault and timing: Auditor fault, low deadline pressure condition, and consideration of deficiency evaluation on audit of ICFR.

Current Date: Due to your need to reschedule interim testing, the control testing took place in early December. The current date is **December 6th**, approximately **4 weeks** before year-end.

Evaluation of Control Deficiency

Even though the control failed in the audit sample, the potential impact that the control deficiency may have on the financial statements is undetermined. As the audit manager, you need to consider its potential impact for the audit of ICFR.

The CFO asserts that the control deficiency can be promptly addressed and remediated. If retesting the control(s) is necessary, consider that your audit team estimates that the credit manager evaluates 4 potential customers, on average, each week.

Figure 16. Research instrument manipulation of fault and timing: Auditor fault, high deadline pressure condition, and consideration of deficiency evaluation on audit of ICFR.

Current Date: Due to your need to reschedule interim testing, the control testing took place in early January. The current date is **January 20th**, approximately **3 weeks** after year-end.

Evaluation of Control Deficiency

Even though the control failed in the audit sample, the potential impact that the control deficiency may have on the financial statements is undetermined. As the audit manager, you need to consider its potential impact for the audit of ICFR.

The CFO asserts that the control deficiency can be promptly addressed and remediated. If retesting the control(s) is necessary, consider that your audit team estimates that the credit manager evaluates 4 potential customers, on average, each week.

Figure 17. Research instrument manipulation of fault and timing: Auditor fault, post-deadline pressure condition, and consideration of deficiency evaluation on audit of ICFR.

Current Date: Due to the CFO's need to reschedule interim testing, the control testing took place in mid-October. The current date is **October 14th**, approximately **12 weeks** before year-end.

Evaluation of Control Deficiency

Even though the control failed in the audit sample, the potential impact that the control deficiency may have on the financial statements is undetermined. As the audit manager, you need to consider its potential impact for the audit of ICFR.

The CFO asserts that the control deficiency can be promptly addressed and remediated. If retesting the control(s) is necessary, consider that your audit team estimates that the credit manager evaluates 4 potential customers, on average, each week.

Figure 18. Research instrument manipulation of fault and timing: Client fault, low deadline pressure condition, and consideration of deficiency valuation on audit of ICFR.

Current Date: Due to the CFO's need to reschedule interim testing, the control testing took place in early December. The current date is **December 6th**, approximately **4 weeks** before year-end.

Evaluation of Control Deficiency

Even though the control failed in the audit sample, the potential impact that the control deficiency may have on the financial statements is undetermined. As the audit manager, you need to consider its potential impact for the audit of ICFR.

The CFO asserts that the control deficiency can be promptly addressed and remediated. If retesting the control(s) is necessary, consider that your audit team estimates that the credit manager evaluates 4 potential customers, on average, each week.

Figure 19. Research instrument manipulation of fault and timing: Client fault, high deadline pressure condition, and consideration of deficiency evaluation on audit of ICFR.

<p>Current Date: Due to the CFO's need to reschedule interim testing, the control testing took place in early January. The current date is January 20th, approximately 3 weeks after year-end.</p>
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Evaluation of Control Deficiency

Even though the control failed in the audit sample, the potential impact that the control deficiency may have on the financial statements is undetermined. As the audit manager, you need to consider its potential impact for the audit of ICFR.

The CFO asserts that the control deficiency can be promptly addressed and remediated. If retesting the control(s) is necessary, consider that your audit team estimates that the credit manager evaluates 4 potential customers, on average, each week.

Figure 20. Research instrument manipulation of fault and timing: Client fault, post-deadline pressure condition, and consideration of deficiency evaluation on audit of ICFR.

At the end of the case materials, a series of questions were asked to measure the auditors' materiality assessment of the control deficiency, as well as the auditors' judgment as to the amount of retesting that should be conducted, given that the client remediates the deficiency. See Figure 21 for a list of questions used to measure primary dependent variables of interest. Supplemental questions for additional analysis were asked, as outlined in Figure 22.

Participants also answered manipulation check questions regarding the timing of testwork and the fault of the control deficiency (see Figure 23) and demographic questions (see Figure 24) at the end of the experimental instrument materials.

Questions

INSTRUCTIONS: Please answer the following questions regarding the Edison Tech audit, based on the information provided in the case materials.

Assuming that Edison Tech has not yet remediated the control, how significant is the control deficiency, in terms of its potential impact on the financial statements?

Immaterial Material
1 2 3 4 5 6 7 8 9

The sampling unit used in testing the control was the number of customers. If management remediates the control, how many additional customers (sample items) would you want to select for retesting?

Number of Additional Customers to Test: _____

Of the number of new customers that you choose to retest (in your response to the previous question), how many times could the control “fail” and you still consider the control “effective?”

Number of Times the Control Could Fail: _____

Assuming that Edison Tech has not yet remediated the control, what is the likelihood that the control deficiency will result in a misstatement?

Very Low Very High
1 2 3 4 5 6 7 8 9

Assuming that Edison Tech has not yet remediated the control, if the control deficiency were to result in a misstatement, how *material* would the misstatement most likely be?

Immaterial Material
1 2 3 4 5 6 7 8 9

Figure 21. Research instrument questions to measure main dependent variables.

Questions

INSTRUCTIONS: Please answer the following questions regarding the Edison Tech audit, based on the information provided in the case materials.

How likely are you to increase your year-end substantive testing related to Accounts Receivables, based on your assessment of the control?

Highly Unlikely									Highly Likely
1	2	3	4	5	6	7	8	9	

How likely are you to increase the audit fee because of actions related to the control deficiency (e.g., retesting performed if the client remediates the deficiency, additional substantive testing)?

Highly Unlikely									Highly Likely
1	2	3	4	5	6	7	8	9	

How important do you consider the credit approval control to be?

Not at all Important									Very Important
1	2	3	4	5	6	7	8	9	

Figure 22. Research instrument questions to measure additional dependent variables.

Questions

INSTRUCTIONS: Please answer the following questions regarding the Edison Tech audit, based on the information provided in the case materials.

In the case, which party requested the delay in control testing (please circle)?

Auditor / CFO

Based on information in the case, how much time is there for management and the auditor to address the control deficiency?

No Time Plenty of Time
1 2 3 4 5 6 7 8 9

Figure 23. Research instrument manipulation-check questions.

INSTRUCTIONS: Please respond to the questions below, which relate to **YOU**, and **NOT** to the materials presented on the preceding pages. **Reminder: All of your responses are completely confidential.**

Your position within your firm:

Partner Sr. Manager Manager Other: _____

How many audit engagements do you work on during a typical year? _____
Audits

Of those engagements, how many are publicly-traded companies? _____ Audits

How long have you been at your current position? _____ Years

How many total years of audit experience do you have? _____ Years

How much experience have you had in auditing Internal Controls over Financial Reporting (ICFR)?

No									Extensive
Experience									Experience
1	2	3	4	5	6	7	8	9	

Gender (please circle): Male / Female

What is your firm's size?

<input type="checkbox"/> Big Four	<input type="checkbox"/> Large Regional
<input type="checkbox"/> International (non-Big Four)	<input type="checkbox"/> Local
<input type="checkbox"/> National	<input type="checkbox"/> Other: _____

Figure 24. Research instrument demographic questions.

Independent Variables

Participants were randomly assigned to one of six experimental conditions, based on a 3x2 between-subjects ANOVA research design. Within the case materials presented to the participants, the existence of deadline pressure created from the timing of the audit testwork is manipulated by indicating that the testwork was conducted more than two months before year-end (low deadline pressure), a few weeks before year-end (high deadline pressure), or after year-end (post-deadline; no deadline pressure). Additionally, the auditor's responsibility for when the control testwork took place is manipulated by describing whether the delay in control testwork was the result of the auditor's rescheduling.

Dependent Variables

In testing Hypotheses H1 and H3, the main dependent variable of interest was the auditors' materiality assessment of the control deficiency. This was measured by asking the participant to rate "how significant is the control deficiency, in terms of its potential impact on the financial statements," using 9-point Likert-type scale (1 = *Immaterial* to 9 = *Material*). To evaluate Hypothesis H2, I measured the number of sampled items the auditor would choose to retest the control deficiency post-remediation. Participants were asked "if management remediates the control, how many additional customers (sample items) would you want to select for retesting?"

CHAPTER IV

RESULTS

Manipulation Checks

In order to determine whether the participants were aware of the timing of the deadline (timing manipulation), I asked participants in all three deadline-pressure treatment groups (low deadline pressure, high deadline pressure, and post-deadline) to rate on a Likert-type scale how much time did they perceive was available for “management and the auditor to address the control deficiency” (1 = *No Time*; 9 = *Plenty of Time*). Participants randomly assigned to interim period manipulation (i.e., October) did perceive that there was more time to address the deficiency ($M = 5.29$) than those assigned to the near year-end manipulation (i.e., December, $M = 2.94$, p -value < 0.0001). Additionally, participants in the after-year end treatment group (i.e., January) perceived that there was even less time available to remediate the control ($M = 2.11$) than the December treatment group ($M = 2.94$; p -value = 0.02). See Table 2 for t -test comparisons between deadline pressure conditions.

In regard to the fault manipulation, all except one participant correctly perceived which party (the auditor or the CFO) requested the delay in testwork. Participants responded to a dichotomous question asking which party requested the delay in control testing. The one participant who failed this manipulation check was excluded for analysis; however, including the participant does not significantly change results. Figure 23 presented the manipulation

check questions asked of participants for each manipulation. These comparisons indicate that the intended manipulations were successful.

Table 2

Analysis of Auditors' Perception of Time to Address Deficiency

Panel A: Perception of Amount of Time to Address Control Deficiency			
	Low Deadline Pressure	High Deadline Pressure	Post-Deadline
Mean	5.29	2.94	2.11
SD	(2.15)	(1.41)	(1.59)
Cell Size	n= 36	n= 41	n= 46

Panel B: Comparisons Under Various Pressures		
	<i>t</i> -stat	<i>p</i> -value
Low Deadline Pressure Versus High Deadline Pressure	5.14	<0.0001
Low Deadline Pressure Versus Post-Deadline	7.00	<0.0001
High Deadline Pressure Versus Post-Deadline	2.41	0.0184

Note: All reported *p*-values are for two-tailed tests.

Tests of Hypotheses

The stated hypotheses evaluated the auditors' judgments of materiality and the sufficiency of audit evidence under low and high deadline pressures, when auditor fault is present or absent. Therefore, I used a subset of the collected data in which I excluded the post-deadline cells (no deadline pressure), resulting in a 2x2 design for testing hypotheses using an analysis of variance (ANOVA) statistical model. For the analysis of H1, I considered whether a main effect of deadline pressure (manipulated dependent variable) on the auditors' assessment of the identified control deficiency's significance was present. Table 3 presents the results of the ANOVA of the auditors' assessment of the control deficiency. While there was not a main effect

of time deadline pressure on the auditors' assessments (low deadline pressure = 5.60, high deadline pressure = 5.37; p -value = 0.286), there was an interactive effect of Time Pressure and Perceived Fault ($F = 2.83$; p -value = 0.049; see Table 3), which impacted the interpretability of main effects. See Figure 25 for a graphical display of the interaction of fault and deadline pressure. Due to the interactive effects, I examined the interaction and the related simple effects in the analysis of the interactive hypothesis as described in H3 (see below).

