Do approaching deadlines influence auditors’ materiality assessments and audit sampling decisions?

Richard Hatfield

*The University of Alabama*

**Date:** Friday 7th March 2014  
**Time:** 3.00pm – 4.30pm  
**Venue:** ASB 216
Do Approaching Deadlines Influence Auditors’ Materiality Assessments and Audit Sampling Decisions?

G. Bradley Bennett
Isenberg School of Management
University of Massachusetts-Amherst
gbbennett@isenberg.umass.edu

Richard C. Hatfield
Culverhouse School of Accountancy
The University of Alabama
rhatfiel@cba.ua.edu
(205) 348-2901

February 2014
SUMMARY

This study considers whether deadline pressures influence auditors’ perceptions of materiality and the sufficiency of audit evidence. Further, we consider how the perceived cause of the increased deadline pressure (i.e., whether the audit firm caused the delay) may further affect auditors’ judgments. Using the audit of Internal Controls over Financial Reporting (ICFR) as an experimental context, we evaluate these decisions with an experiment in which time deadline pressure (low versus high) and the cause of the deadline pressure (audit firm or not) are manipulated. Findings suggest an interactive effect of deadline pressure and auditor fault in that when auditors identify an error under high deadline pressure and are responsible for creating the heightened deadline pressure, they assess the error as less material than in the other conditions. Further, auditors are willing to test fewer items when they are responsible for creating deadline pressure and are willing to accept a higher deviation rate in the sample (i.e., accept more errors in a smaller sample). Further, results from additional analysis suggest that once the deadline is passed (i.e., deadline pressure is no longer present) auditors increased their materiality assessments of identified errors, even though incentives to issue an unqualified opinion still exist. This study extends existing literature by examining how deadline pressure affects the auditor’s assessment of materiality. It also complements recent archival research examining consequences of adverse opinions on the audit of ICFR (e.g., Hammersley et al. 2012; Cassell et al. 2011) by considering how pressures and incentives to avoid such consequences influence the audit of ICFR.

Keywords: audit quality, materiality; deadline pressure; auditor fault; audit evidence; internal controls over financial reporting (ICFR)
I. INTRODUCTION

This study examines how increased deadline pressure towards the end of the audit may affect auditors’ judgments of materiality and sufficiency of audit evidence, especially if the auditor has created such pressure by delaying audit testwork. 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. Given that both auditors and their clients may have scheduling conflicts during the audit that lead to delays (Perry 2010), we consider whether the origin of the deadline pressure (i.e., who is responsible for creating the heightened deadline pressures) has an interactive effect on materiality judgments. Specifically, this study examines the extent to which auditors consider an internal control deficiency as material when the deficiency is identified towards the end of the audit, compared to earlier in the audit, particularly when the auditor has caused the delay in control testing (i.e., increased deadline pressure). We also consider whether auditors’ decisions regarding sample size and tolerable errors differ under heightened deadline pressure. Both types of decisions – materiality issues and selected sample sizes – have a direct impact on audit quality.

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, we examine the auditor’s assessment of control deficiencies using the context of auditing 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 still 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 operation of the control under the new control environment and issue an unqualified opinion if remediation is effective as of year-end. Thus, as the timing of testwork nears year-end, the auditor faces increased deadline pressures: in order to preclude an adverse opinion, any client remediation must take place before year-end and the audit team’s retesting must use a sample from the remediated control system prior to year-end. This context creates a naturally controlled setting to test the effects of deadline pressure.

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 and Nelson 1996; Kadous et al. 2003; Hatfield et al. 2011). Accordingly, when the auditor is under deadline pressure due to the year-end deadline, he/she may consider a misstatement or control deficiency less significant. 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, we hypothesize that the auditor will be less likely to consider an identified control deficiency as a “material weakness” in ICFR when deadline 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 and 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), he/she can avoid blame for negative consequences (e.g., issuance of an adverse opinion) by considering the identified control deficiency less material.

To examine these issues, we conduct an experiment in which participants (audit managers and partners) are provided information regarding a control deficiency (i.e., lack of evidence indicating proper credit checks 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 is examined by manipulating the timing of when the control deficiency is 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 are provided information describing whether the timing of control testwork is the auditor’s responsibility (i.e., whether the auditor or client requested a delay in testwork, thus resulting in testwork being conducted under one of the three levels of pressure described above). Dependent variables include participants’ assessment of the materiality of the control deficiency, as well as participants’ assessment of the sufficiency of audit team’s post-remediation retesting of the control.
Results indicate that deadline pressure interacts with auditor fault to impact auditor materiality assessments of the errors/deficiencies identified. When auditors cause high deadline pressure, 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 causes the delay in testing. Additionally, auditors are more willing to accept higher deviation rates (i.e., more errors) when under high deadline pressure and/or when the auditors are at fault for delaying testing.

