The internal audit function as an auditor persuasion tactic

Kerri-Ann Gooden-Sanderson

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The author of this dissertation is:

Kerri-Ann Gooden-Sanderson  
School of Accountancy  
J. Mack Robinson College of Business  
Georgia State University  
35 Broad Street NW  
Atlanta, GA 30303

The director of this dissertation is:

Dr. Jennifer R. Joe  
Whitney Family Professor of Accounting  
Department of Accounting & MIS  
212 Purnell Hall  
Newark, DE 19716
THE INTERNAL AUDIT FUNCTION AS AN AUDITOR PERSUASION TACTIC

BY

KERRI-ANN GOODEN-SANDERSON

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

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ACCEPTANCE

This dissertation was prepared under the direction of KERRI-ANN GOODEN-SANDERSON’S Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctoral of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

H. Fenwick Huss, Dean

DISSERTATION COMMITTEE

Dr. Jennifer Joe (chair)
Dr. Nerissa Brown
Dr. Richard Hatfield
Dr. Benjamin Luippold
Dr. Detmar Straub
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ABSTRACT

THE INTERNAL AUDIT FUNCTION AS AN AUDITOR PERSUASION TACTIC

BY

KERRI-ANN GOODEN-SANDERSON

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Committee Chair: Dr. Jennifer Joe

Major Academic Unit: School of Accounting

This study examines how reliance on the client’s internal audit function (IAF) affects auditors’ ability to persuade management to accept material weakness assessments of detected internal control deficiencies. I further investigate whether auditors’ ability to persuade management to accept material weakness assessments depends on the subjectivity of the control deficiency assessment to varied interpretations (ambiguity). I apply group affiliation and persuasion theories to hypothesize that management will have higher group identification with the IAF than with the auditors. I predict that management’s group affiliation will lead them to be more accepting of auditors’ internal control assessments when the auditors rely on the client’s IAF than when auditors do not. Further, I hypothesize that the greater the ambiguity in the internal control deficiency assessment, the more persuaded management will be to accept the auditors’ control assessment in situations where the auditors rely on the IAF than when the auditors do not. I conduct an experiment using a 2 X 2 between-subjects design in which I manipulate auditors’ reliance on the client’s IAF during tests of the client’s internal controls (rely or not rely) and the level of ambiguity in the internal control deficiency assessment (less ambiguous or more ambiguous) in a SOX 404 Internal Controls Over Financial Reporting (ICFR) audit setting. The study’s findings provide evidence that relying on the client’s IAF can improve auditors’ likelihood of persuading the client when control assessments are more open to varied interpretations. This study sheds light on a previously ignored benefit of using the client’s IAF – as a persuasion tactic. Thus, my research contributes to two literature streams: factors influencing auditor-client negotiations and the effects of using the IAF on audit engagements. These results provide both practical and theoretical insights to academics, practitioners and auditing standard setters.
I. INTRODUCTION

Auditors and clients regularly engage in negotiations during the financial statement reporting process (Gibbins et al. 2001) and the results of these negotiations are reflected in the final product - audited financial statements (e.g., Brown and Wright 2008). Consequently, the content of audited financial statements can be considered to be a result of the joint efforts of company management and their auditors (Antle and Nalebuff 1991).  

While auditors and management engage in discussions and negotiations to resolve proposed financial statement adjustments (e.g., Gibbins et al. 2001, Hatfield et al. 2010), it is likely that they also engage in such negotiations to resolve differences in classifications of detected internal control deficiencies that affect the Internal Controls Over Financial Reporting (ICFR) audit opinion. The severity of the control deficiency is determined by the potential for a misstatement to be material and the likelihood that the misstatement would not be detected/prevented. The most severe deficiency, material weakness, is a deficiency in internal controls where there is a “reasonable possibility” that a “material” misstatement in the company’s financial statements will not be prevented or detected on a timely basis (PCAOB 2007). Material weaknesses that are not remediated by year-end result in the auditors issuing an adverse opinion on the effectiveness of that company’s internal controls over financial reporting. These criteria defining the classification of internal control deficiencies can be complex and ambiguous (Bedard and Graham 2011; Asare and Wright 2012) and likely lead to contentious discussions and negotiations between auditors and management especially when an adverse

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1 In addition to an opinion on the presentation of the client’s financial statements, auditors also render an opinion on the effectiveness of the client’s internal controls over financial reporting (ICFR; PCAOB 2007).
2 According to Auditing Standard No. 5 (PCAOB 2007), auditors assess a company’s internal controls over financial reporting as either operating effectively or as being deficient. There are three categorizations for deficient controls, listed from least to most severe: (1) control deficiency, (2) significant deficiency, or (3) material weakness. Unlike the other classifications, material weaknesses are disclosed to the public in the form of an adverse ICFR audit opinion.
ICFR opinion is at issue. Research finds that auditors’ ICFR assessments are important because adverse opinions can have negative ramifications for companies and management in the form of lower share prices (Hammersley et al. 2008), increased costs of capital (Ashbough-Skaife et al. 2009), and higher management turnover (Johnstone et al. 2011).

This study investigates how reliance on the client’s internal audit function (IAF) affects auditors’ ability to persuade management to accept material weakness assessments of detected internal control deficiencies. I examine whether the persuasive effects of IAF use is conditional upon the degree of ambiguity associated with the classification of internal control deficiencies under Auditing Standard No. 5 (AS5; PCAOB 2007). Prior studies that investigate auditor-client negotiations primarily focus on financial statement adjustment settings (e.g., Hatfield et al. 2008, Sanchez et al. 2007; Ng and Tan 2003). In a financial statement context, the emphasis of negotiations is on reconciling differences in auditor evaluations of past economic transactions (and related valuations) with those of management to ensure that financial statements are not materially misstated in actuality. On the other hand, in an ICFR audit, auditors evaluate the client’s internal controls over financial reporting to opine on whether controls are operating effectively (i.e., whether the internal controls could reasonably be expected to prevent or detect a material misstatement in the financial statements). In this way, the ICFR context provides a different and important setting in which to investigate auditor-client negotiations. An ICFR audit setting involves a predictive (or forward-looking) judgment about the potential occurrence of undetected misstatements as opposed to a judgment about an actual misstatement occurrence.

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3 Anecdotal evidence gathered through conversations with practicing auditors and senior accounting executives confirm that discussions and negotiations between auditors and management can become heated and contentious especially when related to issues about internal control deficiencies that are classified as material weaknesses by the auditors.

4 To avoid confusion between internal and external auditors I use the term “auditor(s)” throughout this paper to refer to the client’s external auditors. Internal auditors are referred to as the IAF.

5 Auditing standards indicate that a material weakness in internal controls can exist even when financial statements are not materially misstated (Auditing Standard No. 5; PCAOB 2007).
based on past events as is the case in the financial statement audit setting. In addition, the assessment of the client’s internal controls affects the nature and extent of subsequent substantive testing planned for the financial statement audit. In this light, and also considering that there is limited prior research investigating auditor-client negotiations in the ICFR audit setting, my study is important and contributes to the initial academic dialogue on ICFR negotiations.

Research finds that relying on the client’s IAF can benefit the audit process by reducing the amount of testing directly performed by the auditors resulting in cost savings and increased audit efficiency measured by reduced audit delays (e.g., Felix et al. 2001; Pizzini et al. 2012; Abbott et al. 2012b). Prior studies on auditor-client negotiations have examined the effects of auditor persuasion strategies such as the general negotiation approach (e.g., Honglin et al. 2011; Gibbins et al. 2010), reciprocity (e.g., Hatfield et al. 2008; Bame-Aldred and Kida 2007; Sanchez et al. 2007), and auditor concessions (Ng and Tan 2003) on auditor-client negotiations. This study contributes to the internal audit reliance and client negotiation literatures by examining a previously unexplored benefit of relying on the client’s IAF – as a useful persuasion tactic to convince management to acknowledge adverse internal control deficiencies which require public disclosure in the auditors’ report.

Group affiliation and persuasion theories suggest that individuals have higher identification with groups with which they are affiliated (an in-group) and are more persuaded by messages received from in-group sources than by messages received from out-group sources (e.g., Mackie et al. 1992). Additionally, when the message involves the evaluation of more ambiguous cues, the persuasion effects of the in-group source is further enhanced because the individual relies more on heuristic cues (e.g., the message source) to interpret the message.
(Chaiken and Maheswaran 1994; Hafer et al. 1996). Applying these theories, I hypothesize that management will have higher identification with the IAF than with auditors, and will be more persuaded to accept auditors’ control assessments when auditors rely on the IAF than when auditors do not. Additionally, I hypothesize that the ambiguity of the control deficiency assessment moderates auditors’ ability to persuade management. That is, when the judgment involved in assessing the internal control deficiency is more open to different interpretations, auditors will more likely persuade management when they rely versus do not rely on the IAF.

Using a SOX 404 ICFR audit setting, I conduct an experiment in which I manipulate: (1) auditors’ reliance on the client’s IAF during tests of the client’s internal controls (rely or not rely), and (2) the degree of ambiguity in the internal control deficiency assessment (less ambiguous or more ambiguous). I use an ICFR setting because prior research finds that the consequences of receiving an adverse internal control assessment have severe implications for the company and its management (e.g., Hammersley et al. 2008; Ashbough-Skaife et al. 2009; Johnstone et al. 2011). I use management’s willingness to accept the auditors’ adverse internal control assessment as a measure of auditors’ ability to persuade management. To capture management’s identification with the internal and external auditors, I use an adapted organization identification scale (Bamber and Iyer 2007) to measure participants’ group identification with both the IAF and the auditors (within-subjects). Using a sample of accounting professionals with experience performing internal controls assessments, I find that management has higher identification with their IAF than they do with auditors and that management perceives control testing results to be more credible when auditors rely versus do not rely on the IAF. Consistent with my prediction, I also find that when the control assessment is more open to interpretation, management is more persuaded to accept an adverse control assessment when
auditors rely on the client’s IAF. However, evidence suggests that these persuasive effects disappear when the control assessment is less open to interpretation. In fact, in such settings, relying on the client’s IAF may be to the auditors’ disadvantage when trying to persuade management to accept an adverse ICFR opinion.