For Hypothesis 2, I considered whether deadline pressure has a main effect on the auditor's judgment of sufficient sample size for retesting controls. Table 4 presents the results of the ANOVA of the auditors' assessment of the control deficiency. While there was not a main effect of deadline pressure on chosen sample sizes for remediation testing (low pressure = 19.55 versus high pressure = 18.52; p -value = 0.320), there was a main effect of perceived fault on the auditors' chosen sample sizes (*auditor's fault* = 14.56 versus *not auditor's fault* = 23.55; p -value = 0.004; see Table 4). These results, while not hypothesized, indicate that when the auditor is at fault for causing a delay in the audit testwork, he/she will determine that fewer sample items are sufficient, compared to when the auditor has not caused the delay in testwork.

Table 3

Analysis of Auditor's Materiality Assessment of Control Deficiency

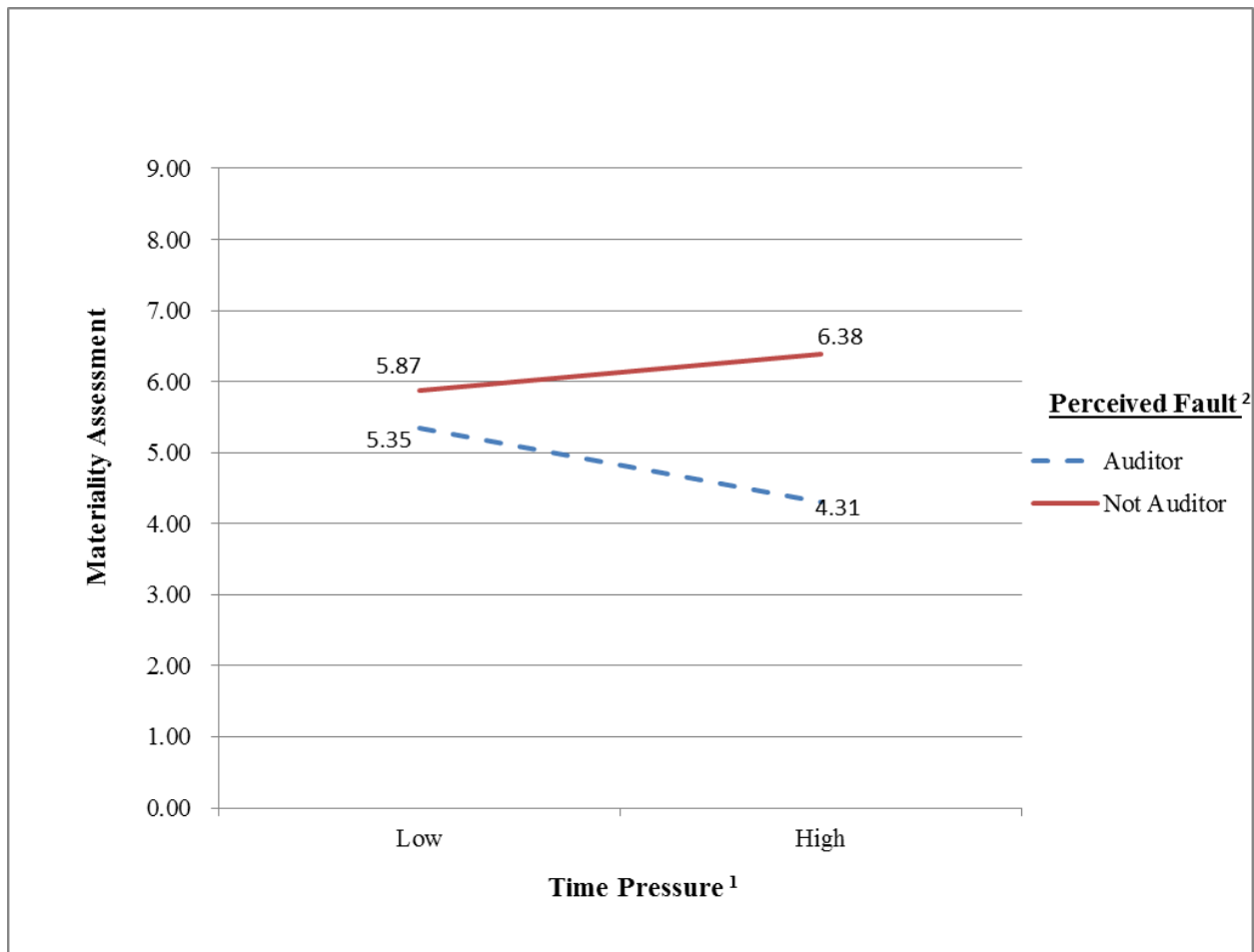
Panel A: Results for Auditor's Assessment of Control Deficiency ³			
Perceived Fault ²	Time Deadline Pressure ¹		
	Low	High	
Auditor	5.35 (1.80) n=19	4.31 (1.58) n=20	4.82 (1.75) n=39
Not Auditor	5.87 (2.07) n=17	6.38 (1.98) n=21	5.99 (2.01) n=38
	5.60 (1.92) n=36	5.37 (2.06) n=41	n=77
Panel B: Results of ANOVA			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
Perceived Fault	1	7.79	0.008
Time Pressure	1	0.32	0.286 ⁴
Perceived Fault X Time Pressure	1	2.83	0.049 ⁴
Panel C: Simple Effects of Perceived Fault			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
When Time Deadline Pressure is Low	1	0.61	0.044
When Time Deadline Pressure is High	1	10.17	0.001 ⁴
Panel D: Simple Effects of Time Deadline Pressure			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
When Pressure is Auditor's Fault	1	2.57	0.057 ⁴
When Pressure is not Auditor's Fault	1	0.61	0.438

¹ For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

³ The mean (standard deviation) for participants' responses are reported, along with the number of responses per cell. Participants responded on a Likert-type scale, with 1 = *Immaterial* and 9 = *Material*

⁴ Reported *p*-values are for one-tailed tests.



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 25. Auditors’ materiality assessment of control deficiency.

Table 4

Analysis of Auditor's Determined Sample Sizes for Retesting Control

Panel A: Results of Auditor's Decision of Planned Remediation ³			
Perceived Fault ²	Time Deadline Pressure ¹		
	Low	High	
Auditor	15.75 (8.27) n=19	13.44 (9.32) n=20	14.56 (8.74) n=39
Not Auditor	23.81 (7.85) n=17	23.35 (18.36) n=21	23.55 (14.06) n=38
	19.55 (8.93) n=36	18.52 (15.32) n=41	n=77

Panel B: Results of ANOVA			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
Perceived Fault	1	9.25	0.004
Time Pressure	1	0.22	0.320 ⁴
Perceived Fault X Time Pressure	1	0.10	0.754

¹ For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

³ Numbers indicate the sample size the auditors reported choosing to select and test once the control was remediated. Participants were asked "how many additional customers (sample items) would you want to select for retesting?" The mean (standard deviation) for participants' responses are reported, along with the number of responses per cell.

⁴ Reported p-values are for one-tailed tests.

However, it should be noted that while sample size is important to the auditor's decision, the number of times the control can fail in the prescribed sample before the control is considered "deficient" (i.e., deviation rate) is also important. If the deviation rate increases as sample size increases, this may indicate the same level of scrutiny on the part of the auditor. For example, testing 10 items and "tolerating" 1 to fail in the sample has the same deviation rate as testing 20 items and tolerating 2 to fail. Therefore, I compared deviation rates by dividing the sample size by the number of reported deviations the auditor would tolerate in his/her reported sample. Results indicate that there are main effects of both time pressure and perceived fault on the auditor's acceptable deviation rate. Table 5 presents the results of the ANOVA of the auditors' assessment of the control deficiency.

On average, when the time pressure is high, the auditor will allow a *higher* deviation rate ($M = 13\%$) compared to when time pressure is low ($M = 9\%$), suggesting the auditor will be more accepting of deviations/errors when under high deadline pressure than when under lower deadline pressure (p -value = 0.060, two-tailed). Additionally, when the auditor is at fault for creating the increased deadline pressure, the auditor will tolerate a *higher* deviation rate ($M = 14\%$ versus 9% when the auditor is not at fault; p -value = 0.035, two-tailed). Although there is not an interactive effect of fault and time pressure on the deviation rates (p -value = 0.639), these results suggest that the auditor may not consider control deviations as significant if identified under these two conditions--high deadline pressure or when the auditor is at fault for creating high deadline pressure. If the auditor has higher tolerable deviation rates, essentially the auditor is willing to accept more errors in the tested sample of the client's work. This difference in the auditor's materiality judgment under these conditions has a potentially negative impact on auditor decision and audit quality, in that the auditor is more accepting of errors as the

deviation/error threshold increases (and sample size is smaller). Figures 26 and 27 provide graphical diagrams of both sample size selection and the related deviation rate under each condition.

Table 5

Analysis of Auditor's Tolerable Deviation Rate in Chosen Sample Size

Panel A: Results of Auditor's Tolerable Deviation Rate ³			
Perceived Fault ²	Time Pressure ¹		
	Low	High	
Auditor	0.11 (0.06) n=19	0.16 (0.14) n=20	0.14 (0.11) n=39
Not Auditor	0.07 (0.03) n=17	0.10 (0.09) n=21	0.09 (0.07) n=38
	0.09 (0.05) n=36	0.13 (0.12) n=41	n=77

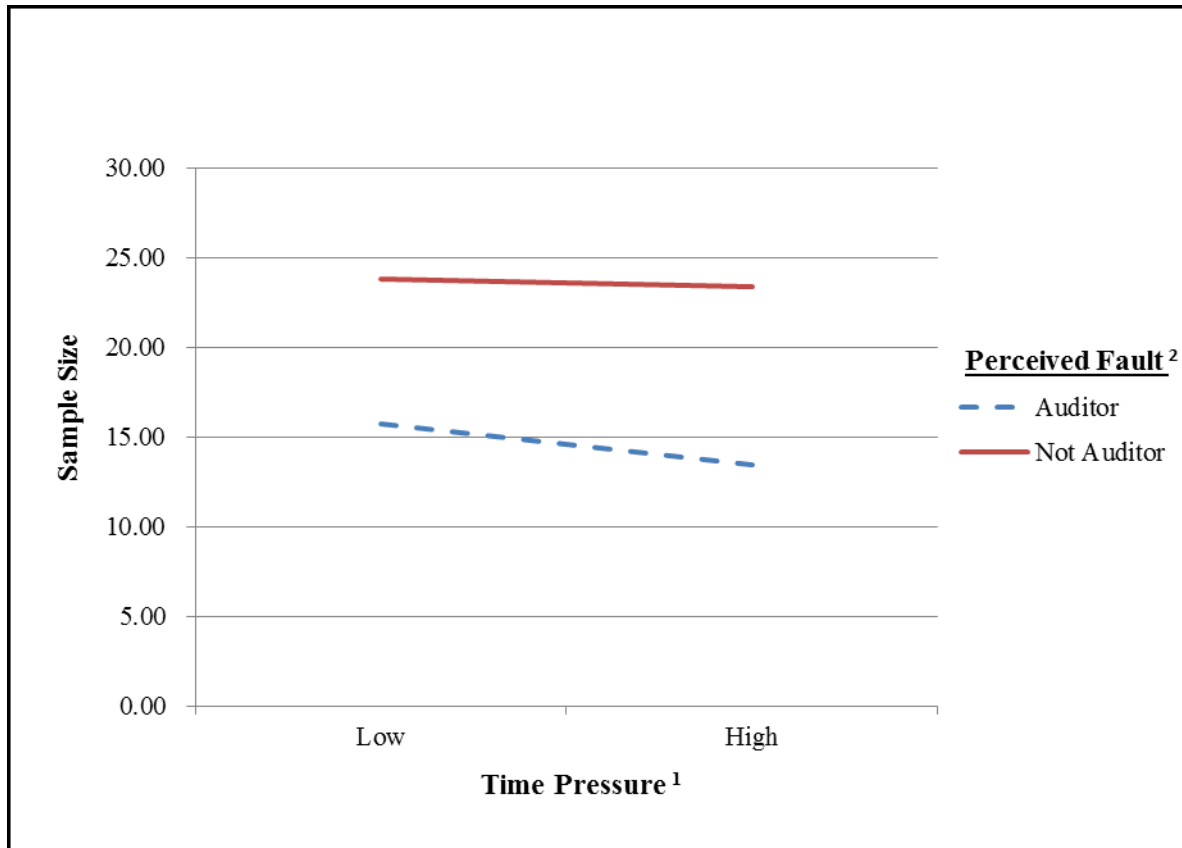
Panel B: Results of ANOVA			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
Perceived Fault	1	4.64	0.035
Time Pressure	1	3.68	0.060
Perceived Fault X Time Pressure	1	0.22	0.639

Note. All reported *p*-values are for two-tailed tests.