In addition to examining auditor judgment prior to the deadline, we also consider how missing the deadline may impact auditors’ assessments. Even though the auditor is no longer under deadline pressure once the deadline has passed, general incentives to avoid issuing an adverse audit opinion are still present. Results indicate 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, after the deadline auditors choose to select a larger sample with a lower deviation rate for retesting the remediated control, compared to when the auditor is under deadline pressure. These results suggest that incentives alone will not produce the predicted reduction in materiality judgments (and remediation solutions). Instead, the hypothesized findings appear to be a result of the “refocusing” on the negative possible outcomes caused by deadline pressure (Hogarth 1990), such that both incentives and pressure are required to produce the predicted results of a decrease of materiality and a loosening of retesting procedures.

This study’s findings extend auditing research in two primary ways. First, this study extends our understanding of auditors’ assessments of significance and materiality by considering how these assessments may change as the audit nears conclusion. We demonstrate that impending deadline pressures combine with reporting incentives to alter materiality judgments as the audit nears an end. Interestingly, when the ability to meet the deadline is removed (i.e., the deadline passed) the incentive
to avoid an adverse opinion no longer influences the auditors’ judgments (i.e., judgments are similar to low time pressure). 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. 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; Ettredge et al. 2010; Hammersley et al. 2012; Cassell et al. 2011). Findings suggest a need for further research in the auditors’ assessment and application of materiality in the financial statement audit, such as whether auditor judgment varies in considering the materiality of financial misstatements that arise during the audit. This analysis also provides 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 section provides theory and hypothesis development. Section III describes the research method and approach of the experimental study. Section IV provides an analysis and discussion of results, and Section V provides a discussion of potential findings and possible limitations of the study.

II. BACKGROUND AND HYPOTHESES

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; PCAOB 2007b). While auditors typically use client financial information to determine quantitative guidelines for materiality decisions (e.g., five percent of net income before taxes; Eilifsen and Messier 2013), the auditor should also consider qualitative factors
that impact their consideration of misstatements or deficiencies during the audit (PCAOB 2007b). AS 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 Such pressures are unlikely to change 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.

**Deadline Pressure**

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) in completing the task that may not always result in the “optimal outcome” and lead to lower decision quality (Goldberger and Breznitz 1982; Zakay and 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). In a discussion regarding deadline penalties, Mano (1990) explains that individuals often deal with increased deadline pressure (and the increased focus on negative consequences) by amending their

---

¹ 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.
decisions and performance in order to meet the deadline. He further explains 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 notes that higher levels of performance increases potential 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) caution that early accounting research examining time pressures may overstate results due to participants being constrained in their ability to anticipate and cope with deadline pressures. This study addresses such a concern by providing information to participants regarding the pending deadline and, subsequently, examining how the auditor’s professional judgment changes when coping with the deadline pressure, in terms of materiality assessments and/or the decision of audit evidence sufficiency.

**Auditing Internal Controls over Financial Reporting**

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. 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 identified 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 influence of an explicit, quantitative planning materiality threshold.

According to PCAOB Auditing Standard No. 5 (2007a), there are three categories of control deficiencies: deficiencies, significant deficiencies, and material weaknesses. 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 (PCAOB 2007a). Even though the client’s controls operate and affect transactions throughout the year, under current guidance, if a material weakness is remediated by the client and satisfactorily retested by the auditor, the auditor can issue an unqualified opinion 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. Audit clients may suffer negative consequences, such as higher costs of equity, after receiving an adverse opinion on ICFR (Ashbaugh-Skaife et al. 2008; Ettredge et al. 2010; Hammersley et al. 2012; Cassell et al. 2011). In addition, audit clients are more likely to change auditors after receiving an adverse opinion on ICFR, resulting in a loss of business for the issuing auditor (Ettredge et al. 2010).

**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 before fiscal year-end. If

---

2 The classification of the deficiency determines if the deficiency is to be communicated to the audit committee and if an adverse opinion on the audit of ICFR should be issued.