Understanding factors that improve auditors’ likelihood of persuading the client has theoretical and practical implications for academics, practitioners, and accounting standard setters. This study extends the literature and informs the audit practice by examining how using the client’s IAF on the ICFR audit can influence management to disclose material weaknesses. Using an archival approach, Lin et al. (2011) find that companies are more likely to disclose material weakness control deficiencies when auditors coordinate audit activities with the client’s IAF. In their “IAF coordination” variable, Lin et al. (2011) include activities such as loaning IAF staff to the auditors, the IAF performing complete or partial audits of locations/functions, conducting joint annual planning sessions with the IAF, as well as conducting joint risk/control sessions with the IAF. By examining the effects of these IAF coordination activities as a single composite variable, Lin et al.’s (2011) study does not specifically disentangle which of these activities influence companies to increase disclosures of material weaknesses nor does the study examine how these activities effect greater disclosure. My study extends Lin et al. (2011) by investigating how using the client’s IAF in the capacity of direct assistants on the audit can increase the persuasiveness of audit findings that influence management to disclose material weaknesses. I also examine control deficiency contexts within which such persuasion may be effective. Beyond the findings of Lin et al. (2011), this study provides evidence that the persuasive effects of coordinating audit testing activities with the client’s IAF is conditional

6 Lin et al. (2011) uses a single composite measure of auditor-IAF coordination which includes several different activities. In their study, the indicator variable is coded as “1” if the auditor engages in any of these activities with the client’s IAF, “0” otherwise.
upon the nature of the control deficiency at issue. That is, when the assessment of the control deficiency is more open to interpretation, management is more persuaded by the auditors’ message when auditors rely on the IAF for direct assistance. However, these persuasive effects dissipate when the assessment of the control deficiency is less open to interpretation.

Auditing standards (e.g., Auditing Standard No. 5, Public Company Auditing Oversight Board [PCAOB] 2007) provide guidance regarding auditors’ use of the client’s IAF during financial statement audits especially on ICFR audits. This study can provide further insights to standard setters as they prescribe how and in what contexts auditors can utilize the client’s IAF during the financial statement assurance process.

In the next sections of the paper, I discuss the relevant literature and develop my hypotheses, followed by a discussion of the investigation method. I then discuss my findings and implications.

**II. BACKGROUND LITERATURE**

*2.1 Auditor Negotiation with the Client*

Although company management is responsible for the content and presentation of the financial statements, the end product can be thought of as resulting from the joint efforts of auditors and management (Antle and Nalebuff 1991). In a survey study, Gibbins et al. (2001) report that 67 percent of audit partners have entered into negotiations regarding adjustments to the financial statements with more than half of their clients. This evidence indicates that auditor-client negotiations are common and play an important role in the audit process as well as in the broader auditor-client relationship.

Earlier studies on auditor-client negotiations provide practical and descriptive evidence to promote our understanding of the experiences and incentives of the negotiating parties (e.g.,
Gibbins et al. 2001; Gibbins et al. 2005, 2007). Subsequent studies further examine the auditor-client negotiation process and find that the process is influenced by several factors including engagement risk and auditor experience (Johnstone et al. 2002; Brown and Johnstone 2009); the effects of past client relationship as well as audit committee strength and effectiveness or existence of authoritative guidance (Ng and Tan 2003; Brown and Wright 2011); and the magnitude of audit differences and prior client concessions (Hatfield et al. 2010). This study aims to extend the literature by investigating how coordinating audit activities with the client’s IAF can also be a factor that influences the auditor-client negotiation process.

Prior studies that investigate auditor-client negotiations primarily focus on financial statement adjustment settings (e.g., Hatfield et al. 2008, Sanchez et al. 2007; Ng and Tan 2003). This paper aims to extend the current literature to provide evidence of how the client’s IAF could be used as an auditor persuasion tactic in an ICFR audit setting. In an ICFR context, auditors evaluate the client’s internal controls over financial reporting and opine on whether these controls are operating effectively so as to prevent (or detect) a material misstatement in the financial statements. As such, the ICFR context involves a predictive judgment about the potential occurrence of a misstatement rather than an actual misstatement judgment based on past events as is the case in the financial statement audit setting. In this way, the predictive judgment involved in ICFR evaluations may be based on comparatively less objective evidence of a misstatement than judgments regarding an actual financial statement misstatement. Bedard and Graham (2011) find that in the absence of objective evidence of a misstatement, the evaluation of the severity of control deficiencies is a more complex and nuanced judgment.

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7 There is a paucity of research of auditor-client negotiations in an ICFR context. Most studies focus on the financial statement adjustment setting (e.g., Hatfield et al. 2008, Sanchez et al. 2007; Ng and Tan 2003).
8 Auditing standards indicate that a material weakness in internal controls may exist even when financial statements are not materially misstated (Auditing Standard No. 5 2007).
process. Given that internal control deficiency judgments are based on less objective evidence and considering that adverse ICFR opinions can have negative implications for companies and management, auditors likely face a contentious ICFR negotiation process with management especially when presented with an adverse internal control deficiency opinion. Therefore, examining auditor negotiation strategies in an ICFR audit context is important to the practice and the accounting literature because of the relative complexities involved in evaluating internal control deficiencies and convincing management to disclose severe deficiencies (Bedard and Graham 2011).

Prior studies that have investigated the effects of governance factors on the auditor-client negotiation process have mainly focused on the audit committee (e.g., Ng and Tan 2003; Brown and Wright 2011). These findings suggest that audit committee strength affects auditors’ perceived bargaining power and that this governance factor influences their pre-negotiation planning judgments and negotiation strategies. This study aims to extend the prior corporate governance literature by examining the effects of another corporate governance factor on the auditor-client negotiation process – the client’s IAF.

2.2 Auditor Reliance on Internal Auditors

Responding to critics following the issuance of Auditing Standard No. 2 (AS2; PCAOB 2004), the PCAOB announced that the inspection process would have an increased focus on efficiency rather than mainly effectiveness (PCAOB 2006). Under their revised approach, the inspection process would evaluate whether auditors relied on the client’s internal audit function (IAF) to the level permitted in AS2 (PCAOB 2006). AS2 was subsequently amended to Auditing Standard No. 5 (AS5; PCAOB 2007) which calls for auditors to employ a top-down

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9 The consequences of receiving an adverse internal control assessment could have severe implications for the company and its management. For example, disclosures of “material weaknesses” have been associated with lower share prices (Hammersley et al. 2008) and increased costs of capital (Ashbough-Skaife et al. 2009).
risk-based approach that includes increased utilization of the IAF depending on the risk associated with the control being tested. AS5 prescribes that the auditor may utilize the client’s IAF when performing tests related to the financial statement and ICFR audits. The PCAOB emphasized that using a client’s IAF on these audits may increase audit efficiency (PCAOB 2007). In support of the PCAOB’s position, Abbott et al. (2012b) find that utilizing the client’s IAF results in cost savings as well as increased audit efficiency.

Before relying on the client’s IAF, the auditors must first assess the relevancy of the client’s IAF activities to the financial statement and/or ICFR audit process and whether efficiencies can be gained by utilizing the IAF. If the IAF activities are deemed relevant and beneficial to the audit process, the auditors must then evaluate the quality of the IAF before engagement. Statement on Auditing Standards (SAS) No. 65 (AICPA 1991) requires the auditor to assess the quality of the client’s IAF using three criteria: competence, objectivity, and quality of the work performed.\(^{10}\) In cases where the IAF is found to be of sufficient quality, the auditor should then evaluate the nature and extent of any reliance that will be placed on the IAF’s work (e.g., Pizzini et al. 2012). Auditors may rely on IAF testing related to internal controls evaluation, as well as those related to substantive testing depending on the nature of the risk involved (PCAOB 2007).

Prior literature focuses largely on how the factors outlined in SAS No. 65, as well as other client characteristics impact auditors’ decisions to rely on the IAF’s work (e.g., Maletta 1993; Maletta and Kida 1993; Felix et al. 2005; Munro and Stewart 2010; Pizzini et al. 2012; Abbott et al. 2012a).\(^{11}\) Primarily, these studies examine how IAF quality characteristics and

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\(^{10}\) The three primary IAF quality characteristics are competence (e.g., educational level, certification), objectivity (e.g., reporting relationship, party responsible for IAF employment decisions), and quality of work performance (e.g., adequacy of audit programs, scope of work performed) (AICPA 1991).

\(^{11}\) See Bame-Aldred et al. (2013) for a review of external auditor reliance on the IAF.
other governance factors affect auditors’ reliance decision in the financial statement audit environment. This study extends the literature by examining the effects of reliance on the IAF in an ICFR context and the resulting effects on the auditor-client negotiation process.

In an archival setting, Lin et al. (2011) find that companies have greater disclosure of material weaknesses when auditors coordinate audit activities with the IAF. In their study, Lin et al. (2011) aggregate several different methods through which auditors coordinate audit activities with the IAF into a single variable. The “coordination” variable, includes any of the following activities: “loaning IAF staff to the external auditors; performing complete or partial audits of specific locations, products, or functions; conducting joint annual planning sessions; and conducting joint risk or control sessions” (p. 301). Since “coordination” with the IAF is considered to occur if any one or all of these activities occur, the study does not disentangle how or which of these variables affect material weakness disclosures (e.g., whether coordination with the client’s IAF allows auditors to identify more control deficiencies, better evaluate identified deficiencies, or better persuade management to disclose deficiencies, etc.). Beyond the benefits of coordinating audit activities with the IAF, I investigate whether auditors’ direct engagement of the client’s IAF increases the credibility of internal control testing results and increases management’s willingness to accept an adverse internal control opinion. By auditors providing a more persuasive message, management may be more likely to make material weakness disclosures when auditors engage the IAF as direct assistants in audit testing.