¹ For the “Time Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

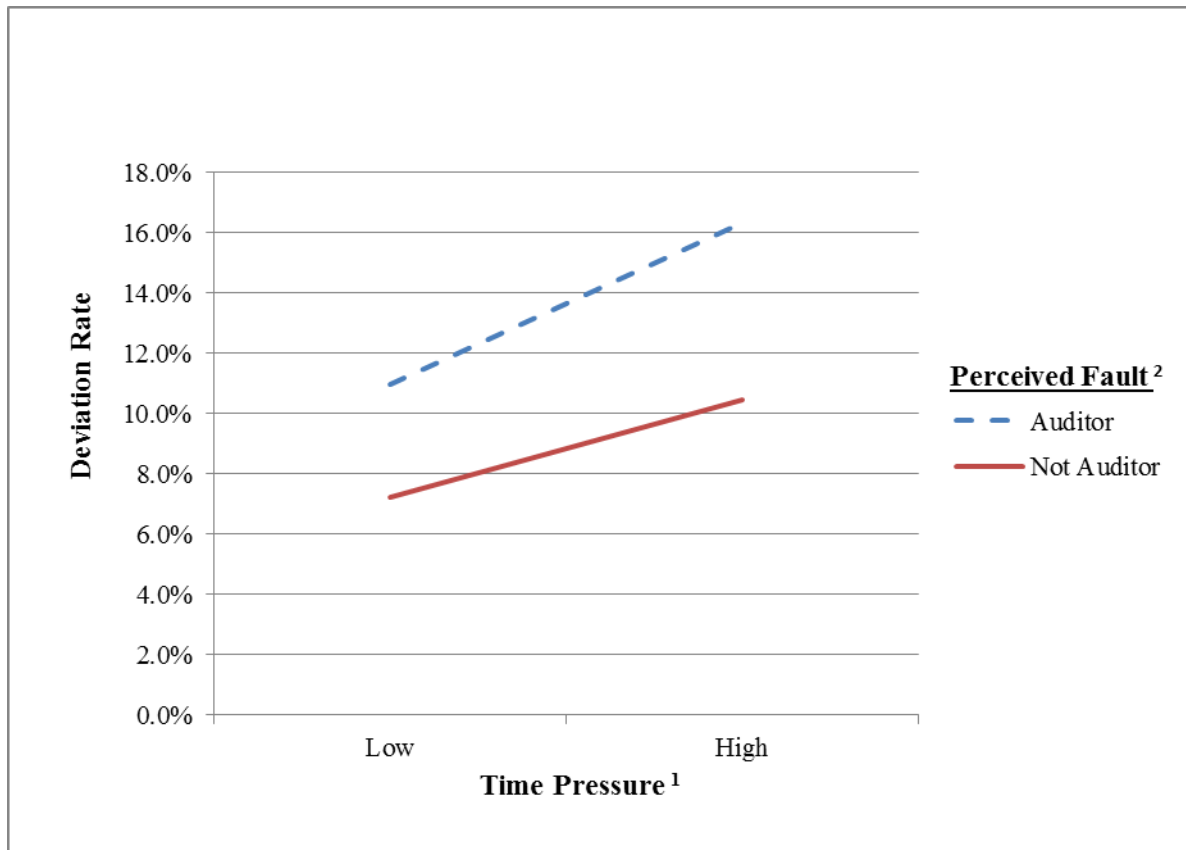
³ Numbers reported are the calculated deviation rates that participants reported in response to two questions: “how many additional customers (sample items) would you want to select for retesting?” and “how many times could the control fail and the control still be considered effective?” The mean (standard deviation) for participants’ responses are reported, along with the number of responses per cell.



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 26. Auditors’ sample sizes for post-remediation testing.



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 27. Auditors’ tolerable deviation rate in sample.

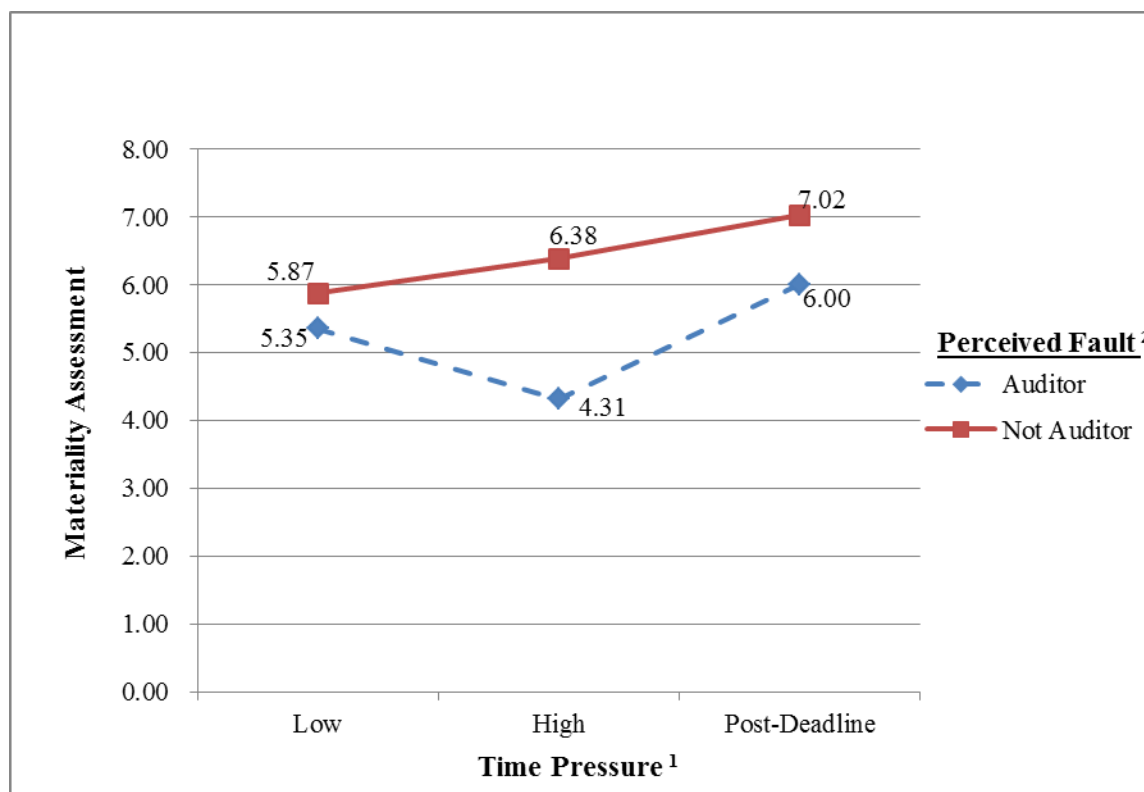
Results also support the hypothesized interactive effect of deadline pressure and auditor fault on the auditor's assessment of materiality (H3). Specifically, when the auditor has caused increased deadline pressure, the auditor is more likely to consider the identified control deficiency less material compared to if the auditor is not at fault for the increased deadline pressure (F -stat = 2.83, p -value = 0.049; see Table 3, Panel B). This finding suggests that the auditor will be more likely to consider identified errors/discrepancies as less significant when the auditor is at fault for the negative consequences of identifying the error when little or no time is left for the client to remediate (in order to preclude an adverse opinion). Figure 25 shows the interactive effect of Time Pressure x Perceived Fault.

In considering the interaction, I also examined whether there is a simple effect of auditor fault when time pressure is high. Table 3, Panel C indicates that auditor fault has an impact on auditor's assessment of materiality when time deadline is high (F -stat = 10.17; p -value = 0.001). This result suggests that when the auditor is under increased deadline pressure (e.g., the auditor is near the year-end deadline), the auditor will consider identified errors/deficiencies as less material when the auditor perceives the pressure to be his/her fault.

Examination of Post-Deadline Influences

In considering the research question that considers how auditors' materiality decisions and sampling decisions may be impacted once the year-end deadline has passed, I found that materiality assessments are influenced by both the timing of testwork and the perceived auditor fault. As indicated in Figure 28, when the auditor was at fault for creating the delay in testwork, participants assigned to the after year-end deadline condition (post-deadline condition) assessed materiality of the control deficiency *higher* ($M = 6.00$) than those participants assigned to the

high deadline condition ($M = 4.31$; p -value = 0.0050; see Table 6 for t -stat comparisons and p -values). While the materiality assessment was higher for the post-deadline condition (when the auditor was at fault), it was not statistically higher than the low deadline condition ($M = 5.35$; p -value = 0.2879). These findings imply that deadline pressure and auditor fault both impact auditors' assessment of materiality prior to the deadline (e.g., year-end), as noted in Table 3. However, auditors will assess the materiality of identified errors/deficiencies differently once the deadline has passed.



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure), December (high pressure), or January (post-deadline).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 28. Auditors’ materiality assessment of control deficiency.

Table 6

Analysis of Auditor's Materiality Assessment of Control Deficiency

Panel A: Results for Auditor's Assessment of Control Deficiency			
Perceived Fault ²	Deadline ¹		
	Low Deadline Pressure	High Deadline Pressure	Post-Deadline
Auditor	5.35 (1.80) n=19	4.31 (1.58) n=20	6.00 (1.93) n=23
Not Auditor	5.87 (2.07) n=17	6.38 (1.58) n=21	7.02 (1.62) n=22

¹For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure), December (high pressure), or January (post-deadline).

²To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Panel B: Comparisons Under Various Pressures; when Auditor is at Fault		
	<u>t-stat</u>	<u>p-value</u>
Low Deadline Pressure Versus High Deadline Pressure	1.77	0.0871
Low Deadline Pressure Versus Post-Deadline	1.08	0.2879
High Deadline Pressure Versus Post-Deadline	-2.99	0.0050

Panel C: Comparisons Under Various Pressures; when Auditor is NOT at Fault		
	<u>t-stat</u>	<u>p-value</u>
Low Deadline Pressure Versus High Deadline Pressure	0.72	0.4782
Low Deadline Pressure Versus Post-Deadline	1.82	0.0808
High Deadline Pressure Versus Post-Deadline	1.08	0.2877

In addition to materiality assessments, auditors' judgments changed once the deadline had passed in terms of the sufficiency of audit evidence as well. As previously stated, once the year-end deadline has passed, the audit client no longer has the ability to remediate the control (and the auditor retest the control) in order to avoid an adverse opinion. Therefore, the year-end deadline pressure may not have the same effect due to this inability to preclude an adverse opinion with retesting. Overall, the auditors that were assigned to the post-deadline manipulation

reported wanting to sample more items and allow for fewer exceptions in order to consider the control sufficiently remediated. Specifically, if the auditor created the deadline pressure prior to year-end, he/she was more likely to sample fewer items in October ($M = 15.75$) and December ($M = 13.44$), compared to January ($M = 28.50$; p -values = 0.0024 and 0.0007, respectively; see Table 7 for t -stat comparisons and p -values). However, when the auditor was not to blame for the delay in testwork (i.e., deadline pressure), there was not a significant change in the sample sizes before year-end compared to after year-end. This suggests that auditor fault has a significant impact on the auditor's request to gather audit evidence, even when the deadline pressure is not at its highest (e.g., interim date).