3 It should be noted that the 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).
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.\footnote{See Appendix for outline of judgments and their ramifications 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. In fact, prior archival accounting research shows a direct correlation with client remediation of control deficiencies and the number months prior to year-end (Graham and Bedard 2013).\footnote{In their study, Graham and Bedard (2013) examined 76 audit engagements sampled by audit firms. Firms reported all deficiencies noted during the sampled audits, not just year-end Material Weaknesses (which are reported to the public).} Additionally, 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 additional incentives 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). As the year-end deadline...
approaches, the client and auditor have less time to remediate and retest identified material weaknesses in internal controls, thus increasing the likelihood that an identified material weakness would result in an adverse opinion for the audit client. Recall that when time pressures are high, individuals will focus on the negative aspects of missing the deadline (Hogarth 1990) increasing the saliency of the possible negative outcomes. When under heightened deadline pressure near year-end, 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, we 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, we 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**

As with deadline pressure, perceived fault increases the salience of negative outcomes resulting from decisions and performance. Perceived fault links the negative outcomes more directly to the
decision maker. Yates (1990) explains that decisions are not made without consideration of the alternative options and respective outcomes for each option. Landman (1993) explains that people often make decisions “with the help of a process of imagination in which we try to experience outcomes ‘before the fact’” (Gigerenzer and Selten 2002) and experience anticipatory regret when considering those options that may yield negative outcomes (Landman 1993; Kunda 2000). Regret is personal in nature and includes feeling personally sorry for circumstances. Gigerenzer and Selten (2002) state that decision makers are influenced by such feelings of regret by modifying their processes for calculating expected utilities of outcomes.

Decisions to avoid negative circumstances are self-serving in that they help the individual preserve a positive self-image and are affectively rewarding for the individual (Koehler and Harvey 2004). Therefore, if an individual feels somewhat responsible for a situation that may lead to a negative outcome, that individual will be more likely to choose an option that minimizes the likelihood of future negative outcomes. If the auditor is the source of deadline pressure, the resulting negative outcomes are more directly linked with the auditor, leading to anticipatory regret of feeling responsible (and perhaps being blamed) for the negative outcomes. In making decisions that avoid subsequent negative consequences one minimizes the potential for regret, and of receiving blame, for the negative outcome.

Alternatively, if deadline pressure is perceived to be the responsibility of management (or at least not that of the auditor) then the auditor will not feel or be responsible for any negative consequences of missing the deadline. As stated before, the auditor still has incentives to avoid classifying a control deviation as material. However, there are also negative consequences of not appropriately handling and/or reporting deviations in the control environment (e.g., inspections or increased audit risk in subsequent periods). Thus, without the more direct link to the auditor (i.e., potential for blame), there may be little or no anticipatory regret attached to the potential outcomes.
In the planning phase of the audit, the auditor and the audit client 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 to avoid 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.

The discussion above suggests that when the auditor feels responsible for the deadline pressure, the potential for anticipatory regret is intensified, resulting in a judgment context most likely to result in behaviors to avoid the immediate negative outcomes. Thus we expect an interaction of deadline pressure and perceived fault demonstrated in Figure 1a and stated in the following hypothesis:

**H3:** When the audit firm is the source of deadline pressure, the reduction in assessed materiality due to deadline pressure will be greater than when the auditor is not the source of deadline pressure.

**Passing of Deadline**

In addition to the hypotheses stated above regarding the testing and identification of control deficiencies before year-end, we also acknowledge that control testing may take place after year-end in some cases (e.g., deficiencies identified through substantive testwork; control testwork is delayed until after year-end; certain year-end controls operate only on an annual basis, such as controls over the consolidation and closing processes). Once the deadline has passed, management does not have an opportunity to remediate the identified control deficiency before year-end (Bedard and Graham 2011). So, while the auditor still has the concern of issuing an adverse opinion, and all the difficult
consequences that entails, there is not a deadline to contend with. Thus, the passing of the deadline creates a unique scenario where the incentives to lower materiality judgments still exist, but the deadline pressure does not. Recall, it is the deadline pressure that heightens the focus on negative outcomes (including regret if the auditor feels responsible) associated with this decision. Therefore, we expect auditors to behave more similarly to the low deadline pressure condition, compared to the high deadline pressure by considering a deficiency as more material than auditors under high deadline pressure. Similarly, it is too late for the auditor to provide the client the opportunity to remediate (and then the auditor retest) the deficiency in controls. Therefore, we expect these judgments will return to the levels demonstrated in the low pressure conditions.