III. THEORY AND HYPOTHESIS DEVELOPMENT

3.1 Persuasion: In-Group versus Out-Group

Membership in social groups is an important aspect of the individual members’ self-concept (Brewer 1991; Triandis 1989) that significantly affects the likelihood that the individual
will be persuaded by information cues (e.g., Mackie et al. 1992; Mackie et al. 1990). Mackie et al. (1992) and Mackie et al. (1990) find that people are more persuaded by messages received from in-group sources than out-group sources. These studies suggest that the significant persuasion effect of in-group sources is due to group members using the information source as a heuristic cue, as well as a systematic cue (to a lesser extent), to (1) accept the message and (2) process the in-group members’ position.\(^\text{12}\) Accounting research finds that when in-group identification is higher, auditors tend to be more lenient in resolving accounting issues with their client (Bamber and Iyer 2007). Auditors are also less skeptical when reviewing work performed by their own firm (Joe and Vandervelde 2007), and are more likely to do business with their former audit firm than with other firms (Iyer et al. 1997).

Research suggests that management is likely to identify more with the IAF than they would with the auditors i.e., on a hypothetical continuum, management would likely consider the IAF to be more representative of in-group members than they would their auditors. This is the case because the IAF is more integrated into an organization’s regular operations and activities. For example, when performing operational and compliance audits, the IAF has opportunities to develop relationships with management (Bou-Raad 2000) and the audit committee (Carcello et al. 2005). Findings from Knippenberg and Schie (2000) suggest that these and other types of interactions between internal auditors and management enhance group identification. Further, Stefaniak et al. (2012) find that internal auditors have a greater level of identification with their firm than auditors do (with the same firm). As a result, I expect that the reciprocal will occur.

\(^{12}\) Self-categorization theory, which suggests that the one’s concept of self fluctuates between personal and social identities, is thought to provide an explanation for these underlying in-group persuasion effects (Turner et al. 1987). When individuals’ social identity is more prominent in a given situation, they tend to focus more on their membership with the social in-group and the similarities / characteristics they share with this group. In this way, information pertaining to the in-group becomes part of the person’s self-concept (Smith and Henry 1996).
Specifically, I anticipate that a company’s management will have greater in-group affiliation with the IAF than they will with the auditors. This leads to my first hypothesis:

**H1:** Management will have higher group identification with the IAF than they will with the auditors.

Perceived similarities with in-group members are thought to influence persuasion in one of two ways. First, individuals might more readily accept an in-group member’s argument by using the in-group’s status as a heuristic cue so that they are more likely to agree with “similar others” (Allen and Wilder 1979). Second, messages from in-group sources might also be perceived as coming from a more credible source thereby, making the message a more credible one (Chaiken 1980). Therefore, in the context of auditor-client negotiations over ICFR classifications I expect that management will likely find control testing results to be more credible when their IAF participates in executing control testing and will be more persuaded to accept resultant internal control assessments.

Further, considering that IAFs are more directly compensated by the client company and could have greater incentive to bias their evaluations toward their employer (Dezoort et al. 2000), management may be more inclined to agree with an adverse control deficiency that internal auditors find due to the perception that the IAF is more of an ally than the auditors.\(^\text{13}\) That is, managements’ underlying expectation that their IAF may be more biased against assessing control weaknesses as severe, may lead management to give more consideration to severe deficiencies identified by their IAF. Accordingly, I expect that when auditors rely on the client’s IAF during internal controls testing, management’s in-group affiliation with the IAF will make the auditors’ control assessments more persuasive. Therefore, management will be more

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\(^{13}\) Notwithstanding, Stefaniak et al. (2012) find evidence that internal auditors are less lenient than external auditors when evaluating their client firm’s control deficiencies. If management is aware of this effect, they may be less likely to agree with internal auditor-aided assessments.
persuaded to accept the auditors’ internal control assessment when the auditors rely on the company’s IAF than when the auditors do not.\textsuperscript{14} This leads to my next hypothesis:

\textbf{H2: Management will be more persuaded by the auditors’ control assessments when the auditors rely on the client’s IAF than when they do not.}

3.2 Control Deficiency Evaluations

Evaluating control deficiencies using the definitions described in accounting standards is a complex task involving significant judgment (Earley et al. 2008; Bedard and Graham 2011). Auditing Standard No. 5 (AS5) defines a material weakness as a deficiency, or a combination of deficiencies, where there is a reasonable possibility that a material financial statement misstatement will not be timely prevented or detected\textsuperscript{15} (PCAOB 2007). From the AS5 control deficiency definition, it is evident that material weakness evaluations contain two elements of judgment: the magnitude of the misstatement (i.e., the misstatement must be evaluated as material) as well as the likelihood that such a misstatement will not be prevented / detected in a timely manner (i.e., the likelihood must be assessed at least as a “reasonable possibility”). I propose that financial statement preparers and auditors have more experience evaluating materiality than they do the likelihood of detection. Therefore, evaluating the integration of magnitude and likelihood of a control weakness leading to a misstatement becomes a variably complex judgment that can be interpreted differently.

Accounting standards place heavy emphasis on assessing materiality and have provided significant guidance to financial statement preparers and auditors (e.g., AS No. 11, AS5). Prior studies find that materiality is typically assessed in relation to the company’s income (e.g.,

\textsuperscript{14} In the event that an alternate argument presented in the popular press is true, if managers hold the view that IAFs are ineffective (e.g., Coenen 2008; Cooper 2008), they will discount IAF findings and recommendations which will limit the persuasiveness of message-sources that include the IAF. In this way, auditor reliance on the client’s IAF might not provide any incremental persuasion.

\textsuperscript{15} In contrast, AS5 describes a significant deficiency as a deficiency, or a combination of deficiencies, that is less severe than a material weakness but is nonetheless important to warrant management’s attention.
Robinson and Fertuck 1985; Icerman and Hillison 1991; Wright and Wright 1997), is consistent across audit firms (Messier et al. 2005), and that auditors’ and investors’ materiality judgments are similar (Chewning et al. 1998). Thus, the task of evaluating materiality is considered to be a regularly performed task and one in which financial statement preparers and auditors utilize a general decision framework.

On the other hand, there is limited authoritative guidance and there is no commonly used decision framework for assessing the likelihood that a control will detect or prevent a misstatement in a timely manner. Accounting standards define the likelihood of an event occurring using phrases such as “remote,” “reasonable possibility,” and “probable” (e.g., AS No.5) without providing a comprehensive framework for how these phrases are to be interpreted and applied in a practical context. Consequently, studies find that the criteria used for judging misstatement likelihood is ambiguous in practice due to the difficulties in interpreting the related probability phrases (e.g., Reimers 1992; Reimers et al. 1993; Amer et al. 1994; Brody et al. 2003; Doupnik and Rechter 2004; Asare and Wright 2012; Bedard and Graham 2011). These studies suggest that interpreting probability phrases such as those defining a material weakness is relatively more ambiguous and open to varied interpretations than assessing materiality due to the lack of comprehensive authoritative guidance and a general framework. Therefore, assessing the likelihood of detecting a misstatement is a comparatively more complex task involving greater judgment and the evaluation of more ambiguous cues than that of assessing the magnitude of a misstatement.

3.3 The Effects of Perceived Message Ambiguity and Group Affiliation on Persuasion

The ambiguity of the message cues likely impacts the ability of the message source to effect persuasion. Psychological research finds that when message cues are more ambiguous,
and are more open to varied interpretation, individuals rely on heuristic processing and are more persuaded when the message is delivered by a more credible messenger (Chaiken and Maheswaran 1994). However, when message cues are less ambiguous, source credibility has limited impact on persuasion (Chaiken and Maheswaran 1994). These findings suggest that for messages with more varied interpretations, individuals will rely more on the message source to interpret the argument. Applying the results of Mackie et al. (1992), individuals will perceive in-group members as having higher credibility than they will out-group messengers and therefore, will be more persuaded by more ambiguous message cues delivered by in-group members. Thus, sources with which management identifies more (i.e., the IAF) will be more persuasive when the subject matter of the message is more subject to differential interpretation (i.e., more ambiguous).

Given that management likely has a better framework and more resources for assessing materiality than for assessing the likelihood of detecting a misstatement, they might find judgments related to the likelihood of a misstatement to be more open to interpretation than judgments related to materiality. In the context of a material weakness evaluation, I expect where the magnitude of the misstatement is high and the likelihood of detection just marginally meets the threshold of “reasonably possible,” management will find the evaluation of the control assessment to be more ambiguous and open to varied interpretations due to their focus on the likelihood of detection judgment. On the other hand, where the likelihood of detection is high and the magnitude of the misstatement just marginally meets the threshold of “materiality,” management will find the evaluation of the control assessment to be less ambiguous due to their focus on the misstatement magnitude judgment (see Figure 1 and Figure 2).
In keeping with effects of group affiliation in persuasion theories, I expect that the ambiguity of the message cue will moderate the effects of group affiliation on message persuasiveness in an assurance setting. That is, when management perceives the judgment to be more open to interpretation (i.e., ambiguous), they will be more persuaded by messages from in-group sources than by messages from out-group sources. Therefore, when the control deficiency evaluation involves more ambiguous message cues (i.e., more open to interpretation), it is likely that management will be more persuaded to accept the control assessment when the auditors rely on the client’s IAF than when the auditors do not rely on this function for control testing. This leads to my next hypothesis.

**H3:** *When the assessment of the control deficiency is more open to interpretation (ambiguous), management will be more persuaded to accept the auditors’ control assessment when the auditors rely on the client’s IAF than when the auditors do not rely on the IAF.*

Further, given the moderating effects of message cue ambiguity on persuasion, I expect that the likelihood of persuasion will be greatest when the message is more ambiguous and the message is communicated by an in-group source. That is, management will be more persuaded by the auditors’ control assessment when the judgment is more open to interpretation (i.e., ambiguous) and the auditors rely on the client’s IAF than when the judgment involved with the control assessment is less ambiguous. I expect this moderating effect of message source will diminish when the message is less ambiguous (Chaiken and Maheswaran 1994).

*Insert Figure 3 here*

*Insert Figure 4 here*
IV. METHOD

4.1 Participants

This study’s research question investigates the likelihood that auditors can persuade management to accept a material weakness control assessment. As such, accounting professionals who have responsibility over the ICFR audit, and who more frequently discuss accounting related issues with auditors make up the target participant pool for this study. Therefore, I obtain a convenience sample of accounting professionals who have experience evaluating internal controls over financial reporting and discussing financial statement issues with auditors to proxy my target participants and address the research questions.