Table 8 provides t -stat comparisons and related p -values for the auditors' tolerable deviation rates for the post-deadline condition compared to before year-end conditions. In respect to the deviation rate, the auditors without deadline pressure (post-deadline) reported tolerating fewer exceptions/deviations in their selected samples. For example, when the auditor was at fault for creating high deadline pressure, auditors reported an average tolerable deviation rate of 16.30%, compared to only 7.04% reported by auditors testing after the deadline. (Graphic displays of the auditors' chosen sample sizes and tolerable deviation rates, as compared to the post-deadline condition, are provided in Figures 29 and 30, respectively.) The auditors' sampling and retesting decisions suggest that *before the deadline* the auditor was willing to issue an unqualified opinion on ICFR based on *fewer* effective sampled items than if the control was tested without the deadline pressure (post-deadline).

Table 7

Analysis of Auditors' Sample Sizes for Post-remediation Testing

Panel A: Results for Auditors' Sample Sizes for Post-remediation Testing			
Perceived Fault ²	Deadline ¹		
	Low Deadline Pressure	High Deadline Pressure	Post-Deadline
Auditor	15.75 (8.27) n=19	13.44 (9.32) n=20	28.50 (14.52) n=20
Not Auditor	23.81 (7.85) n=17	23.35 (18.36) n=21	30.88 (17.87) n=17

¹For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure), December (high pressure), or January (post-deadline).

²To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Panel B: Comparisons Under Various Pressures; when Auditor is at Fault		
	<u>t-stat</u>	<u>p-value</u>
Low Deadline Pressure Versus High Deadline Pressure	0.74	0.4635
Low Deadline Pressure Versus Post-Deadline	3.31	0.0024
High Deadline Pressure Versus Post-Deadline	3.77	0.0007

Panel C: Comparisons Under Various Pressures; when Auditor is NOT at Fault		
	<u>t-stat</u>	<u>p-value</u>
Low Deadline Pressure Versus High Deadline Pressure	0.09	0.9256
Low Deadline Pressure Versus Post-Deadline	1.21	0.2346
High Deadline Pressure Versus Post-Deadline	1.49	0.1515

Table 8

Analysis of Auditors' Tolerable Deviation Rate in Sample

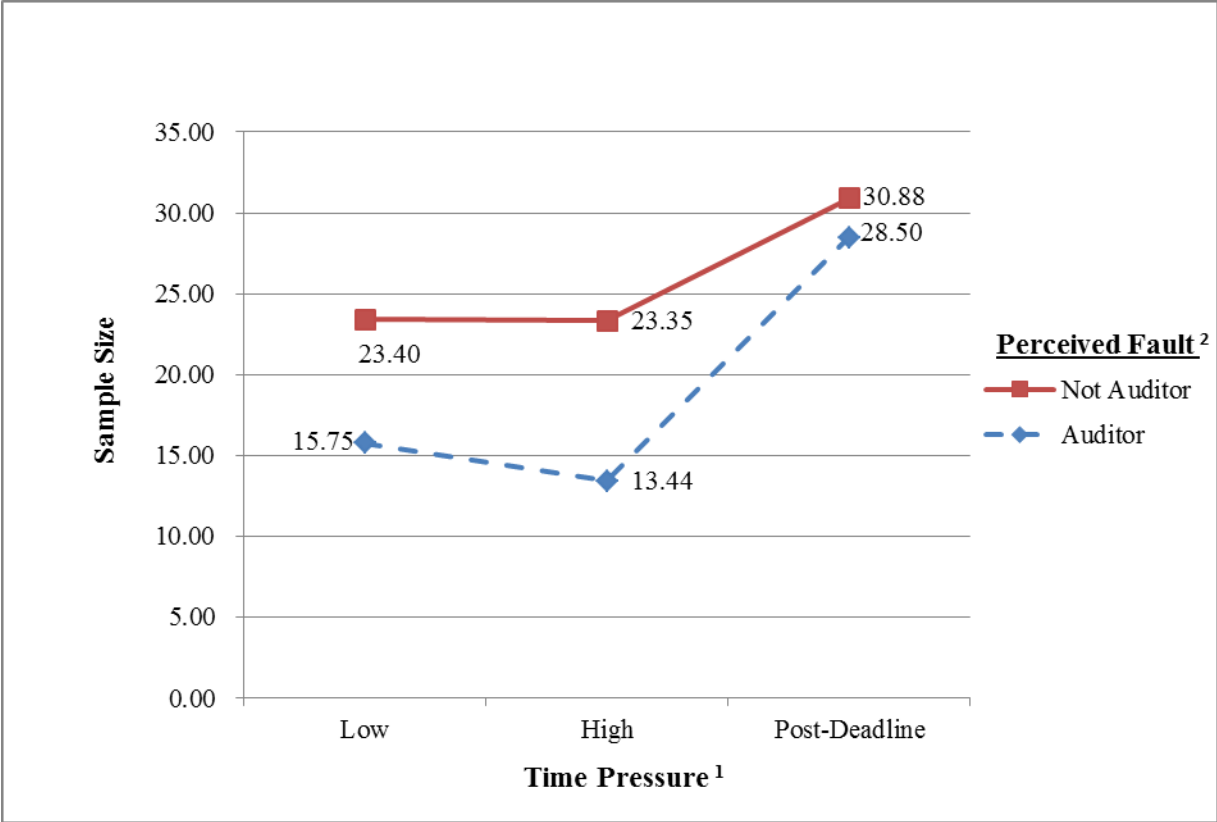
Panel A: Results for Auditors' Tolerable Deviation Rate in Sample			
Perceived Fault ²	Deadline ¹		
	Low Deadline Pressure	High Deadline Pressure	Post-Deadline
Auditor	0.11 (0.06) n=19	0.16 (0.14) n=20	0.07 (0.04) n=20
Not Auditor	0.07 (0.03) n=17	0.10 (0.09) n=21	0.05 (0.03) n=19

¹For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure), December (high pressure), or January (post-deadline).

²To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Panel B: Comparisons Under Various Pressures; when Auditor is at Fault		
	<u>t-stat</u>	<u>p-value</u>
Low Deadline Pressure Versus High Deadline Pressure	1.38	0.1832
Low Deadline Pressure Versus Post-Deadline	2.34	0.0276
High Deadline Pressure Versus Post-Deadline	2.52	0.0224

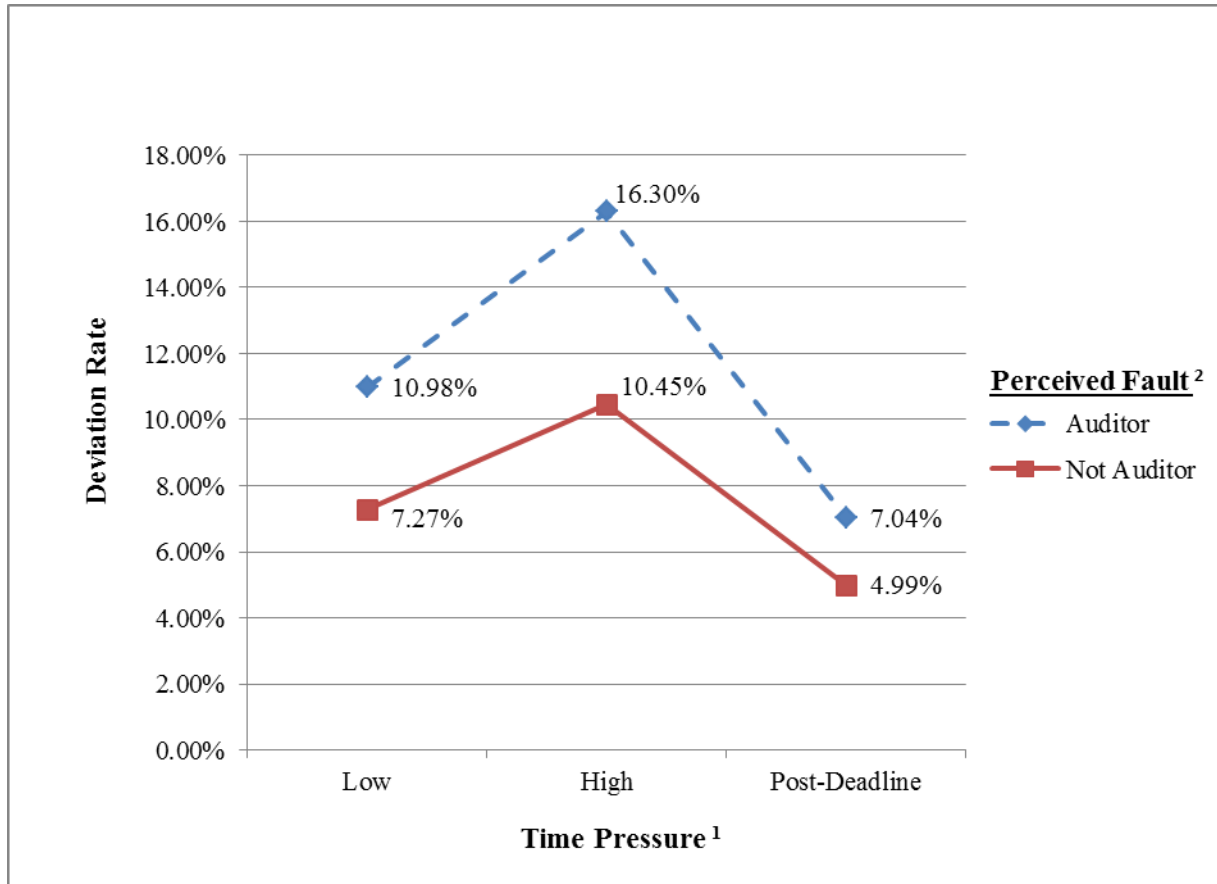
Panel C: Comparisons Under Various Pressures; when Auditor is NOT at Fault		
	<u>t-stat</u>	<u>p-value</u>
Low Deadline Pressure Versus High Deadline Pressure	1.41	0.1721
Low Deadline Pressure Versus Post-Deadline	2.15	0.0401
High Deadline Pressure Versus Post-Deadline	2.49	0.0221



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure), December (high pressure), or January (post-deadline).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 29. Auditors’ sample sizes for post-remediation testing.



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure), December (high pressure), or January (post-deadline).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 30. Auditors’ tolerable deviation rate in sample.

CHAPTER V

SUPPLEMENTAL ANALYSIS

In addition to the main analysis, as hypothesized previously, I collected additional data regarding, in each given scenario, how likely the auditor would be to increase substantive testwork as a result of the identification of the control deficiency and to increase the client's audit fees as a result of the identified control deficiency. Also, I asked participants to assess the likelihood of a misstatement, as well as the materiality if a misstatement did occur, as a result of the identified control deficiency. These additional questions, while related to the primary dependent variable of the control deficiency's materiality assessment, were asked in an attempt to "tease out" whether participants viewed the deficiency's assessment as one stemming from the "materiality" or "likelihood" of a misstatement. Correlation matrixes that include these variables, as well as the main dependent variables already discussed, are provided in Tables 9 through 13.