Yet, if the auditor’s decision was based primarily on incentives (e.g., to avoid negatively impacting the auditor-client relationship, especially when the auditor is at fault), we would expect auditors’ materiality thresholds to decrease if the deficiency was identified after the deadline has passed, as there is no possibility to resolve the situation through reduced remediation/retesting procedures. The auditor can only avoid issuing an adverse opinion on ICFR if the auditor determines that the control deficiency is less material, in terms of its potential impact on the financial statements. Due to these two possible (opposing) responses in auditors’ materiality decisions to identifying a deficiency post-deadline, we 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/her 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?

**III. RESEARCH DESIGN**

Given the subjective nature of the materiality assessment, audit managers and partners were considered appropriate subjects due to their professional experience level. Participants were 123 audit
professionals: 102 partners; 18 managers/senior managers; and three identified as “other”. Responding participants have an average of 25.65 years of audit experience, including experience auditing ICFR (mean of 6.3 on a nine-point Likert scale; where 1= “no experience” and 9= “extensive experience”).

Audit Task

Participants were mailed case materials in which they were asked to review information regarding a hypothetical audit engagement and related control testwork. The provided materials included background information of both the audit client and the auditor, including that the participant’s role in the scenario is the audit manager on the audit and that the client’s year-end is December 31. Additionally, participants were 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.). The participants also received partial financial statement information for use in assessing the audit task and related control deficiency.

After initial background information, participants were informed that both parties (auditor and client management) have initially agreed to testing controls as of an interim date (early October). After current year information (e.g., financial information), participants were then informed that one party (either the auditor or the client) had a conflict arise prior to the interim testwork taking place, and

---

6 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. The mailout was conducted without any prior professional relationship, contact, or prior agreement/interest in participating (i.e., a “cold” mailout), resulting in a lower response rate than other studies where there was prior contact with potential participants and/or firm support in contacting/administering materials. This response rate is similar to other studies using such a data collection method (e.g., 6.4 percent Bennett et al. 2013 using a mailout for partners; 5-8 percent in Graham and Harvey 2007 and 5.4 percent in Dichev et al. 2013 using a mailout for CFOs). Additionally, there are no significant differences between early versus late responders, no interactions, and no effect on results by inclusion in the model.
requested delaying control testwork to a subsequent date.\textsuperscript{7,8} Thus, the timing of when control testwork was 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 provided with results of one area of the audit team’s control testwork in which a control “failed” (i.e., failure of the credit manager to properly run credit checks before sales commenced). The materials included the audit program the team used for testwork, which included the assertions and financial statement accounts affected 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, the audit team found no evidence in the customer file that the credit manager conducted credit checks on new customers for sales that were approved). It was also noted that no compensating controls were available to be tested.

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) followed, in which the participant was provided more details on how this deficiency occurred, as well as management’s evaluation of the finding. In general, management described the failures as anomalies, and he (the credit manager) downplayed the significance and pervasiveness of any effect the control deficiency may have on the

\textsuperscript{7} For participants that 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 prepared for interim audit fieldwork as originally scheduled.

\textsuperscript{8} A “delay” of control testwork is included for all three conditions, primarily to enhance the salience of the “fault” manipulation. The delay is presented in the materials in one of three ways: a week, two months, or three months.
financial statements. The participant was also informed that the CFO stated that the control deficiency could be addressed and remediated promptly (i.e., within the week), if needed.

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. Manipulation check questions and demographic information were also collected. See Table 1 for an overview of the instrument.

[Insert Table 1]

**Independent Variables**

Participants were randomly assigned to one of six experimental conditions, based on a 2x2 plus 2 between-subjects ANOVA research design.9 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 or client management’s. Specifically, when the auditor was at fault, the participant was instructed:

“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...”

---

9 The 2x2 includes cells for manipulating deadline pressure (low versus high), as well as the presence (absence) of auditor fault. The additional two cells address the research question that considers how auditors’ materiality decisions change after the deadline, when the options are much more limited, yet incentives to avoid an adverse opinion are the same.
When the client requested the postponement of control testwork, the following information was provided:

“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...”