I recruited participants from two state CPA societies located in the southeast US via their respective membership online discussion groups.\textsuperscript{16} I also retained the services of an academic research participant search firm with a participant pool spanning the US. Participants were required to be accounting professionals with experience performing internal controls assessments and discussing audit issues with auditors. Study materials were administered via the Internet using Qualtrics and participants were randomly assigned to experimental conditions (Wade and Tingling 2005). There was no difference in the allocation of participants from these recruiting sources across experimental conditions.\textsuperscript{17}

One hundred and fifteen participants completed my experimental instrument. Participants ranged from 21 to 72 years old, with the average age being 43 years old. Approximately 70\% of the participants were male and approximately 77\% were CPAs. Seventy-four percent reported they had practiced public accounting (auditing). Of the participants who

\textsuperscript{16} These states require members of their state CPA online groups to be registered CPAs with the state’s CPA regulatory agency.

\textsuperscript{17} Using a chi-square test, there is no statistical difference in the allocation of participants from these two recruiting sources across the four experimental conditions ($\chi^2[3] = 0.40, p = 0.94$ two-tailed).
practiced public accounting, the average time spent in this practice was nine years. Fifty percent of the participants reported that they had internal auditing experience. Participants with internal auditing experience reported an average of five years experience in the practice. Participants reported having average experience of nine years assessing internal controls and nine years discussing financial statement issues with auditors (see Table 1).

4.2 Experimental Design

To test my hypotheses, I conduct an experiment using a 2 X 2 between-subjects design in which I manipulate the auditors’ reliance on the IAF for internal control testing (rely or not rely), and the ambiguity of the control deficiency assessment (less ambiguous or more ambiguous). Using an ICFR control assessment setting, I measure managers’ willingness to accept the auditors’ control assessment as my dependent variable.

To develop the experimental instrument used in this study, I conducted pilot testing with 21 accounting professionals whose mean age was 43 and who had spent an average of five years in their current accounting role. Several participants were practicing controllers, CFOs, and SOX compliance officers in their company. Pilot participants had an average of four years experience performing internal controls assessments and discussing related issues with their auditors. Feedback garnered from the pilot was used to refine the experimental instrument so as to increase the salience of the manipulated variables, enhance the realism of the control deficiency scenario, and improve the clarity of the dependent variable related questions.

4.3 Procedures

Participants read a hypothetical case about an ICFR audit engagement. I adapted the case used in Stefaniak et al. (2012) and a material weakness scenario used in Appendix D of AS2
In this study, participants assumed the role of the CFO for Tango Sierra (Tango), a publicly-traded manufacturer of electronic equipment based in the United States. The CFO has responsibility for preparing the company’s financial statements and disclosing material weaknesses in internal controls. Tango has had consistent sales and income growth over the past several years, has retained the same external auditors for the past five years, and has received clean financial statement and ICFR opinions in prior audits. Participants were told that Tango has an IAF that is regarded as being of a high quality. Many of the internal auditors hold professional certifications (e.g., CPA, CIA) and are objective and competent in the auditing work they do. Auditors and the IAF have direct access to the Tango’s Audit Committee. Participants were also told that tests of internal controls for Sarbanes Oxley compliance reporting purposes are not performed by Tango’s IAF, rather such tests are performed by a separate Controls Testing department. Before describing the deficient control, the case provides participants with the definition of a material weakness including references to materiality and likelihood as two criteria specifically addressed in the definition provided in AS5.

The experimental instrument describes a scenario in which, at year-end, Tango’s auditors perform control testing for the ICFR audit. Tango has a standard sales contract, but sales personnel often modify the standard contract terms to grant unauthorized and unrecorded sales discounts to customers without the knowledge of AR personnel. Since AR personnel are unaware of the sales discounts, the entire sales amount is recorded as an outstanding balance on the AR aging and results in sales and AR overstatements.

The case indicates that auditors perform ICFR testing by either using Tango’s IAF as direct assistants (rely condition) or by using the auditors’ own staff (not rely condition) to carry

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18 The Securities and Exchange Commission published examples of material weakness control deficiency scenarios with the publication of PCAOB Auditing Standard No. 2 (2004).
out testing procedures. Based on the results of control testing, the auditors determine the magnitude of the potential misstatement as well as the likelihood that the misstatement would not be detected or prevented by the current controls. The description of these two factors form the bases for the manipulation of judgment ambiguity in this experiment. That is, in the Less Ambiguous condition, the case presents a scenario where the magnitude of the potential misstatement is marginal at 4.5% of pretax income (i.e., greater than “significant” but on the lower threshold of being material) and the likelihood that the misstatement is not detected/prevented is greater than “remote” at 70% (i.e., clearly “reasonably possible;” see Figure 2). Whereas, in the More Ambiguous condition, the case presents a scenario where the magnitude of the potential misstatement is greater than “significant” at 6% of pretax income (i.e., clearly material) and the likelihood that the misstatement is not detected/prevented is marginal at 25% (i.e., greater than “remote” but on the lower threshold of being “reasonably possible;” see Figure 2).¹⁹ To maintain the integrity of the experimental design, the control weakness meets the definition of a material weakness in both ambiguity conditions.

Participants were then shown an excerpt of the auditors working papers with information that reinforced the details presented in the case (see Appendix). Given that the control deficiency was discovered at year-end (Tango does not have time to perform remediation) and there are no compensating controls, the auditors assess the control deficiency as a material weakness. After reading the case materials, participants answered questions regarding their willingness to accept the auditors control assessment of material weakness. They also answered questions relating to their identification with the IAF and the auditors as well as manipulation check and demographic related questions.

¹⁹ More details regarding the Ambiguity conditions is provided under the Independent Variables section of the paper.
4.4 Independent Variables

To manipulate the ambiguity of the control deficiency assessment, I use different combinations of the two factors that interplay to define the severity of a control deficiency – (1) the materiality of a potential misstatement, and (2) the likelihood that a misstatement is not prevented / detected in the financial statements (AS5, PCAOB 2007; see Figure 1). For a control deficiency to be defined as a “material weakness,” it must meet the following criteria: (1) the potential misstatement must be material, and (2) the likelihood that the misstatement is not prevented / detected must be at least “reasonably possible” (AS5, PCAOB 2007).

Prior studies find that auditors, management and financial statement users use the rule-of-thumb of four to five percent of pretax income to assess materiality (see Messier et al. 2005 for a review). That is, misstatements with a magnitude lower than four percent of pretax income are generally considered to be immaterial; while misstatements greater than five percent of pretax income are generally considered to be material. I use this rule-of-thumb as the parameter to design the less / more ambiguous control assessment conditions.

Regarding the likelihood of not detecting or preventing a misstatement, prior research finds that the mean numerical probability threshold that corresponds to the transition from the probability phrase “remote” to “reasonably possible” is 16% (i.e., 16% is the mean numerical probability for the threshold between “remote” and “reasonably possible;” Harrison and Tomassini 1989). I use this specification as a guide in designing the less / more ambiguous control assessment conditions.

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20 Harrison and Tomassini (1989) used a sample of auditors to conduct their study. They also find an upper quartile average of 25% and a lower quartile average of 10% for this remote / reasonably possible threshold. Reimers (1992) finds there is agreement among auditors and MBA students on the numerical probability interpretation of probability phrases e.g., remote, reasonably possible.
As indicated in the prior literature, auditors and management alike have experience with (and there are resources in accounting standards) interpreting the materiality and have developed simple rules to aid in these determinations (Messier et al. 2005). As such, there is greater consensus surrounding the interpretation of material misstatements. Whereas, practitioners have limited frames of reference for processing the probability phrases used in control deficiency definitions (Bedard and Graham 2011; Asare and Wright 2012). Therefore, in general, assessing misstatement materiality is less open to varied interpretations (less ambiguous) than interpreting the likelihood scenarios associated with not detecting a misstatement (see Figure 2). Against this theoretical framework, I select a high numerical probability (70%) to reflect the likelihood that a misstatement would not be prevented or detected and a marginal measure for the magnitude of the potential misstatement (4.5% of pretax income) for the less ambiguous control deficiency assessment condition. By using this configuration, the judgment of whether this deficiency meets the definition of a material weakness is more focused on the “materiality” factor (i.e., whether the magnitude of this misstatement is material) since the assessment of whether the “likelihood” factor meets the criteria for material weakness is more salient (see point “B” in Figure 1). By increasing the salience of the “likelihood” factor as meeting the meeting the material weakness criteria, participants’ attention is channeled towards assessing the “materiality” factor which is on the margin in this condition. Determining whether the marginally material misstatement meets the criteria of a material weakness is a relatively less ambiguous determination for participants to make.

For the more ambiguous control deficiency assessment condition, I select a marginal numerical probability (25%) to reflect the likelihood that a misstatement would not be prevented or detected and a high measure for the magnitude of the potential misstatement (6% of pretax
income). By using this configuration, the judgment of whether this deficiency meets the
definition of a material weakness is more focused on the “likelihood” factor (i.e., whether the
likelihood is at least “reasonably possible”) since the assessment of whether the “materiality”
factor meets the criteria for material weakness is more salient (see point “A” in Figure 1). In this
condition, the materiality of the misstatement is greater than the conventional rule-of-thumb
whereas, the “likelihood” of not detecting the misstatement is on the margin of “reasonably
possible.” By increasing the salience of the “materiality” factor meeting the criteria,
participants’ attention is channeled towards the “likelihood” factor. Making the determination of
whether the marginal “likelihood” factor meets the criteria for a material weakness is a relatively
more ambiguous determination for participants to make (Figure 2).

I consulted with three ex-Big Four financial statement auditors who confirmed that the
rule-of-thumb of four to five percent of pretax income is currently and widely used in practice by
auditors and management as a general guideline for materiality. These prior Big Four auditors
have extensive experience with assessing internal controls and confirmed that the likelihood
probabilities selected (i.e., 25% and 70%) were reasonable estimates for the intended
manipulation and experimental conditions.