Increase of Substantive Testwork

Participants were asked to respond, using a Likert-type scale, of how likely they were to increase year-end substantive testwork related to Accounts Receivable, based on the assessment of the control (1 = *Highly Unlikely* to 9 = *Highly Likely*). Results indicate that there is an interaction of fault and timing on the likelihood of increasing substantive testwork (see Table 14 for results of statistical ANOVA). Specifically, when the auditor is at fault for creating high

deadline pressure, the auditor is less likely to increase substantive testwork ($M = 6.31$) than when the client is at fault for creating the heightened deadline pressure ($M = 8.00$) or when the deadline pressure is low ($M = 7.82$ when it is the auditor's fault; 7.80 when it is the client's fault). There is no statistical difference between conditions; the auditor was as equally likely to increase substantive testwork in the other three conditions. Figure 31 provides a graphical display of the interactive effect of fault and deadline pressure on auditors' decisions regarding substantive testwork.

When considering earlier described findings regarding sample size and deviation rates, these findings further suggest that audit quality may be compromised when the auditor is at fault for creating high deadline pressure. Specifically, when the auditor creates high deadline pressure (which impacts both the client and the auditor), the auditor will be more willing to "compromise" on both control testwork by selecting fewer sample items (with a higher acceptable deviation rate) *and* less likely to increase substantive testwork to lower the auditors' detection risk of not identifying a material misstatement in the financial statements.

Table 9

Correlation Matrix: All Conditions

	Material	NumbRetest	DevRate	Likelihood	Mat	Increase_Sub	Increase_Fee
Material	.	0.08583	-0.20020**	0.58192***	0.61987***	0.53623***	0.43254***
NumbRetest	0.08583	.	-0.40532***	0.15261	0.08437	0.12356	0.17866*
DevRate	-0.20020**	-0.40532***	.	-0.29669***	-0.18100*	-0.31652***	-0.21638**
Likelihood	0.58192***	0.15261	-0.29669***	.	0.52763***	0.42089***	0.36055***
Mat	0.61987***	0.08437	-0.18100*	0.52763***	.	0.46393***	0.31677***
Increase_Sub	0.53623***	0.12356	-0.31652***	0.42089***	0.46393***	.	0.41434***
Increase_Fee	0.43254***	0.17866*	-0.21638**	0.36055***	0.31677***	0.41434***	.

*Significant at the $p < 0.10$ level

**Significant at the $p < 0.05$ level

***Significant at the $p < 0.01$ level

Material	How “significant” the auditor considers control deficiency, “in terms of its potential impact on the financial statements”
NumbRetest	How many additional sample items the auditor would want to select for retesting
DevRate	Calculated: Dividing the number the times the control could “fail” and still consider the control effective by NumbRetest (defined above).
Likelihood	The assessed likelihood that the control deficiency will result in a misstatement
Mat	The materiality of a misstatement, if the control deficiency were to result in a misstatement
Increase_Sub	The likelihood that the auditor would increase substantive testwork related to Accounts Receivable
Increase_Fee	The likelihood that the auditor would increase the auditor’s fee based on identified deficiency and additional work (e.g., additional substantive testwork; retesting of controls)

Table 10

Correlation Matrix: Auditor Fault, Low Deadline Pressure

	Material	NumbRetest	DevRate	Likelihood	Mat	Increase_Sub	Increase_Fee
Material	.	0.03868	-0.15711	0.56982**	0.77741***	0.62222***	0.44323*
NumbRetest	0.03868	.	-0.65118***	0.06371	-0.28231	0.11245	0.32588
DevRate	-0.15711	-0.65118***	.	-0.09126	0.13888	-0.15560	-0.30197
Likelihood	0.56982**	0.06371	-0.09126	.	0.63671***	0.60984***	0.26418
Mat	0.77741***	-0.28231	0.13888	0.63671***	.	0.59955**	0.28686
Increase_Sub	0.62222***	0.11245	-0.15560	0.60984***	0.59955**	.	0.63583***
Increase_Fee	0.44323*	0.32588	-0.30197	0.26418	0.28686	0.63583***	.

*Significant at the $p < 0.10$ level

**Significant at the $p < 0.05$ level

***Significant at the $p < 0.01$ level

Material	How “significant” the auditor considers control deficiency, “in terms of its potential impact on the financial statements”
NumbRetest	How many additional sample items the auditor would want to select for retesting
DevRate	Calculated: Dividing the number the times the control could “fail” and still consider the control effective by NumbRetest (defined above).
Likelihood	The assessed likelihood that the control deficiency will result in a misstatement
Mat	The materiality of a misstatement, if the control deficiency were to result in a misstatement
Increase_Sub	The likelihood that the auditor would increase substantive testwork related to Accounts Receivable
Increase_Fee	The likelihood that the auditor would increase the auditor’s fee based on identified deficiency and additional work (e.g., additional substantive testwork; retesting of controls)

Table 11

Correlation Matrix: Auditor Fault, High Deadline Pressure

	Material	NumbRetest	DevRate	Likelihood	Mat	Increase_Sub	Increase_Fee
Material	.	0.03086	-0.00445	0.53571**	0.35385	0.68613**	0.53881**
NumbRetest	0.03086	.	-0.70234***	0.40194	-0.02000	0.12461	0.19685
DevRate	-0.00445	-0.70234***	.	-0.47718*	-0.20177	-0.25065	-0.21635
Likelihood	0.53571**	0.40194	-0.47718*	.	0.46663*	0.38899	0.28884
Mat	0.35385	-0.02000	-0.20177	0.46663*	.	0.27183	0.06190
Increase_Sub	0.68613***	0.12461	-0.25065	0.38899	0.27183	.	0.58891**
Increase_Fee	0.53881**	0.19685	-0.21635	0.28884	0.06190	0.58891**	.

*Significant at the $p < 0.10$ level

**Significant at the $p < 0.05$ level

***Significant at the $p < 0.01$ level

Material	How “significant” the auditor considers control deficiency, “in terms of its potential impact on the financial statements”
NumbRetest	How many additional sample items the auditor would want to select for retesting
DevRate	Calculated: Dividing the number the times the control could “fail” and still consider the control effective by NumbRetest (defined above).
Likelihood	The assessed likelihood that the control deficiency will result in a misstatement
Mat	The materiality of a misstatement, if the control deficiency were to result in a misstatement
Increase_Sub	The likelihood that the auditor would increase substantive testwork related to Accounts Receivable
Increase_Fee	The likelihood that the auditor would increase the auditor’s fee based on identified deficiency and additional work (e.g., additional substantive testwork; retesting of controls)

Table 12

Correlation Matrix: Client Fault, Low Deadline Pressure

	Material	NumbRetest	DevRate	Likelihood	Mat	Increase_Sub	Increase_Fee
Material	.	-0.17478	0.17561	0.71220***	0.22468	0.12049	0.45395*
NumbRetest	-0.17478	.	-0.69692***	-0.38433	0.41888	0.59320**	0.01254
DevRate	0.17561	-0.69692***	.	0.22238	-0.56690**	-0.65853***	-0.18269
Likelihood	0.71220***	-0.38433	0.22238	.	0.14690	-0.21236	0.32449
Mat	0.22468	0.41888	-0.56690**	0.14690	.	0.68425***	0.59673**
Increase_Sub	0.12049	0.59320**	-0.65853***	-0.21236	0.68425***	.	0.42934
Increase_Fee	0.45395*	0.01254	-0.18269	0.32449	0.59673**	0.42934	.

*Significant at the $p < 0.10$ level

**Significant at the $p < 0.05$ level

***Significant at the $p < 0.01$ level

Material	How “significant” the auditor considers control deficiency, “in terms of its potential impact on the financial statements”
NumbRetest	How many additional sample items the auditor would want to select for retesting
DevRate	Calculated: Dividing the number the times the control could “fail” and still consider the control effective by NumbRetest (defined above).
Likelihood	The assessed likelihood that the control deficiency will result in a misstatement
Mat	The materiality of a misstatement, if the control deficiency were to result in a misstatement
Increase_Sub	The likelihood that the auditor would increase substantive testwork related to Accounts Receivable
Increase_Fee	The likelihood that the auditor would increase the auditor’s fee based on identified deficiency and additional work (e.g., additional substantive testwork; retesting of controls)

Table 13

Correlation Matrix: Client Fault, High Deadline Pressure

	Material	NumbRetest	DevRate	Likelihood	Mat	Increase_Sub	Increase_Fee
Material	.	-0.20413	-0.03905	0.37206	0.41884*	0.35883	0.08255
NumbRetest	-0.20413	.	-0.65009***	0.03507	-0.15367	-0.10006	-0.23064
DevRate	-0.03905	-0.65009***	.	-0.27286	0.01260	-0.04515	0.17673
Likelihood	0.37206	0.03507	-0.27286	.	0.68161***	0.44642*	0.00932
Mat	0.41884*	-0.15367	0.01260	0.68161***	.	0.30315	0.12933
Increase_Sub	0.35883	-0.10006	-0.04515	0.44642*	0.30315	.	0.0000
Increase_Fee	0.08255	-0.23064	0.17673	0.00932	0.12933	0.0000	.

*Significant at the $p < 0.10$ level**Significant at the $p < 0.05$ level***Significant at the $p < 0.01$ level

Material	How “significant” the auditor considers control deficiency, “in terms of its potential impact on the financial statements”
NumbRetest	How many additional sample items the auditor would want to select for retesting
DevRate	Calculated: Dividing the number the times the control could “fail” and still consider the control effective by NumbRetest (defined above.)
Likelihood	The assessed likelihood that the control deficiency will result in a misstatement
Mat	The materiality of a misstatement, if the control deficiency were to result in a misstatement
Increase_Sub	The likelihood that the auditor would increase substantive testwork related to Accounts Receivable
Increase_Fee	The likelihood that the auditor would increase the auditor’s fee based on identified deficiency and additional work (e.g., additional substantive testwork; retesting of controls)

Table 14

Analysis of Auditors' Decision to Increase Substantive Testing

Panel A: Results for Auditors' Decision to Increase Substantive Testing ³				
	Perceived Fault ²	Time Deadline Pressure ¹		
		Low	High	
-	Auditor	7.82 (1.29) n=16	6.31 (2.06) n=16	7.09 (1.84) n=33
	Not Auditor	7.80 (1.32) n=15	8.00 (1.80) n=17	7.91 (1.57) n=32
		7.81 (1.28) n=32	7.18 (2.08) n=33	n=65

¹ For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (high pressure) or December (for low pressure).