**Dependent Measures**

In testing Hypotheses H1 and H3, the dependent variable of interest is the auditors’ materiality assessment of the control deficiency. This is measured by asking the participant to rate “how significant is the control deficiency, in terms of its potential impact on the financial statements” using a nine-point Likert scale (1-“Immaterial” to 9-“Material”). To evaluate H2, we measure the number of sampled items the auditor would choose to retest the control deficiency post-remediation. We asked participants, “If management remediates the control, how many additional customers (sample items) would you want to select for retesting?”

**IV. RESULTS**

**Manipulation Checks**

In order to determine if the participants were aware of the timing of the deadline (timing manipulation), we asked participants in all three deadline-pressure treatment groups (low deadline pressure, high deadline pressure, and post-deadline) to rate on a Likert scale how much time they perceived was available for “management and the auditor to address the control deficiency” (1-“No Time”; 9-“Plenty of Time”). Participants randomly assigned to the low deadline pressure manipulation (i.e., October) did perceive that there was more time to address the deficiency (mean of 5.29) than those assigned to the high deadline pressure manipulation (i.e., December, mean of 2.94, p < 0.001).
Likewise, those in the no deadline pressure (deadline passed) perceived the least amount of time available (i.e., January, mean 2.11, p= 0.02). In regards to the fault manipulation, all except one participant correctly perceived which party (the auditor or the CFO) requested the delay in testwork.\textsuperscript{10} These comparisons indicate that the intended manipulations were successful.

**Test of Hypotheses**

The stated hypotheses evaluate the auditor’s judgments of materiality and the sufficiency of audit evidence under low and high deadline pressures, when auditor fault is present or absent. Therefore, we use a subset of the collected data that excludes the post-deadline cells (no deadline pressure), resulting in a 2x2 design for testing hypotheses using an analysis of variance (ANOVA) statistical model.

**Materiality Decisions**

For the analysis of H1, we consider whether deadline pressure had a main effect on the auditors’ materiality assessment for the identified control deficiency. Table 2 presents the results of the ANOVA of the auditors’ assessment of the control deficiency. While there is not a main effect of time deadline pressure on the auditors’ assessments as predicted in H1, (low deadline pressure = 5.60, high deadline pressure = 5.37; p = 0.286), there is an interactive effect of Time Pressure and Perceived Fault as hypothesized in H3 (F = 2.83; p = 0.049; see Table 2 and Figure 1). Specifically, when the audit firm is responsible for the new deadline, high deadline pressure causes auditors to rate an identified control deficiency as less material compared to low deadline pressure (simple effect p-value = 0.057; See Panel B, Table 2). However, when the auditor is not responsible for deadline pressure, there is not effect for deadline pressure (p-value = 0.438; See Panel B, Table 2). This pattern of results supports H3. We also examine the simple effect of auditor fault when time pressure is high. Table 2, Panel C indicates that

\textsuperscript{10} 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.
auditor fault has an impact on auditors’ assessment of materiality when deadline pressure is high (F = 10.17; p = 0.001). This pattern of results suggests that the effect on materiality assessment only occurs when deadline pressure is high and the audit firm is responsible for the deadline.¹¹

[Insert Table 2 and Figure 1]

**Sufficiency of Audit Evidence**

As stated in Hypothesis 2, we consider whether deadline pressure has a main effect on the auditor’s judgment of sufficient sample size for retesting controls. While there is not a main effect of deadline pressure (low pressure = 19.55 versus high pressure = 18.52; p = 0.320), there is a main effect of perceived fault on the auditors’ chosen sample sizes (auditor’s fault=14.56 versus not auditor’s fault=22.59; p = 0.004; see Table 3). 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. Such a determination increases the chance of remediating and retesting before the deadline.

[Insert Table 3]

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 allowed deviation rate decreases as sample size decreases, this may indicate the same level of scrutiny on the part of the auditor.¹² Therefore, we compare 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. (See Table 4.)

---

¹¹ Auditing Standard No. 5 requires auditors to determine the likelihood that a deficiency could result in a misstatement as well as the magnitude of such a misstatement. Results are similar if we use either of these measurements as dependent variables.