To manipulate auditor reliance on the client’s IAF, in the hypothetical case, I indicate
whether or not the auditors received control testing assistance from the client’s IAF. That is,
control testing was performed by the IAF as direct assistants to the auditors (rely) or performed
by the auditors’ staff only (not rely).

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21 Each of the ex-auditors have over seven years of public accounting and internal controls experience in multi-
national and publicly traded companies. Two of the three ex-auditors consulted have significant public accounting
experience and currently hold leadership accounting roles at publicly traded companies (including Fortune 500
companies).
4.5 Dependent Variable and Group Identification

After participants read the hypothetical experimental case and the auditors’ control assessment, they rated their willingness to accept the auditors’ control assessment of “material weakness.” This rating serves as the primary dependent variable and is measured on a seven-point scale with the first option being “Very Unwilling” and the seventh option being “Very Willing.”22 Consistent with prior studies on auditor negotiations (e.g., Hatfield et al. 2008), I use this measure of “willingness” to proxy participants’ control assessment persuasion, where a higher willingness rating suggests that participants will be more persuaded to accept the auditors’ control assessment; and a lower “willingness” rating suggests that participants will be less persuaded to accept the auditors’ control assessment.

Participants then completed an adapted version of Bamber and Iyer’s (2007) Organizational Identification Scale. I modify the identification questions to measure participants’ within-subjects identification with Tango’s internal auditors and with Tango’s external auditors (see Table 2 for the within-subjects identification questions). That is, I ask participants of their agreement via five statements that measured their group identification with Tango’s IAF (while still assuming their role as Tango’s CFO). I use a similar set of statements to measure participants’ group identification with Tango’s auditors.23 I use a seven-point scale to measure participants’ agreement with the statements (with the first option being “Strongly Disagree” and the seventh option being “Strongly Agree”24). I compare the responses to these two sets of statements to determine whether participants’ have a higher group identification with the IAF than they do the auditors. The mean scores from each set of statements comprise management’s

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22 The response options were numerically coded such that “Very Unwilling” = 1 and “Very Willing” = 7.
23 I randomize the order in which each set of questions is presented to participants (i.e., IAF first or auditors first).
24 The response options were numerically coded such that “Strongly Disagree” = 1 and “Strongly Agree” = 7.
group identification with their IAF and auditors. (See Figure 5 for a summary of hypotheses, theoretical constructs, and variable measures).

V. RESULTS

5.1 Manipulation Checks

To examine whether participants attended to the IAF reliance manipulation, I asked them to respond with “yes” or “no” to the question of whether Tango’s IAF assisted Jones Auditors (Tango’s external auditors) with AR control testing. Eighty-one percent of participants correctly answered this question in accordance with their reliance condition. Ninety-one percent of participants correctly identified the estimated misstatement magnitude amount referenced in their experimental condition. Ninety percent of participants also correctly indicated the approximate likelihood that a misstatement is not detected according to their experimental condition.

Given the complex nature of internal control assessments (Earley et al. 2008; Bedard and Graham 2011) and my theoretical predictions, I focus data analyses on participants who attended to the details of the case and correctly recalled the experimental manipulations (Heppner et al., 2007). That is, I analyze the results of the 82 participants who attended to and recalled both the auditor reliance and assessment ambiguity manipulations. There is no statistical difference between the demographic profiles of the 115 participants who completed all study materials and the 82 participants who correctly recalled the experimental manipulations (see Table 1). I compare participants’ demographic profiles across the four experimental conditions. With the exception of having prior experience practicing public accounting, the demographic profiles of the participants are the same across conditions.  

\[25\]  With the exception of Prior Experience in Public Accounting (p = 0.05 two-tailed), mean demographic measures (see Table 1) are the same across experimental cells (p values > 0.15 two-tailed). I control for Prior Experience in Public Accounting in all data analyses.
To investigate whether participants perceived the Less (More) Ambiguous experimental conditions as being less (more) open to interpretation, I examine participants’ likelihood to challenge the auditors’ control assessment in these conditions. I expect that participants will be more willing to challenge auditors’ control assessment when the control assessment process is perceived to be more ambiguous and more open to interpretation. To this end, I ask participants to indicate the likelihood that they will “challenge the external auditor’s control assessment of material weakness.” This rating is measured on a seven-point scale with the first option being “Very Unlikely” and the seventh option being “Very Likely.”

I find that participants in the More Ambiguous condition indicated that they were more likely to challenge the auditor’s control assessment than participants in the Less Ambiguous condition (5.53 vs. 4.68, respectively; p = 0.03 one-tailed; not tabled). This finding lends support to the theoretical development used in this study and also extends accounting research on the ambiguity involved in assessing internal control deficiencies.

Further analysis finds that participants were manipulated in the Ambiguity conditions by the differences in “likelihood” parameters but not by the “materiality” parameters. Using a seven point scale, participants’ assessment of the likelihood that a misstatement was not prevented / detected is statistically different between the Ambiguous conditions in keeping with the intended manipulation (means = 4.37 [more ambiguous] vs. 5.05 [less ambiguous]; p = 0.03 two-tailed; not tabled). However, there is no statistical difference in participants’ assessments between the two Ambiguity conditions when asked of their perceptions of the materiality of the

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26 The response options are numerically coded such that “Very Unlikely” = 1 and “Very Likely” = 7.
27 The response options are numerically coded such that “Very Unlikely” = 1 and “Very Likely” = 7.
potential AR misstatement\textsuperscript{28} (means = 4.08 [more ambiguous] vs. 3.75 [less ambiguous]; p = 0.23 two-tailed; not tabled).

5.2 Data Analyses

I find evidence to support H1 which predicts that management has higher group identification with their IAF than they do with the auditors.\textsuperscript{29} Specifically, identification ratings for the IAF are higher than those for the auditor (means = 5.28 vs. 3.71, respectively; p < 0.01 one-tailed; see Table 2).\textsuperscript{30} On a per question pair basis, I also find that identification ratings for the IAF are higher than those corresponding to the auditor which lends further support to this prediction (all p < 0.01; see Table 2). These results suggest that management has greater identification with their IAF as in-group members than they do with their auditors. I further investigate whether management identification with their IAF and auditors differ with auditor reliance on the IAF. Results indicate that auditor IAF reliance does not affect management identification with their IAF (means = 5.39 [rely] vs. 5.15 [not rely]; p = 0.18 two-tailed; not tabled). However, I find moderate support that management identifies more with their auditors when the auditors rely on the client’s IAF than when the auditors do not (mean = 3.93 [rely] vs. 3.47 [not rely]; p = 0.07 two-tailed; not tabled). These results extend Stefaniak et al. (2012) and add to the accounting literature by providing evidence that management has greater affiliation with their IAF than their auditors. Further, by relying on the client’s IAF, auditors may be able to increase management’s identification with them. Research finds that management’s increased

\textsuperscript{28} Participants’ assessments were made on a seven point scale on a scale with 1 = Less Material, and 7 = More Material.

\textsuperscript{29} The Cronbach’s alpha of the Organizational Identification scale is 0.81 suggesting the set of items in the scale reliably measures a single unidimensional latent construct.

\textsuperscript{30} Statistical inferences are unchanged when using the entire pool of 115 participants (means = 5.28 [IAF] vs. 3.66 [auditors]; p < 0.01 one-tailed; not tabled).
identification with auditors allows auditors to enhance future business relationships with the client (e.g., Iyer et al. 1997).

H2 predicts that management will be more willing to accept the auditors’ control assessments when the auditors rely on the company’s IAF than when the auditors do not. Contrary to my expectations, I do not find evidence that, in general, management is more willing to accept auditors’ control assessments when auditors rely on their IAF for audit testing assistance (means = 4.30 [rely] vs. 4.36 [not rely]; p = 0.36 one-tailed; Table 4).\footnote{Additional data analysis support this finding. Employing a chi-square test suggests IAF reliance has a moderate effect on management’s willingness to accept auditors’ assessments ($\chi^2 [6] = 8.92, p = 0.08$ one-tailed). Kruskal-Wallis tests indicate no effect of reliance on managements’ willingness ($H[1] = 0.001; p = 0.48$ one-tailed). Similarly, Mann-Whitney tests also indicate that management’s willingness to accept the auditors’ control assessment does not differ based on auditors’ reliance on the client’s IAF (median = 5.00 [rely] vs. 5.00 [not rely]; $U = 834.50; z = -0.038; p = 0.48$ one-tailed; $r = -0.004$).}

Based on psychological research on group identification and persuasion (e.g., Mackie et al. 1992), I expect that management will find audit testing results to be more credible when auditors rely versus do not rely on the IAF. I find empirical support that management perceives internal controls testing results to be more credible when auditors rely on their IAF than when auditors do not. When asked to indicate their agreement with the statement “In your opinion, the internal controls testing results were credible,”\footnote{Using a seven point scale to capture responses where 1 = Strongly Disagree and 7 = Strongly Agree.} participants’ agreement rating was higher when the auditors relied on the IAF for internal controls testing than when the auditors did not (means = 5.37 [rely] vs. 4.92 [not rely]; p = 0.03 two-tailed; not tabled). This finding lends support to the theoretical development of H2.\footnote{Inferences for hypotheses testing remained the same after controlling for this Audit Testing Credibility variable.} Further, these findings provide evidence for the practical implications of relying on the client’s IAF for audit testing. Relying on the client’s IAF can improve the credibility of the auditors’ testing results which may enhance communications between auditors and management. Additional analysis provides evidence that management also perceives IAF competence to be higher when auditors rely on the IAF for audit testing (means =
5.40 [rely] vs. 4.51 [not rely]; p < 0.01 two-tailed; not tabled) and perceives the IAF to be more objective when there is auditor IAF reliance (mean = 5.49 [rely] vs. 4.69 [not rely]; p < 0.01 two-tailed; not tabled). Notwithstanding, these management perceptions of audit test result credibility, IAF competence, and IAF objectivity do not alter the effects of auditor IAF reliance on management’s willingness to accept auditors’ assessments.\(^\text{34}\)

While there is limited support for a main effect of IAF reliance on auditor persuasion, evidence suggests that management’s willingness to accept auditors’ control assessments is conditional upon two factors - auditors’ reliance on the client’s IAF as well as the ambiguity involved in evaluating the control deficiency. I explore this evidence in the evaluation of H3. In H3, I predict that management will be more persuaded to accept the auditors’ control assessment when the control assessment is more ambiguous and auditors rely on the IAF than when they do not. Data suggests that auditors’ likelihood of persuading management is conditional upon reliance on the client’s IAF and the ambiguity involved in assessing the control deficiency (i.e., disordinal interaction between auditors’ reliance on the client’s IAF and control assessment ambiguity; p = 0.04 one-tailed; Table 4; Figure 6).\(^\text{35}\) When the evaluation of the control deficiency is more ambiguous, management is more willing to accept the auditors’ control assessment when auditors rely on the IAF than when they do not (means = 4.47 vs. 3.84, respectively; p = 0.10 one-tailed; Table 3). This finding is consistent with prior psychological studies (e.g., Chaiken and Maheswaran 1994) that find that associations with a perceived in-

34 Controlling for management’s perception of audit test result credibility, IAF competence, and IAF objectivity do not change the statistical inference that auditor reliance on IAF does not have a main effect on management’s willingness to accept auditors’ control assessments (p = 0.49 one-tailed).