² To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

³ The mean (standard deviation) for participants' responses are reported, along with the number of responses per cell. Participants responded on a Likert-type scale, with 1 = *Highly Unlikely* and 9 = *Highly Likely*

Panel B: Results of ANOVA

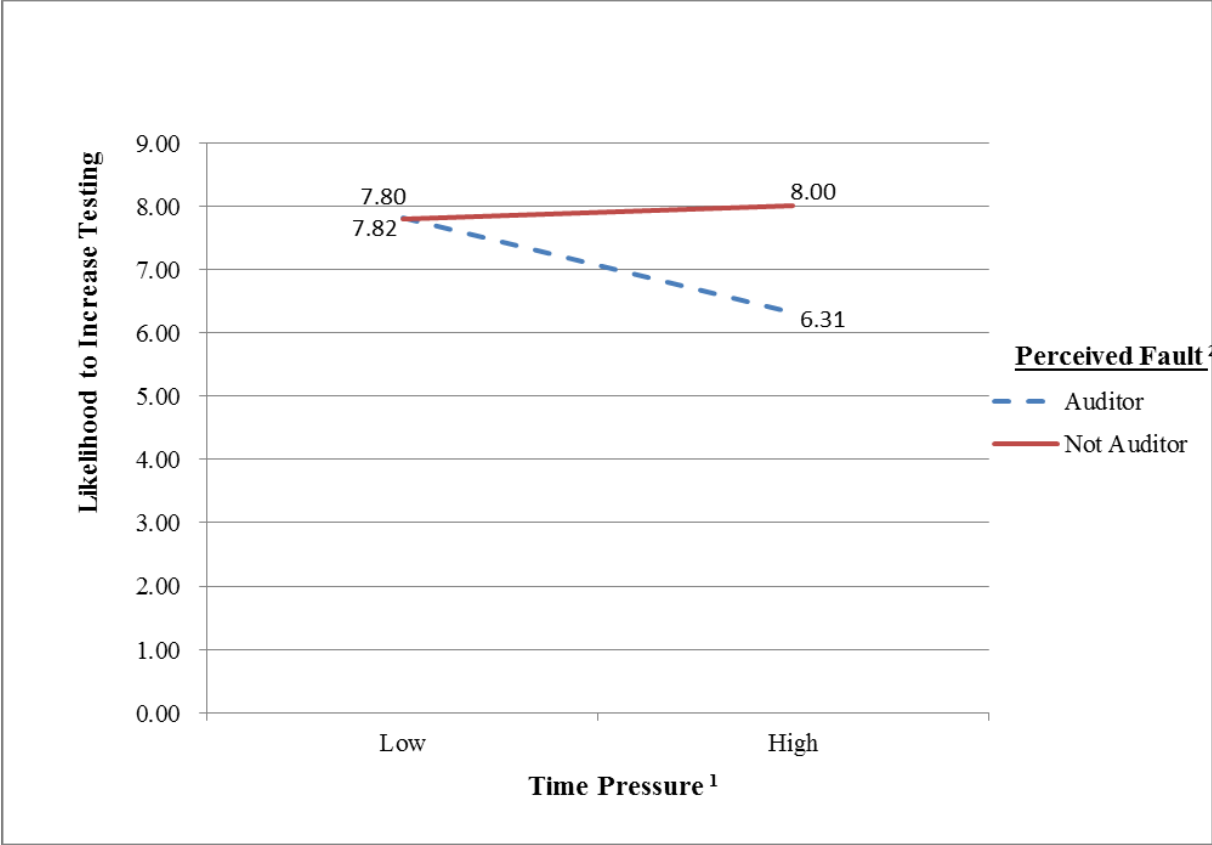
	<u>df</u>	<u>F-Stat</u>	<u>p-value</u>
Perceived Fault	1	4.11	0.047
Time Pressure	1	2.55	0.115
Perceived Fault X Time Pressure	1	4.35	0.041

Panel C: Simple Effects of Perceived Fault

	<u>df</u>	<u>F-Stat</u>	<u>p-value</u>
When Time Deadline Pressure is Low	1	0.05	0.960
When Time Deadline Pressure is High	1	2.50	0.018

Panel D: Simple Effects of Time Deadline Pressure

	<u>df</u>	<u>F-Stat</u>	<u>p-value</u>
When Pressure is Auditor's Fault	1	2.51	0.019
When Pressure is not Auditor's Fault	1	0.36	0.721



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 31. Auditors’ decision to increase substantive testing.

Increase of Audit Fees

In addition to asking participants the impact the control deficiency would have on subsequent audit procedures, I asked participants whether the identification of the control deficiency and related work (e.g., retesting the remediated deficiency; additional substantive testwork; etc.) would have an impact on the audit fee. Specifically, using a 9-point Likert-type scale (1 = *Highly Unlikely* to 9 = *Highly Likely*), participants responded to how likely they would be to increase the audit fee. Table 15 provides the results of statistical ANOVA for the auditors' decisions regarding increasing audit fees in the provided scenario. Findings suggest that when the auditor is at fault, the auditor is less likely to increase the audit fee ($M = 4.79$) than when the auditor is not at fault ($M = 5.88$). This is a moderately significant main effect of fault (F -stat = 3.69, p -value = 0.069, two-tailed). Figure 32 provides a graphical display of the main effect of fault on the auditors' decision to increase audit fees.

These findings suggest that the auditor is less likely to increase the audit fee for additional work resulting from the identified control deficiency. Even though the results are moderately significant, these findings further support earlier discussed findings of how "fault" in the audit context can impact auditors' judgment, resulting in more lenient treatment of the client.

Table 15

Analysis of Auditors' Decision to Increase Audit Fee

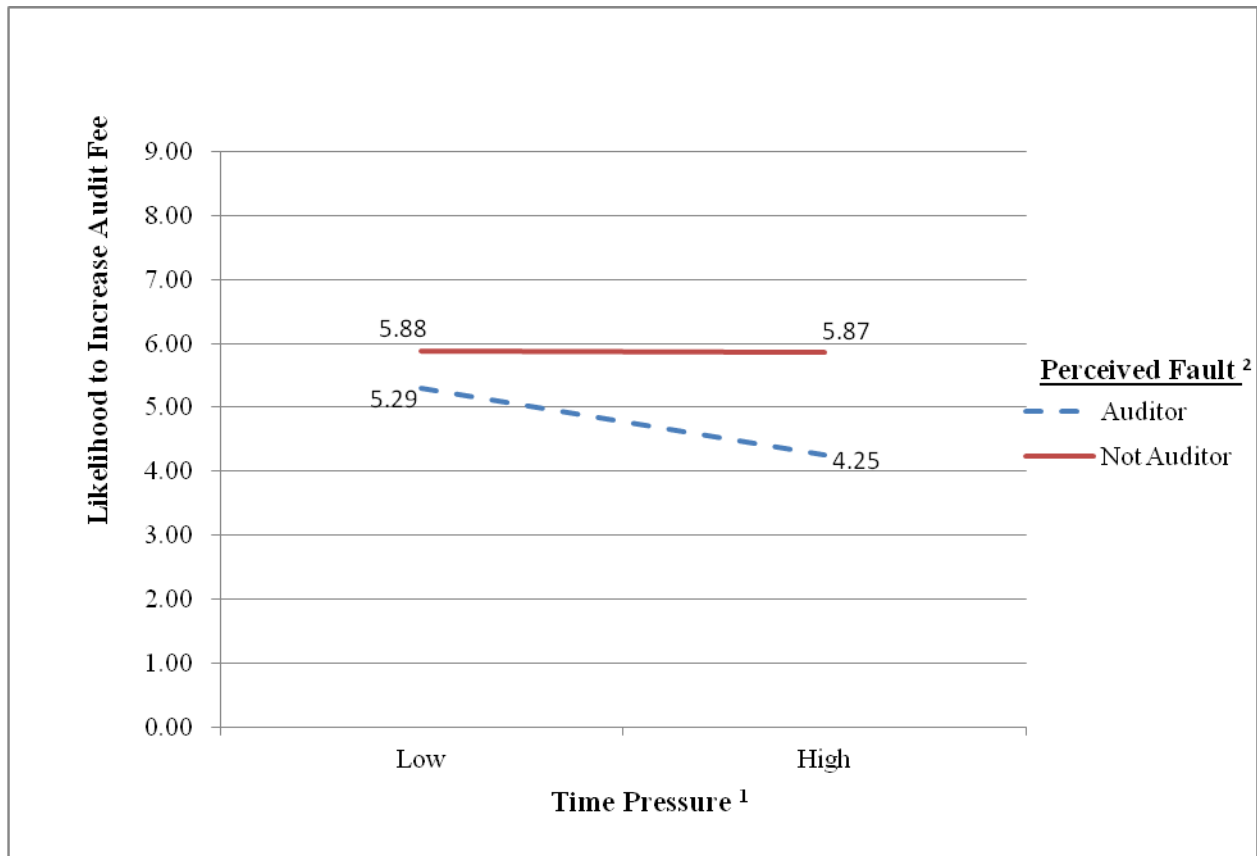
Panel A: Results for Auditors' Decision to Increase Audit Fee ³			
Perceived Fault ²	Time Deadline Pressure ¹		
	Low	High	
Auditor	5.29 (2.05) n=16	4.25 (2.41) n=16	4.79 (2.26) n=33
Not Auditor	5.87 (2.72) n=17	5.87 (2.39) n=17	5.88 (2.51) n=32
	5.56 (2.37) n=33	5.09 (2.50) n=45	n=65

¹ For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (high pressure) or December (for low pressure).

² To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

³ The mean (standard deviation) for participants' responses are reported, along with the number of responses per cell. Participants responded on a Likert-type scale, with 1 = *Highly Unlikely* and 9 = *Highly Likely*

Panel B: Results of ANOVA			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
Perceived Fault	1	3.43	0.069
Time Pressure	1	0.75	0.391
Perceived Fault X Time Pressure	1	0.79	0.377



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 32. Auditors’ decision to increase audit fee.

Further Analysis of Materiality and Likelihood of Misstatement

As discussed earlier, the assessment of a control deficiency is based on whether the deficiency is likely to result in a material misstatement. So, both the likelihood of a misstatement occurring and the determination that such a misstatement would be material should be considered in this assessment. In an attempt to try to “tease out” the participants’ response, in

two separate questions (using 9-point Likert-type scales), I asked participants (1) the likelihood that the control deficiency would result in a misstatement (1 = *Very Low* to 9 = *Very High*) and (2) if the control deficiency were to result in a misstatement, how material would the misstatement most likely be (1 = *Immaterial* to 9 = *Material*).

Table 16 provides the results of the statistical ANOVA for the auditors' assessment of the likelihood that the control deficiency identified would result in a misstatement. Results indicate that for the likelihood assessment, there is an interactive effect of time and fault, similar to that discussed earlier in relation to DV 1 (assessment of the control deficiency), as discussed in relation to H1 and H3. The interaction was significant (F -stat = 5.19, p -value = 0.026). Simple effects of deadline pressure indicate that auditors' are at fault, they are more likely to determine that there is a higher likelihood that a misstatement will occur from the control deficiency when the deadline pressure is low ($M = 5.59$) than when the deadline pressure is high ($M = 3.75$). This simple effect of fault on deadline pressure is statistically significant (F -stat = 2.65, p -value = 0.013). See Figure 33 for a graphical display of results.

Similarly, participants assessed the materiality (assuming a misstatement were to occur) as less material when the auditor is at fault for creating high deadline pressure. Table 17 provides the statistical ANOVA results of the auditors' assessment of a misstatement's materiality, assuming that the deficiency did result in a misstatement. There is a statistically significant interactive effect of fault and deadline pressure on the auditors' assessment of the materiality of a misstatement arising from the control deficiency (F -stat = 9.61, p -value = 0.003). Again, there is a simple effect of fault on deadline pressure, in that when the auditor is at fault for creating the deadline pressure, the auditor assesses the materiality of the potential misstatement higher when

there is low deadline pressure ($M = 5.23$) compared to when the deadline pressure is high ($M = 3.50$; F -stat = 3.74, p -value = 0.001). Figure 34 provides a graphical display of these results.

Because both of these measures are similar to the main dependent of the participant's assessment of the control deficiency (i.e., the auditor's assessment of the significance of the control deficiency, "in terms of its potential impact on the financial statements"), I considered whether these three questions were essentially measuring the same construct. As shown in the correlation matrix provided in Table 9, all three of these variables are highly correlated overall (significant at p -value < 0.01 level). Thus, I am unable to determine whether it was the participants' "materiality" assessment or "likelihood" assessment that was driving their responses for the main dependent variable (i.e., the significance of the control deficiency).