¹² 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.
On average, when the time pressure is high, the auditor will allow a higher deviation rate (13%) compared to when time pressure is low (9%), suggesting the auditor will be more accepting of deviations/errors when under high deadline pressure than when under lower deadline pressure (p = 0.030, one-tailed). Additionally, when the auditor is at fault for creating the increased deadline pressure, the auditor will tolerate a higher deviation rate (14% versus 9% when the auditor is not at fault; p = 0.035, two-tailed). Although there is not an interactive effect of fault and time pressure on the deviation rates (p = 0.377), these results suggest that the auditors’ judgments of the sufficiency of audit evidence may be affected by both the heightened deadline pressure and the auditors’ responsibility for creating this high deadline pressure situation. When the auditor decides on allowing higher tolerable deviation rates, he/she is willing to accept more errors in the tested sample of the client’s work. This difference in the auditor’s professional judgment under deadline pressure 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 the chosen sample size has decreased). Again, increased deviation rates improve the chance of successfully retesting the control before the deadline. See Figures 2a and 2b.

Overall, these findings regarding audit sampling, coupled with the previously discussed findings regarding materiality, indicate that audit quality may be impaired when the auditor is under higher deadline pressures, particularly when the auditor has created the higher pressure situation (i.e. the auditor is at fault for the heightened deadline pressure). There are two main findings that imply audit quality may be compromised in such a situation. First, the auditor may lower their standards for what is considered “material” implicitly raising materiality thresholds to which audit evidence is subjected. Secondly, the auditor may lower his/her professional standards regarding the sufficiency of audit
evidence in terms of both sample size and tolerable error rates (i.e., may decide to sample fewer items and allow for more errors in the selected sample). Either situation (higher materiality thresholds or insufficient audit evidence) may negatively impact audit quality and lead to incorrect conclusions regarding the reliability of the client’s systems and financial information. However, the combination of these two audit quality issues may further exacerbate potentially negative ramifications to audit quality.

**Further Analysis: Post-Deadline Decisions**

As previously noted, in addition to the three hypothesis stated and evaluated (as discussed above), we asked a research question that considers how auditors’ materiality decisions may be affected once the year-end deadline has passed. Examining the auditors’ post-deadline decisions, we find that materiality assessments are influenced by both the timing of testwork and the perceived auditor fault. As indicated in Figure 3, when the auditor is at fault for creating the delay in testwork, auditors in the after year-end deadline condition assess materiality of the control deficiency higher than those participants assigned to the high deadline condition (means of 6.08 and 4.31, respectively; p = 0.0050). (See Figure 3 for mean comparisons and p-values.) While the materiality assessment is higher for the post-deadline condition (when the auditor was at fault), it is not higher than the low deadline pressure condition (p = 0.2879). These findings imply that the heightened salience of negative consequences induced by deadline pressure subside once the deadline is passed, causing materiality judgments to return to the “low deadline pressure” levels. This occurs even though the consequences on the auditors’ materiality assessment, due to fault, persist after the deadline passes (i.e., incentives to avoid an adverse opinion are still present).

[Insert Figure 3]

In addition to materiality assessments, we also consider auditors’ judgments regarding sufficiency of audit evidence. We expect these measures to return to low pressure values as there is little advantage to reducing the sample or increasing deviation rates (i.e., no time for client to remediate
the control or for the auditor to retest the control). Overall, the auditors assigned to the post-deadline manipulation report wanting to select a larger sample and to allow for fewer errors in the sample in order to consider the control sufficiently remediated. Particularly, when the auditor is at fault, the sample size (deviation rate) increases (decreases) relative to the high pressure condition (p-values of 0.0007 and 0.0224 respectively; see Figure 4). Samples size and deviation rates actually are larger (smaller) in the post-deadline condition than the low deadline pressure condition when the auditor is responsible for the pressure (p-values of 0.0024 and 0.0276 respectively; see Figure 4). These results suggest that auditors go back to more “normative” sampling rates once it is too late to do anything.

[Insert Figures 4a and 4b]

V. DISCUSSION

The purpose of this study is 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 focuses 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 assessment of control deficiencies when under deadline pressure, particularly when the auditor is at fault for creating the heightened deadline pressure. Further, when auditors have created a delay in testwork, even when deadline pressure is low, they are willing to sample fewer items to test a remediated control. Additionally, auditors are more willing to accept higher deviation rates (i.e., more errors) when under high deadline pressure and/or when the auditors are at fault for delaying testing. Both of these changes in auditors’ judgments of materiality and sampling of audit evidence can have a negative impact on audit quality.