35 Results of an ordinal logistic regression support this finding. The coefficient on the interaction of IAF Reliance*Ambiguity is 1.25 (positive) and statistically significant (p = 0.05 one-tailed). To provide additional support for this finding, I examine different configurations of participants who participated in the study. Interaction results are statistically significant for participants who pass one or more of the experimental manipulations. For example, participants who pass (1) the IAF Reliance manipulation only (p = 0.04, one-tailed); (2) the IAF Reliance and “Materiality” manipulations (p = 0.02, one-tailed); (3) both IAF Reliance and the “Likelihood” manipulations (p = 0.05, one-tailed); (4) both Ambiguity manipulations (p = 0.07, one-tailed).
group improves the persuasiveness of messages that are more open to interpretation. However, these persuasiveness effects seem to disappear when the evaluation of the control deficiency is less open to interpretation. When the evaluation of the control deficiency is less ambiguous, management appears to be more willing to accept the auditors’ control assessment when auditors do not rely on the IAF than when they do (means = 4.85 vs. 4.17, respectively; p = 0.10 one-tailed; Table 3). These findings suggest that relying on the client’s IAF improves auditors’ likelihood of persuading management to accept an adverse control assessment when the evaluation of the control is more open to interpretation but not when the evaluation is less open to interpretation.

Analysis of median values for management’s willingness to accept auditors’ control assessments sheds more light on the interactive effects of IAF reliance and judgment ambiguity on the persuasiveness of auditors’ messages. In the more ambiguous condition, test of differences between Rely and Not Rely median scores provide moderately more support that relying on the client’s IAF influences management to be more persuaded to accept auditors’ control assessments than not relying on the IAF (medians = 5.00 [rely] vs. 4.00 [not rely], p = 0.12 one-tailed; not tabled). However, in the less ambiguous condition, tests of differences between Rely and Not Rely median scores suggest that IAF reliance has significantly less effect on auditor persuasion (medians = 4.00 [rely] vs. 5.00 [not rely], p = 0.43 one-tailed; not tabled).

The pattern of auditor persuasion observed in the Less Ambiguous condition may be due to a combination of the diminished effects of in-group sources on persuasion as well as management’s perception of the auditors. Chaiken and Maheswaran (1994) find that when the message is less ambiguous, the persuasion effects of in-group sources disappear. That appears to be the case in this setting. That is, when the interpretation of the control deficiency is less
ambiguous, auditors’ reliance on the IAF does not increase persuasion. In fact, reliance on the IAF appears to have the opposite effect. That is, management appears to penalize reliance on the IAF in this setting. Interviews with accounting practitioners suggest that management may interpret the breakdown in controls in the less ambiguous condition to be of such an obvious nature that a reasonable IAF would have detected and remediated it before year-end. In this way, relying on the IAF does not increase persuasion, rather it increases the salience that the IAF did not find and remediate this “obvious” control deficiency which has now resulted in an adverse ICFR opinion. Potentially, IAF reliance in a less ambiguous control deficiency environment may induce management to engage in counterfactual reasoning about the existence of the control deficiency which may counteract the effects of in-group persuasion. Notwithstanding this potential explanation, the effects of IAF reliance on management persuasion in less ambiguous control deficiency settings may be an area for future research.

VI. CONCLUSIONS AND IMPLICATIONS

This study aims to provide evidence regarding auditor reliance on their client’s IAF as a persuasion tactic. I use psychological theories related to group affiliation and persuasion to predict that management will have higher identification with their IAF than with auditors and be more persuaded to accept auditors’ control assessment when auditors rely on their IAF than when auditors do not. Additionally, I predict that the effects of such persuasion will be greater when the underlying control deficiency assessment is more open to interpretation. Using a participant group consisting of accounting professionals with experience performing internal controls assessments, I find evidence to some of my predictions. Specifically, I find that management has higher group identification with their IAF than they do with auditors and perceive control testing results to be more credible when auditors rely on their IAF than when
auditors do not. Further, management is more willing to accept auditor ascribed control deficiency assessments when auditors rely on their IAF for control testing and the judgment involved in evaluating the control deficiency is more conducive to varied interpretations. However, these persuasive effects disappear when the control assessment is less open to interpretation. In fact, when the control assessment is less ambiguous, not relying on the client’s IAF may be a more persuasive tactic for auditors.

These findings also extend prior studies on auditor reliance on the client’s IAF as well as studies focused on auditor negotiations by providing evidence that relying on the client’s IAF can enhance auditors’ persuasion abilities in internal control over financial reporting audit contexts. The persuasive effects of relying on the client’s IAF in settings where the control assessment is more ambiguous has significant implications for practice as it is likely that auditors’ internal control assessments will be more challenged during client negotiations when control deficiency issues are regarded as more open to different interpretations. Where such contexts may be anticipated, auditors can increase their negotiating leverage by engaging the client’s IAF in audit testing. Hence, relying on the client’s IAF for direct assistance with audit testing may aid auditors in having more effective discussions and negotiation exchanges with their client.

Findings from this study also suggest that auditors can increase management’s identification with them by relying on the client’s IAF for audit testing. Prior studies find that when management identifies more with their auditor, they are more likely to engage in future business dealings with the auditor (Iyer et al. 1997).

This study provides theoretical and practical insights for academics, accounting regulators and practitioners. While prior research has investigated negotiation factors such as the
effects of a contentious versus a collaborative negotiation approach (Honglin et al. 2011), a reciprocity strategy (Bame-Aldred and Kida 2007; Sanchez et al. 2007), integrative versus distributive strategies (Gibbins et al. 2010), the effects of auditor concessions (Ng and Tan 2003), this study investigates and finds evidence of the effectiveness of using the client’s IAF in negotiations. This study contributes to this literature by providing evidence that relying on the client’s IAF can be an effective tool auditors use to persuade management. Greater auditor persuasion in an internal control over financial reporting context may result in more conservative financial reporting, greater disclosure of material weaknesses (Lin et al. 2011), and a more efficient auditing process (Sanchez et al. 2007). Further, this study provides insights to standard setters as they prescribe guidance for how auditors utilize the client’s IAF during the financial statement assurance process.

Future research may investigate the effects of a less ambiguous control assessment environment on auditors’ likelihood of persuading management. There may be specific characteristics about such an environment that eliminate the in-group effect on persuasion. Future studies may also examine other ways in which the coordinating activities with the IAF may benefit the auditor-client negotiation process e.g., audit planning and risk assessment activities. Future research may also investigate the effects of in-group persuasion in other accounting contexts where complex judgments are involved.
REFERENCES


Figure 1.
Graphical Presentation of Judgment Ambiguity Constructs in Material Weakness Control Deficiency (Points A and B)

<table>
<thead>
<tr>
<th>Materiality Magnitude</th>
<th>Materiality</th>
<th>Likelihood of Misstatement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not material but significant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not material or significant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Judgment Ambiguity Construct Definitions:
A- More ambiguous assessment:
   - Marginal likelihood that misstatement is not detected or prevented (25%);
   - High magnitude of misstatement materiality (6% of pretax income).
B- Less ambiguous assessment:
   - High likelihood that misstatement is not detected or prevented (70%);
   - Marginal magnitude of misstatement materiality (4.5% of pretax income).
**Figure 2**  
*Illustration of Relative Ambiguity in Assessing “Materiality” versus “Likelihood”*

### Relative Ambiguity in Assessing Materiality vs. Likelihood for Material Weakness Control Deficiency

<table>
<thead>
<tr>
<th>Magnitude of Misstatement: Material</th>
<th>Likelihood of Misstatement: (Probable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(High)</td>
<td>Open to Interpretation / Ambiguity</td>
</tr>
<tr>
<td></td>
<td>Open to Interpretation / Ambiguity</td>
</tr>
<tr>
<td></td>
<td>Likelihood of Misstatement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Magnitude of Misstatement: Material / Significant</th>
<th>Likelihood of Misstatement: (Reasonably Possible / Remote)</th>
</tr>
</thead>
</table>

**Ambiguity in Assessing Materiality Factor of Material Weakness (MW) Control Deficiency (upper / lighter shaded area):**

- As the magnitude of misstatement crosses threshold from Significant to Material (right to left), ambiguity in assessing MW control deficiency is greater. When magnitude of misstatement is highest, ambiguity in assessing MW control deficiency is lower.

**Ambiguity in Assessing Likelihood Factor of Material Weakness (MW) Control Deficiency (lower / darker shaded area):**

- As the likelihood of misstatement crosses threshold from Remote to Reasonably Possible (right to left), ambiguity in assessing MW control deficiency is greater. When likelihood of misstatement is highest, ambiguity in assessing MW control deficiency is lower.
Figure 3
Graphical Illustration of Theory

Management’s Group Identification (H1)

Message Source: In-Group vs. Out-Group
[Auditor IAF Reliance: Rely vs. Not Rely] (H2)

Judgment Ambiguity: (Less Ambiguous vs. More Ambiguous) (H3)

Auditors’ Ability to Persuade Management
H3 predicts an interaction between auditor reliance on the IAF and the perceived ambiguity of the control deficiency evaluation on management’s likelihood to be persuaded by the auditors’ control assessment.