Table 16

Analysis of Auditors' Assessment of the Likelihood that Deficiency Results in Misstatement

Panel A: Auditors' Assessment of the Likelihood that Deficiency Results in Misstatement ³			
Perceived Fault ²	Time Deadline Pressure ¹		
	Low	High	
Auditor	5.59 (1.73) n=17	3.75 (1.44) n=16	4.70 (1.83) n=33
Not Auditor	5.27 (1.58) n=15	5.38 (2.06) n=17	5.33 (1.82) n=32
	5.44 (1.64) n=32	4.59 (1.94) n=33	n=65

¹ For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (high pressure) or December (for low pressure).

² To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

³ The mean (standard deviation) for participants' responses are reported, along with the number of responses per cell. Participants responded on a Likert-type scale, with 1 = *Very Low* and 9 = *Very High*

Panel B: Results of ANOVA

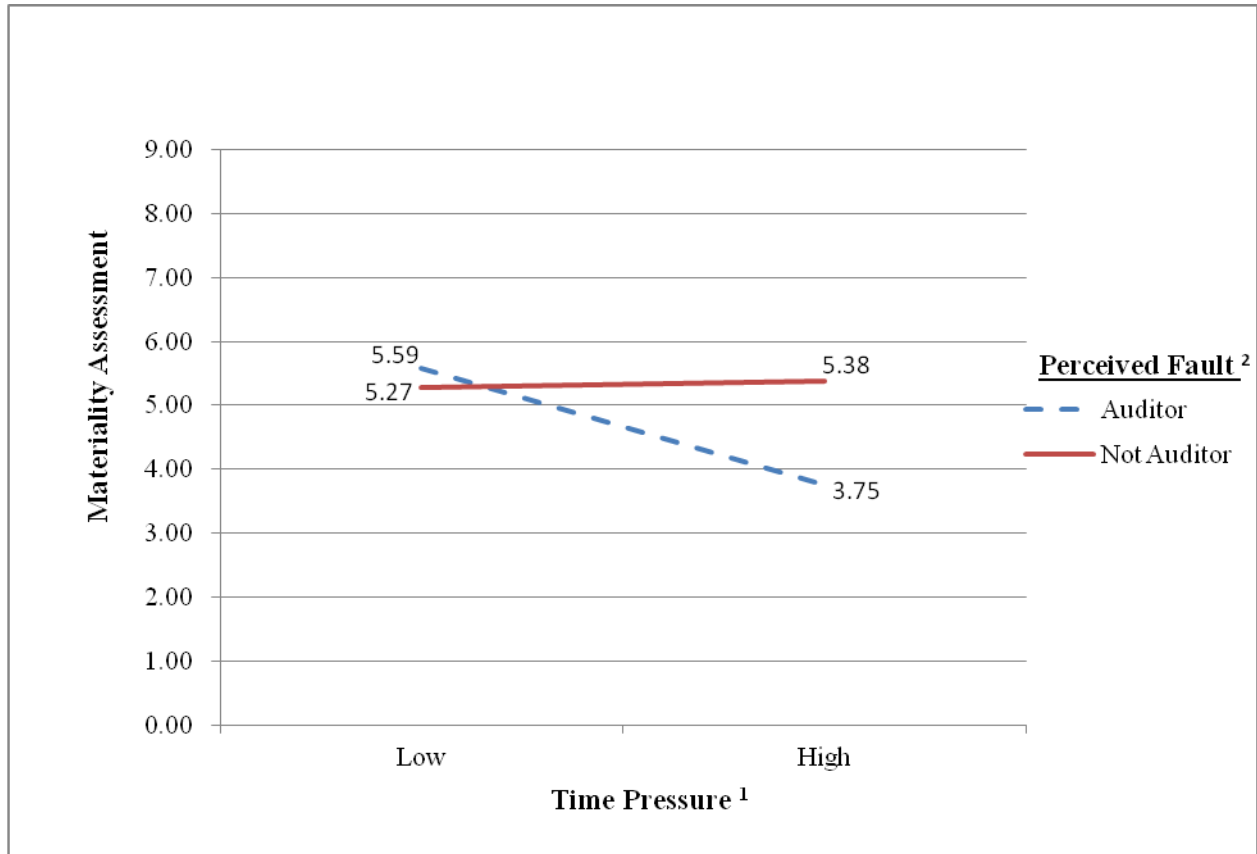
	<u>df</u>	<u>F-Stat</u>	<u>p-value</u>
Perceived Fault	1	2.34	0.132
Time Pressure	1	4.03	0.049
Perceived Fault X Time Pressure	1	5.19	0.026

Panel C: Simple Effects of Perceived Fault

	<u>df</u>	<u>F-Stat</u>	<u>p-value</u>
When Time Deadline Pressure is Low	1	0.55	0.587
When Time Deadline Pressure is High	1	2.65	0.013

Panel D: Simple Effects of Time Deadline Pressure

	<u>df</u>	<u>F-Stat</u>	<u>p-value</u>
When Pressure is Auditor's Fault	1	3.32	0.002
When Pressure is not Auditor's Fault	1	0.18	0.859



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 33. Auditors’ assessment of the likelihood that a material misstatement could occur due to control deficiency.

Table 17

Analysis of Auditors' Assessment of Materiality, if the Control Deficiency Resulted in Misstatement

Panel A: Results for Auditors' Assessment of Materiality of Misstatement, If One Occurred ³				
	Perceived Fault ²	Time Deadline Pressure ¹		
		Low	High	
-	Auditor	5.23 (1.68) n=17	3.50 (0.89) n=16	4.39 (1.60) n=33
	Not Auditor	4.60 (1.72) n=15	5.55 (2.34) n=17	5.11 (2.10) n=32
		4.94 (1.70) n=32	4.56 (2.05) n=33	n=65

¹ For the "Time Deadline Pressure" manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (high pressure) or December (for low pressure).

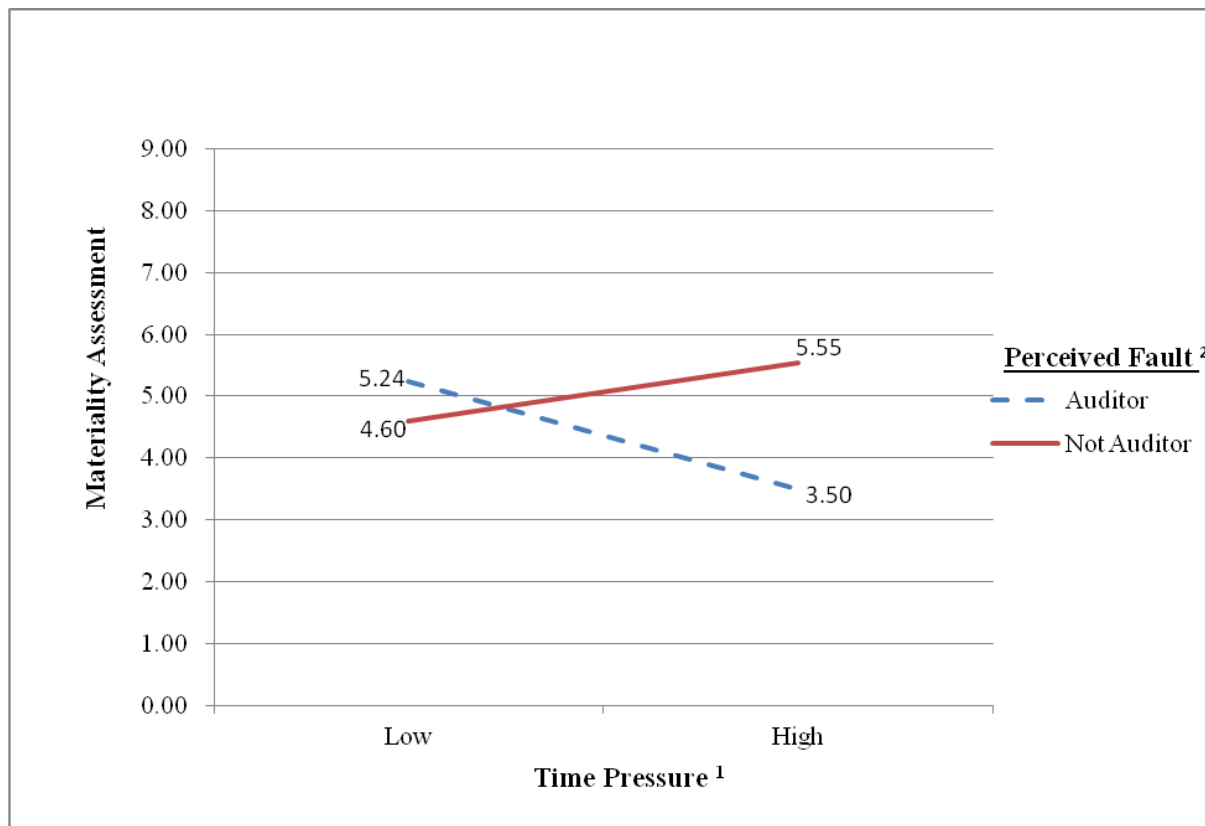
² To manipulate "Perceived Fault," participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

³ The mean (standard deviation) for participants' responses are reported, along with the number of responses per cell. Participants responded on a Likert-type scale, with 1 = *Immaterial* and 9 = *Material*

Panel B: Results of ANOVA			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
Perceived Fault	1	2.68	0.107
Time Pressure	1	0.80	0.375
Perceived Fault X Time Pressure	1	9.61	0.003

Panel C: Simple Effects of Perceived Fault			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
When Time Deadline Pressure is Low	1	1.06	0.301
When Time Deadline Pressure is High	1	3.37	0.003

Panel D: Simple Effects of Time Deadline Pressure			
	<i>df</i>	<i>F-Stat</i>	<i>p-value</i>
When Pressure is Auditor's Fault	1	3.74	0.001
When Pressure is not Auditor's Fault	1	1.33	0.195



¹ For the “Time Deadline Pressure” manipulation, the research instrument described that the testwork, and subsequently the discovery of the control deficiency, took place in either October (low pressure) or December (high pressure).

² To manipulate “Perceived Fault,” participants were informed that the delay in interim testwork was either the result of the auditor needing to reschedule (i.e., postpone) testwork or the client needing to reschedule testwork to later in the year. (See Note 1 above for timing of when the work was postponed.)

Figure 34. Auditors’ materiality assessment if control deficiency resulted in a misstatement in the financial statements.

CHAPTER VI

DISCUSSION

Implications

This purpose of this study was to evaluate whether an auditor's perception of materiality is affected by pressures created by the deadlines that accompany the end of an audit. This study specifically focused on the auditor's judgment of whether an internal control deficiency identified during the audit of ICFR is considered material. Results indicate that auditors' lower their materiality assessments when under deadline pressure, especially when the auditor is at fault for creating the heightened deadline pressure. Further, auditors' will be willing to test fewer items when the auditor is at fault for creating deadline pressure, and deviation rates will be higher when the auditor has created a situation of high deadline pressure, indicating that auditors will accept more errors/deficiencies in fewer sample items. Both these changes on auditors' judgments of materiality and audit evidence can have negative implications on audit quality.

This study extends accounting literature on auditor judgment and perceptions of materiality, in examining how auditor's materiality assessment may change based on the point in time in which the assessment takes place (i.e., earlier in the audit versus late in the audit). This study also complements recent archival research that notes the impact of the auditor's opinion of ICFR on the audit client (Ashbaugh-Skaife et al., 2008; Ettredge et al., 2010; Hammersley et al.,

2010; Cassell et al., 2011). This study extends this stream of literature to examine factors that may influence the classification of control deficiencies and thus the audit opinion.