This study extends accounting literature on auditor judgment and perceptions of materiality, by examining how auditors’ 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). It is interesting to note that
these findings are not simply dependent on the incentives of the auditor. The impending deadline pressure combines with the incentive to avoid a negative outcome in this setting, such that both are required to produce the reported effect on auditor materiality/data sufficiency judgments. That is, even with the same incentives (e.g., avoiding issuing an adverse opinion and damaging client relations), judgments are similar to those made under low pressure when the deadline has passed. 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. 2012; 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. Findings also suggest that auditors’ assessments of materiality in other highly qualitative decisions, including financial statement misstatements or footnote disclosures, could also be impacted by pressures and biases, such as deadline pressures and/or whether the auditor is at “fault” for such pressures.

These findings also imply the possible need for changes in both auditor training/policies as well as auditing standards/requirements, in the areas of professional judgment and assessment of materiality. This study identifies areas in the current auditing standards where regulators may want to consider revision, such as additional disclosure as to the timing, extent, and initial findings (and remediation) of controls during the audit of ICFR. Additionally, audit firms may consider internal policies to help mitigate the effects of deadline pressure by requiring all control testing of ICFR to be done before the beginning of the fourth quarter, thus providing management and the auditor time (three months) to consider remediation/retesting.
REFERENCES

Anderson, A. W. 2010. Audit Planning is a 2-way Street – Both the Auditor and the Company Need to be Involved. Anderson’s Audit Express (online): http://accountabilityplusllc.com


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).

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.)
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).

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.)

---

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 3 - Auditors' Materiality Assessment of Control Deficiency

Not Auditor Fault Comparisons
Post-Deadline vs Low: 0.0808
(7.02 vs 5.87)
Post-Deadline vs High: 0.2877
(7.02 vs 6.38)

Auditor Fault Comparisons
Post-Deadline vs Low: 0.2879
(6.00 vs 5.35)
Post-Deadline vs High: 0.0050
(6.00 vs 4.31)

1 For the "Time Deadlines 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 4a - Auditors' Sample Sizes for Post-Remediation Testing

Not Auditor Fault Comparisons
Post-Deadline vs Low: (30.88 vs 23.40) p-value 0.1326
Post-Deadline vs High: (30.88 vs 23.35) p-value 0.2346

Auditor Fault Comparisons
Post-Deadline vs Low: (28.50 vs 15.75) p-value 0.0024
Post-Deadline vs High: (28.50 vs 13.44) p-value 0.0007

Figure 4b - Auditors' Tolerable Deviation Rate in Sample

Not Auditor Fault Comparisons
Post-Deadline vs Low: (4.99% vs 7.27%) p-value 0.0790
Post-Deadline vs High: (4.99% vs 10.45%) p-value 0.0305

Auditor Fault Comparisons
Post-Deadline vs Low: (7.04% vs 10.98%) p-value 0.0276
Post-Deadline vs High: (7.04% vs 16.30%) p-value 0.0224

---

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.)
Table 1
General Description of Instrument Content & Process

- Client Background
- Overview of Audit of ICFR
- Details of Audit Planning Meeting & Audit Schedule
- Financial Statement Information (Income Stmt & Balance Sheet)
- Description of Postponement of Control Testwork
  \{Manipulation: Client vs Auditor's Request for Postponing\}
  \{Manipulation: Postponement of 1 week; until December; until January\}
- Results of Control Testwork (including control deficiency found)
- Narrative of discussion of deficiency with client management
- Questions regarding auditor's assessment of deficiency
- Questions regarding number of items auditor would want to retest
- Manipulation Checks & Demographic Questions
## Table 2
### Analysis of Auditor's Materiality Assessment of Control Deficiency

#### Panel A: Results for Auditor's Assessment of Control Deficiency

<table>
<thead>
<tr>
<th>Perceived Fault</th>
<th>Time Deadline Pressure</th>
<th>Low</th>
<th>High</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditor</td>
<td>Low</td>
<td>5.35</td>
<td>4.31</td>
<td>(1.80)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.82</td>
<td>(1.75)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=19</td>
<td></td>
<td>n=20</td>
<td></td>
</tr>
<tr>
<td>Not Auditor</td>
<td>Low</td>
<td>5.87</td>
<td>6.38</td>
<td>(2.07)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>5.99</td>
<td>(2.01)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=17</td>
<td></td>
<td>n=21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>5.60</td>
<td>5.37</td>
<td>(1.92)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td></td>
<td>n=41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=36</td>
<td></td>
<td>n=38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Panel B: Results of ANOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Fault</td>
<td>1</td>
<td>7.79</td>
<td>0.008</td>
</tr>
<tr>
<td>Time Pressure</td>
<td>1</td>
<td>0.32</td>
<td>0.286</td>
</tr>
<tr>
<td>Perceived Fault X Time Pressure</td>
<td>1</td>
<td>2.83</td>
<td>0.049</td>
</tr>
</tbody>
</table>