Variable Definitions
- **Rely on IAF** – The external auditors rely on the client’s internal audit function for assistance with control testing.
- **Not Rely on IAF** - The external auditors do not rely on the client’s internal audit function for assistance with control testing.
- **Less Ambiguous Judgment** – The evaluation of the control deficiency is less ambiguous: likelihood of detection is marginal and the magnitude of the misstatement is high.
- **More Ambiguous Judgment** – The evaluation of the control deficiency is more ambiguous: likelihood of detection is high and the magnitude of the misstatement is marginal.
- **Auditors’ Ability to Persuade Management** – Likelihood that management will be persuaded to accept the auditor’s material weakness control assessment.
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Independent Variable Construct</th>
<th>Independent Variable Measure</th>
<th>Dependent Variable Construct</th>
<th>Dependent Variable Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Management will have higher group identification with the IAF than they will with the auditors.</td>
<td>Internal Audit Function (IAF)</td>
<td>Internal Audit Function (IAF)</td>
<td>Management’s Identification with IAF / Auditors</td>
<td>Agreement with statement using a seven point scale:</td>
</tr>
<tr>
<td></td>
<td>External Auditors (Auditors)</td>
<td>External Auditors (Auditors)</td>
<td></td>
<td>When someone criticizes Tango’s internal audit function / external auditor, it feels like a personal insult.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tango’s internal audit function / external auditor successes are my successes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>When I talk about Tango’s internal audit function / external auditor, I usually say “We” rather than “They”.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I am very interested in what others think about Tango’s internal audit function / external auditors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>When someone praises Tango’s internal audit function / external auditors, it feels like a personal compliment.</td>
</tr>
<tr>
<td>H2: Management will be more persuaded by the auditors’ control assessments when the auditors rely on the client’s IAF than when they do not.</td>
<td>Auditors’ rely or not rely on the client’s IAF for control testing assistance</td>
<td>Rely on IAF: Jones Auditors explains that they relied on your in-house IAF to perform AR controls testing. Not Rely on IAF: Jones Auditors explains that they did not rely on your</td>
<td>Auditor Persuasion</td>
<td>Indication of willingness on a seven point scale:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>As Tango’s CFO, how willing are you to accept the external auditor’s control assessment of “material weakness?”</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>Independent Variable Construct</td>
<td>Independent Variable Measure</td>
<td>Dependent Variable Construct</td>
<td>Dependent Variable Measure</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>H3: When the assessment of the control deficiency is more open to interpretation (ambiguous), management will be more persuaded to accept the auditors’ control assessment when the auditors rely on the client’s IAF than when the auditors do not rely on the IAF.</td>
<td>Auditors’ rely or not rely on the client’s IAF for control testing assistance</td>
<td>IAF to perform AR controls testing.</td>
<td>Auditor Persuasion</td>
<td>Indication of willingness on a seven point scale: As Tango’s CFO, how willing are you to accept the external auditor’s control assessment of “material weakness?”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambiguity in assessment of the control deficiency</td>
<td>Rely on IAF: Jones Auditors explains that they relied on your in-house IAF to perform AR controls testing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Rely on IAF: Jones Auditors explains that they did not rely on your IAF to perform AR controls testing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>More Ambiguous: The magnitude of a possible misstatement resulting from this breakdown in controls is approximately 6% of income before taxes. The likelihood that there is a misstatement that is not prevented / detected, as a result of this internal control deficiency, is estimated at 25%.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less Ambiguous: The magnitude of a possible misstatement resulting from this breakdown in controls is approximately 4.5% of income before taxes. The likelihood that there is a misstatement that is</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis</td>
<td>Independent Variable Construct</td>
<td>Independent Variable Measure</td>
<td>Dependent Variable Construct</td>
<td>Dependent Variable Measure</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>not prevented / detected, as a result of this internal control deficiency, is estimated at 70%.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 6
Evidence from Data Collection: H2 and H3

Management’s Willingness to Accept Auditors’ Control Assessment Auditors’ (dependent variable)

Variable Definitions
- Rely on IAF – The external auditors rely on the client’s internal audit function for assistance with AR internal control testing.
- Not Rely on IAF - The external auditors do not rely on the client’s internal audit function for assistance with AR internal control testing.
- Less Ambiguous Judgment – The evaluation of the control deficiency is less ambiguous: likelihood of detection is high and the magnitude of the misstatement is marginal.
- More Ambiguous Judgment – The evaluation of the control deficiency is more ambiguous: likelihood of detection is marginal and the magnitude of the misstatement is high.
- Management’s Willingness to Accept the Auditors’ Control Assessment (Dependent variable): Participants’ response to the following statement “As Tango’s CFO, how willing are you to accept the external auditor’s control assessment of ‘material weakness?’” Participants indicate their willingness using a seven-point scale where 1 = Very Unwilling, 4=Neither Unwilling nor Willing, and 7= Very Willing.
Table 1
Participant Demographics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>All Participants Mean (Standard deviation)</th>
<th>Participants in Data Analyses Mean (Standard deviation)</th>
<th>t value&lt;sup&gt;1&lt;/sup&gt;</th>
<th>p value&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (n = 115: range 21 to 72 years) (n = 82: range 21 to 71 years)</td>
<td>43 (12)</td>
<td>41 (11)</td>
<td>-0.93</td>
<td>0.35</td>
</tr>
<tr>
<td>Gender: Male</td>
<td>70%</td>
<td>70%</td>
<td>-0.01</td>
<td>0.99</td>
</tr>
<tr>
<td>CPA designation</td>
<td>77%</td>
<td>74%</td>
<td>-0.34</td>
<td>0.73</td>
</tr>
<tr>
<td>Prior experience in public accounting</td>
<td>74%</td>
<td>71%</td>
<td>-0.49</td>
<td>0.62</td>
</tr>
<tr>
<td>For participants with prior public accounting experience, time spent in practice (years)</td>
<td>9.8 (9.6)</td>
<td>8.6 (8.2)</td>
<td>-0.78</td>
<td>0.43</td>
</tr>
<tr>
<td>Prior experience in internal auditing</td>
<td>50%</td>
<td>52%</td>
<td>0.27</td>
<td>0.78</td>
</tr>
<tr>
<td>For participants with prior internal auditing experience, time spent in practice (years)</td>
<td>5.0 (3.6)</td>
<td>5.1 (3.7)</td>
<td>0.11</td>
<td>0.91</td>
</tr>
<tr>
<td>Internal controls experience</td>
<td>9.5 (9.2)</td>
<td>9.5 (9.2)</td>
<td>-0.05</td>
<td>0.95</td>
</tr>
<tr>
<td>Experience discussing financial statement audit issues with auditors</td>
<td>9.4 (9.0)</td>
<td>9.5 (9.6)</td>
<td>0.07</td>
<td>0.94</td>
</tr>
<tr>
<td>n</td>
<td>115</td>
<td>82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes
1 Test of difference between means of 155 participants and 82 participants
2 p value is two-tailed
### Table 2
**Group Identification Scale**
Analyzed Data Sample (n=82)

<table>
<thead>
<tr>
<th>Identification Question&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Internal Auditors&lt;sup&gt;b&lt;/sup&gt;</th>
<th>External Auditors&lt;sup&gt;b&lt;/sup&gt;</th>
<th>p-value&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>When someone criticizes Tango’s <strong>internal audit function / external auditor</strong>, it feels like a personal insult.</td>
<td>4.87 (1.57) [7.00] {1.00}</td>
<td>3.17 (1.66) [7.00] {1.00}</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Tango’s <strong>internal audit function / external auditor</strong> successes are my successes.</td>
<td>5.48 (1.40) [7.00] {1.00}</td>
<td>3.56 (1.81) [7.00] {1.00}</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>When I talk about Tango’s <strong>internal audit function / external auditor</strong>, I usually say “We” rather than “They”.</td>
<td>4.98 (1.65) [7.00] {1.00}</td>
<td>2.72 (1.81) [7.00] {1.00}</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>I am very interested in what others think about Tango’s <strong>internal audit function / external auditors</strong>.</td>
<td>5.73 (1.04) [7.00] {3.00}</td>
<td>5.33 (1.30) [7.00] {2.00}</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>When someone praises Tango’s <strong>internal audit function / external auditors</strong>, it feels like a personal compliment.</td>
<td>5.37 (1.45) [7.00] {1.00}</td>
<td>3.79 (1.61) [7.00] {1.00}</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5.28 (1.12) [7.00] {2.20}</td>
<td>3.71 (1.21) [6.80] {1.80}</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

<sup>a</sup> Measured on a seven-point scale with 1= “Strongly Disagree” and 7= “Strongly Agree”

<sup>b</sup> Mean, (Standard Deviation), [Maximum], {Minimum}

<sup>c</sup> p-values are one-tailed.
Table 3
Variable Descriptive Statistics for Management’s Willingness to Accept the Auditors’ Control Assessment
Auditor Reliance and Judgment Ambiguity (H2 and H3)
Mean, [Median] and (Standard Deviation)

Management’s Willingness to Accept the Auditors’ Control Assessment

<table>
<thead>
<tr>
<th></th>
<th>Rely on IAF(^2)</th>
<th>Not Rely on IAF(^3)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Ambiguous Judgment(^4)</td>
<td>4.17 [4.00]</td>
<td>4.85 [5.00]</td>
<td>4.48 [5.00]</td>
</tr>
<tr>
<td></td>
<td>(1.83)</td>
<td>(1.66)</td>
<td>(1.77)</td>
</tr>
<tr>
<td>n = 24</td>
<td></td>
<td>n = 20</td>
<td>n = 44</td>
</tr>
<tr>
<td>More Ambiguous Judgment(^5)</td>
<td>4.47 [5.00]</td>
<td>3.84 [4.00]</td>
<td>4.16 [5.00]</td>
</tr>
<tr>
<td></td>
<td>(1.42)</td>
<td>(1.64)</td>
<td>(1.55)</td>
</tr>
<tr>
<td>n = 19</td>
<td></td>
<td>n = 19</td>
<td>n = 38</td>
</tr>
<tr>
<td>Total</td>
<td>4.30 [5.00]</td>
<td>4.36 [5.00]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.65)</td>
<td>(1.70)</td>
<td></td>
</tr>
<tr>
<td>n = 43</td>
<td></td>
<td>n = 39</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Management’s Willingness to Accept the Auditors’ Control Assessment (Dependent variable): Participants’ response to the following statement “As Tango’s CFO, how willing are you to accept the external auditor’s control assessment of “material weakness?” Participants indicate their willingness using a seven-point scale where 1 = Very Unwilling, 4=Neither Unwilling nor Willing, and 7= Very Willing.