Limitations

While this setting provided a definitive deadline to evaluate the auditors' assessments of materiality when time is close to the year-end deadline, compared to mid-year, there were limitations of this study that should be noted. First, as with all experimental studies, all factors and dynamics that are present in a real audit environment could not be incorporated into this research design, limiting the external validity of this study's findings. While I have evaluated which factors are important to the materiality decision (and holding constant all factors that are not intentionally manipulated in the research design), there may be unidentified factors that may moderate findings under certain conditions. In addition, while the concept of materiality used in this setting is similar to that used in financial statement materiality, further research may prove useful in determining whether generalizability of findings can be made to other assessments of materiality. Also, I use audit managers and partners as participants, but do not evaluate whether the effects hold (or are weaker or stronger) for staff-level and senior-level auditors, which have a significant amount of interaction with management (Bennett & Hatfield, 2011).

Further Research Opportunities

Further research may need to be conducted to include additional levels of the audit team. For example, do these findings indicating that deadline pressures impact decisions of managers and partners, in terms of materiality and sampling decisions, hold for lower-level professionals (e.g., seniors and staff-level employees) who may have fewer discussions with management

regarding deadlines (i.e., reporting deadlines, filing deadlines, etc.)? Also, are effects stronger due to pressures felt by managers and partners, who oversee the staff budgets and evaluations? Future research experiments can consider how additional factors and pressures may impact auditors' perceptions and application of materiality, and how those perceptions may impact audit quality.

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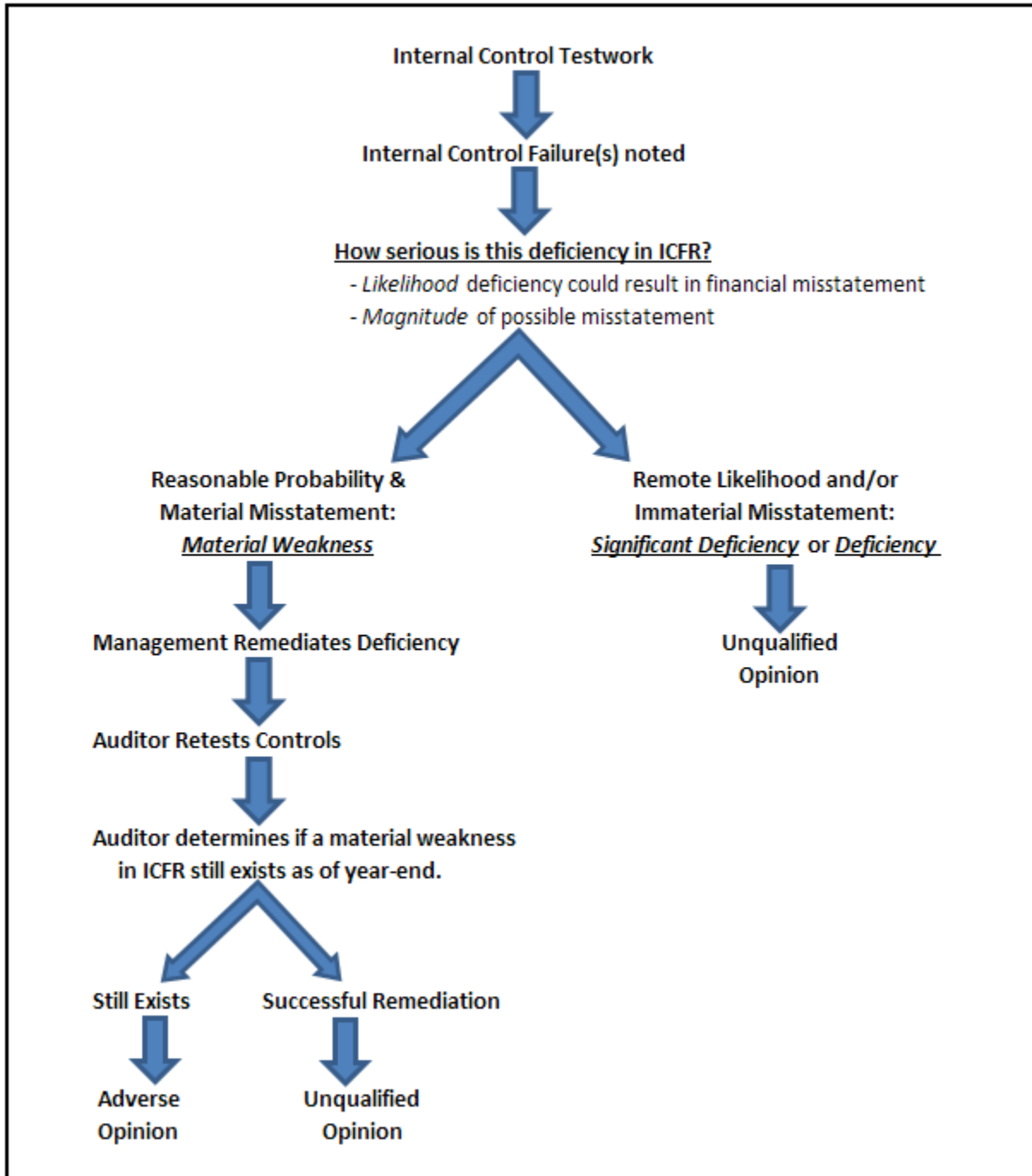
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APPENDIX A

OUTLINE OF THE AUDIT OF INTERNAL CONTROL,
INCLUDING CONSEQUENCES OF CONTROL DEFICIENCY JUDGMENTS

**Outline of the Audit of Internal Control,
Including Consequences of Control Deficiency Judgments**



APPENDIX B

EXAMPLE OF AUDITORS' REPORT ON THE AUDIT OF INTERNAL
CONTROLS OVER FINANCIAL REPORTING

Independent Auditors' Report on the Audit of Internal Controls over Financial Reporting

*Report of Independent Registered Public Accounting Firm
[Introductory Paragraph]*

We have audited EarthWear Clothiers' internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control—Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). EarthWear Clothiers' management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

[Scope Paragraph]

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

[Definition Paragraph]

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

[Inherent Limitations Paragraph]

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

[Opinion Paragraph]

In our opinion, EarthWear Clothiers maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on criteria established in *Internal Control—Integrated Framework*, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

[Explanatory Paragraph]

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of EarthWear Clothiers, and our report dated February 15, 2010, expressed an unqualified opinion.

*Willis & Adams
Boise, Idaho
February 15, 2010*

Source: Messier et al. (2011)

NOTE: *EarthWear Clothiers and Willis & Adams are fictitious firms Messier et al. (2011) use for example purposes.*

APPENDIX C
IRB APPROVAL

Office for Research
Institutional Review Board for the
Protection of Human Subjects

THE UNIVERSITY OF
ALABAMA
R E S E A R C H

November 7, 2011

George Bradley Bennett
School of Accountancy
College of Commerce & Business Administration
Box 870220

Re: IRB # 11-OR-319, "Do Auditors' Perceptions of Materiality Change in Response to Approaching Deadlines?"

Dear Mr. Bennett:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. You have also been granted the requested waiver of written documentation of informed consent. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on November 6, 2012. If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure form.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB application number.

Good luck with your research.

Sincerely,



358 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-0127
(205) 348-8461
FAX (205) 348-7189
TOLL FREE (877) 820-3066

Stuart Usdan, Ph.D.
Chair, Non-Medical IRB
The University of Alabama

IRB Project #:

UNIVERSITY OF ALABAMA
INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS
REQUEST FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

I. Identifying information

	Principal Investigator	Second Investigator	Third Investigator
Names:	George Bradley Bennett	Rick Hatfield (Advisor)	
Department:	Accounting	Accounting	
College:	Culverhouse College of Commerse & Business Administration	Culverhouse College of Commerse & Business Administration	
University:	The University of Alabama	The University of Alabama	
Address:	Box 870220	Box 870220	
Telephone:	205-348-6131	205-348-2901	
FAX:	205-348-8453	205-348-8453	
E-mail:	gbbennett@cba.ua.edu	rhatfiel@cba.ua.edu	

Title of Research Project: Do Auditors' Perceptions of Materiality Change in Response to Approaching Deadlines?

Date Submitted: ~~8/31/2011~~ 10/26/2011
Funding Source: Culverhouse School of Accountancy

Type of Proposal	<input checked="" type="checkbox"/> New	<input type="checkbox"/> Revision	<input type="checkbox"/> Renewal Please attach a renewal application	<input type="checkbox"/> Completed	<input type="checkbox"/> Exempt
Please attach a continuing review of studies form					
Please enter the original IRB # at the top of the page					

UA faculty or staff member signature:

II. NOTIFICATION OF IRB ACTION (to be completed by IRB):

Type of Review: _____ Full board Expedited

IRB Action:

Rejected Date: _____
 Tabled Pending Revisions Date: _____
 Approved Pending Revisions Date: _____

Approved-this proposal complies with University and federal regulations for the protection of human subjects.

Approval is effective until the following date: 11/6/2012

Items approved: Research protocol (dated 11/7/11)
 Informed consent (dated 11/7/11)
 Recruitment materials (dated _____)
 Other (dated _____)

Approval signature _____ Date 11-7-11

Dear Auditor:

It is vital that accounting research examine the auditors' decisions and judgments that influence the financial statement information that is made public. However, what factors may impact the decisions of auditors? How do auditors handle certain situations? Knowing the answers to these questions is important, given the recent interest in audit judgment and the steps taken by the audit profession to ensure, and perhaps improve, the quality of such estimates.

Researchers from the University of Alabama are working on what promises to be an enlightening and timely study. We are asking you and other auditors from accounting firms to complete a brief study in which we ask you to provide your answers to a given audit scenario.

Please review the following information that outlines the study. If you chose to participate, the study materials are enclosed, as well as a pre-paid envelope for you to send your responses back.

Purpose

This research study focuses on decisions regarding the audit of internal controls over financial reporting. Included in this packet is an audit scenario in which you are asked to read and answer questions regarding the scenario, based on your professional expertise and knowledge.

Participation

This research is being conducted by Bradley Bennett, an accounting Ph.D. student at the University of Alabama. This study contains an audit scenario and questions relating to the decisions regarding an issue that is to be negotiated between the auditor and client management. The study will take approximately 20 minutes to complete.

Participation is voluntary; you are free not to participate or to stop participation at any point during the study prior to completion.

All responses will remain anonymous, and results of the study will be used and reported in the aggregate. In order to keep responses anonymous, we ask that by returning your responses to the study, you agree to the following statement:

UA IRB Approved Document
Approval date: 11/7/11
Expiration date: 4/6/12

“By returning my responses via the enclosed envelope, I freely provide consent and acknowledge my rights as a voluntary participant.”

Risks & Benefits

There are no physical, economic, or legal risks to participation. Any psychological or social risks are highly unlikely.

While there are no direct benefits to participants, there are benefits to accounting research community in that results will provide insight into the decisions and judgment regarding disputed audited issues that are negotiated between auditor and client.

Questions

If you should have any questions regarding this case or would like a summary of results once all data has been collected, please contact either of the following persons:

Bradley Bennett, 601-927-4494, gbbennett@cba.ua.edu

Rick Hatfield (advisor), 205-348-2901, rhatfiel@cba.ua.edu

If you have any questions regarding your rights as a research participant, please contact Ms. Tanta Myles, The University of Alabama Research Compliance Officer, at 205-348-8461 or at cmyles@fa.ua.edu.

Again, your responses will be *anonymous and treated with strict confidentiality*. Only the researchers will see your responses—we will *not disclose* the names of any participating accounting firms or individuals.

When you complete the questions at the end of the booklet, please simply return it in the enclosed ***pre-paid postage*** envelope.

Thank you for your time and effort. Your participation is crucial to the success of this study.

Sincerely,

G. Bradley Bennett

UA IRB Approved Document
Approval date: 11/7/11
Expiration date: 11/6/12