#### Panel C: Simple Effects of Perceived Fault

<table>
<thead>
<tr>
<th>When Time Deadline Pressure</th>
<th>df</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1</td>
<td>0.61</td>
<td>0.044</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>10.17</td>
<td>0.001</td>
</tr>
</tbody>
</table>

#### Panel D: Simple Effects of Time Deadline Pressure

<table>
<thead>
<tr>
<th>When Pressure is Auditor's Fault</th>
<th>df</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1</td>
<td>2.57</td>
<td>0.057</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td>0.61</td>
<td>0.438</td>
</tr>
</tbody>
</table>

---

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 scale, with 1="Immaterial" and 9="Material"

4. Reported p-values are for one-tailed tests.
Table 3
Analysis of Auditor's Determined Sample Sizes for Resting Control

Panel A: Results of Auditor's Decision of Planned Remediation

<table>
<thead>
<tr>
<th>Perceived Fault</th>
<th>Time Deadline Pressure&lt;sup&gt;1&lt;/sup&gt;</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditor</td>
<td>Low</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.75  (8.27) n=19</td>
<td>13.44  (9.32) n=20</td>
<td>14.56  (8.74) n=39</td>
<td></td>
</tr>
<tr>
<td>Not Auditor</td>
<td>23.81  (0.80) n=17</td>
<td>23.35  (18.36) n=21</td>
<td>23.55  (14.06) n=38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19.55  (8.93) n=36</td>
<td>18.52  (15.32) n=41</td>
<td>n=77</td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Results of ANOVA

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Fault</td>
<td>1</td>
<td>9.25</td>
<td>0.004</td>
</tr>
<tr>
<td>Time Pressure</td>
<td>1</td>
<td>0.22</td>
<td>0.320&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Perceived Fault X Time Pressure</td>
<td>1</td>
<td>0.10</td>
<td>0.754</td>
</tr>
</tbody>
</table>

<sup>1</sup> 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).

<sup>2</sup> 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.)

<sup>3</sup> 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.

<sup>4</sup> Reported p-values are for one-tailed tests.
Table 4
Analysis of Auditor's Tolerable Deviation Rate in Chosen Sample Size

Panel A: Results of Auditor's Tolerable Deviation Rate

<table>
<thead>
<tr>
<th>Perceived Fault 2</th>
<th>Time Pressure 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Auditor</td>
<td>0.11 (0.06)</td>
<td>0.16 (0.14)</td>
<td>0.14 (0.11)</td>
</tr>
<tr>
<td></td>
<td>n=19</td>
<td>n=20</td>
<td>n=39</td>
</tr>
<tr>
<td>Not Auditor</td>
<td>0.07 (0.03)</td>
<td>0.10 (0.09)</td>
<td>0.09 (0.07)</td>
</tr>
<tr>
<td></td>
<td>n=17</td>
<td>n=21</td>
<td>n=38</td>
</tr>
<tr>
<td></td>
<td>0.09 (0.05)</td>
<td>0.13 (0.12)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n=36</td>
<td>n=41</td>
<td>n=77</td>
</tr>
</tbody>
</table>

Panel B: Results of ANOVA

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F-Stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Fault</td>
<td>1</td>
<td>4.64</td>
<td>0.035</td>
</tr>
<tr>
<td>Time Pressure</td>
<td>1</td>
<td>3.68</td>
<td>0.060</td>
</tr>
<tr>
<td>Perceived Fault X Time Pressure</td>
<td>1</td>
<td>0.22</td>
<td>0.639</td>
</tr>
</tbody>
</table>

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.
APPENDIX

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

Internal Control Testwork

Internal Control Failure(s) noted

How serious is this deficiency in ICFR?
- Likelihood deficiency could result in financial misstatement
- Magnitude of possible misstatement

Reasonable Probability & Material Misstatement: 
*Material Weakness*

Management Remediates Deficiency

Auditor Retests Controls

Auditor determines if a material weakness in ICFR still exists as of year-end.

Still Exists
- Adverse Opinion

Successful Remediation
- Unqualified Opinion

Remote Likelihood and/or Immaterial Misstatement: 
*Significant Deficiency* or *Deficiency*

Unqualified Opinion