\(^2\) Rely on IAF – The external auditors rely on the client’s internal audit function for assistance with AR internal control testing.

\(^3\) Not Rely on IAF - The external auditors do not rely on the client’s internal audit function for assistance with AR internal control testing.

\(^4\) Less Ambiguous Judgment – The evaluation of the control deficiency is less ambiguous: likelihood of detection is high and the magnitude of the misstatement is marginal.

\(^5\) More Ambiguous Judgment – The evaluation of the control deficiency is more ambiguous: likelihood of detection is marginal and the magnitude of the misstatement is high.
Table 4

Test of Hypothesis H2 and H3
ANOVA of Management’s Willingness to Accept the Auditors’ Control Assessment

<table>
<thead>
<tr>
<th>Factor</th>
<th>Df</th>
<th>Sum of Squares</th>
<th>F</th>
<th>p-value&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Public Accounting Experience</td>
<td>1</td>
<td>7.162</td>
<td>2.65</td>
<td>.05</td>
</tr>
<tr>
<td>Reliance on IAF</td>
<td>1</td>
<td>0.32</td>
<td>0.12</td>
<td>.36</td>
</tr>
<tr>
<td>Judgment Ambiguity</td>
<td>1</td>
<td>1.11</td>
<td>0.41</td>
<td>.26</td>
</tr>
<tr>
<td>Reliance on IAF*Judgment Ambiguity</td>
<td>1</td>
<td>8.42</td>
<td>3.11</td>
<td>.04</td>
</tr>
<tr>
<td>Error</td>
<td>77</td>
<td>207.98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes
<a>p-value is one-tailed</a>

Variable definitions:
As defined in Table 3
Appendix

Experimental Instrument (Qualtrics online screen shots)

All participants see the Informed Consent screens below.
Participants who select the option to exit the study are directed to the screen below.

Participants who indicate they would like to continue to the study are directed to the screen below.
Participants who are randomly assigned to the Rely / More Ambiguous condition see the following screens:

[Image of the first screen]

"Your internal audit function (IAF) at Tango is in-house. That is, all of your internal auditors are employees of Tango. Your IAF is of a high quality and is competent as many of these internal auditors have professional certifications e.g., CPA, CIA, etc. Your internal auditors have many years of prior experience performing internal controls and financial statement audits. They are knowledgeable about Tango’s accounting and business operations and have worked for Tango for many years.

Both the external auditors and your internal audit function report to and have direct access to the Audit Committee of Tango’s Board of Directors.

[Progress bar and next button]

[Image of the second screen]

"External Auditor Reliance on the Client’s Internal Audit Function (IAF)

Auditing standards give external auditors the option to rely (use) on a client’s IAF to help perform testing for the internal controls over financial reporting (ICFR) audit provided the function meets certain criteria. Jones Auditors evaluated and determined that your IAF meets the criteria laid out in the auditing standards. That is, your IAF is sufficiently competent and objective to assist the external auditors in year-end ICFR audit testing.

Any decision by the external auditors to rely on the client’s IAF in year-end ICFR audit testing is strictly optional and is not required by auditing standards – even if the IAF meets the criteria outlined in the standards. Further, the external auditors’ decision whether or not to rely on the your IAF for internal controls testing has no impact on audit fees or on the external auditors’ perceived quality of your IAF.

[Progress bar and next button]"
Internal Controls Over Financial Reporting (ICFR) and Sarbanes-Oxley (SOX) Act of 2002

Accounting regulations (i.e., SOX Section 302) require that CFOs conduct their own testing to determine whether their company’s internal controls are operating effectively. At Tango, internal controls testing is not conducted by your internal audit function for SOX reporting purposes. Rather, Tango has a separate Controls Testing department that performs all internal controls testing and reports their conclusions to you, the CFO.

There are three classifications for deficient internal controls with the most severe being a “material weakness.” A material weakness is a deficiency in internal controls, such that there is a reasonable possibility that a material misstatement of the company’s financial statements will not be prevented or detected on a timely basis. Therefore, there are two key requirements to consider for a material weakness assessment:

1. The magnitude of a potential misstatement is material; and
2. The likelihood that the misstatement is not prevented / detected is at least “reasonably possible” (in other words, the likelihood is more than “remote”).

Unlike the other two classifications of internal control deficiencies, detected material weaknesses that are not remediated by year-end result in the external auditors issuing an adverse opinion on the company’s ICFR audit.

Companies do not want to receive an adverse ICFR audit opinion because it can trigger negative reactions from creditors and investors (e.g., decreased share prices, increased management turnover).

Tango’s Tests of Internal Controls over Accounts Receivable

Jones Auditors, Tango’s external auditor, is assessing the operating effectiveness of controls over the accounts receivable (AR) processes as part of the Internal Controls Over Financial Reporting (ICFR) audit.

Tango has a standard sales contract, but sales personnel occasionally modify the standard contract terms. Sales personnel occasionally grant unauthorized and unrecorded sales discounts to customers without the knowledge of AR personnel. Since AR personnel are unaware of the sales discounts, the entire sales amount is recorded as an outstanding balance on the AR aging and results in sales and AR overstatements. Customers, having received a sales discount, deduct the discount amounts when paying their invoices.

The external auditors explain that the magnitude of a possible misstatement resulting from this breakdown in controls is approximately 6% of income before taxes.

Further, the likelihood that there is a misstatement that is not prevented / detected, as a result of this internal control deficiency, is estimated at 25%.
Since this control deficiency was detected at year-end, Tango does not have time to remediate it before Jones Auditors renders an ICFR audit opinion. Additional control tests revealed that related monitoring controls were not operating effectively and so would not mitigate this deficiency. Based on these findings, Jones Auditors explains to you that the internal controls over AR are deficient and that their assessment is “material weakness.”

To support their conclusion, Jones Auditors explains that they relied on your In-house IAF to perform AR controls testing. That is, your in-house IAF who are Tango employees assisted Jones Auditors by executing controls testing leading to the “material weakness” control assessment. Jones Auditor provides you with a copy of the audit workpaper documenting the testing results (see workpaper on next page).

The audit manager and partner from Jones Auditors reviewed all AR control testing and re-testing procedures and results before assessing the internal control deficiency as “material weakness.”

The “material weakness” control assessment means that Tango’s AR controls could not prevent or quickly detect a material misstatement in the financial statements. Therefore, Jones Auditors will render an adverse opinion on the ICFR audit.
JONES AUDITORS LLP

Excerpts from Audit Workpapers for Accounts Receivable

Company Name: Tango Soars Incorporated
Balance Sheet Date: December 31, 2013

Audit Objectives: Internal controls are operating effectively to ensure that receivables reflected in the balance sheet exist, and include all authentic obligations of third parties to the entity.
Financial Statement Assertions:
- Existence or occurrence
- Rights and obligations

Audit Steps

<table>
<thead>
<tr>
<th>Audit Steps</th>
<th>Performed By</th>
<th>Workpaper Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>From sample of sales contracts and associated invoices, verify transaction amounts and terms to specific All account balances.</td>
<td>Tunga Sierra Inc. Internal Auditing</td>
<td>SD-25</td>
</tr>
<tr>
<td>Verify appropriate approval for non-standard sales and AR terms.</td>
<td>Tunga Sierra Inc. Internal Auditing</td>
<td>SD-26</td>
</tr>
</tbody>
</table>

Summary Results:
Sales contract testing indicates that sales personnel often override standard contract terms and issue unrecorded sales discounts to customers (SD-25). These discounts are not recorded and result in overstated accounts receivable.

The potential misstatement is estimated to be approximately 6% of net income before taxes. The likelihood that a misstatement that is not preserved / directed resulting from this internal control deficiency is estimated at 25%. 

Jones Auditors LLP Internal Control Assessment: Material Weakness
Accounts Receivable

Control Tests performed by: Tunga Sierra Internal Auditing - Katty Si Melissa (Staff Auditor-Staff)
Date: 1/5/2014

Reviewed and approved by: Jones Auditors LLP - Jonathan Allenby (Audit Manager)
Date: 1/10/2014

Reviewed and approved by: Jones Auditors LLP - Joshua Gassert (Audit Partner)
Date: 1/10/2014
Participants who are randomly assigned to the Rely / Less Ambiguous condition see the following screens:

---

External Auditor Reliance on the Client’s Internal Audit Function (IAF)

Auditing standards give external auditors the option to rely (use) on a client’s IAF to help perform testing for the internal controls over financial reporting (ICFR) audit provided the function meets certain criteria. Jones Auditors evaluated and determined that your IAF meets the criteria laid out in the auditing standards. That is, your IAF is sufficiently competent and objective to assist the external auditors in year-end ICFR audit testing.

Any decision by the external auditors to rely on the client’s IAF in year-end ICFR audit testing is strictly optional and is not required by auditing standards – even if the IAF meets the criteria outlined in the standards. Further, the external auditors’ decision whether or not to rely on the your IAF for internal controls testing has no impact on audit fees or on the external auditors’ perceived quality of your IAF.
Internal Controls Over Financial Reporting (ICFR) and Sarbanes Oxley (SOX) Act of 2002

Accounting regulations (i.e., SOX Section 302) require that CFOs conduct their own testing to determine whether their company’s internal controls are operating effectively. At Tango, internal controls testing is not conducted by your internal audit function for SOX reporting purposes. Rather, Tango has a separate Controls Testing department that performs all internal controls testing and reports their conclusions to you, the CFO.

There are three classifications for deficient internal controls with the most severe being a “material weakness.” A material weakness is a deficiency in internal controls, such that there is a reasonable possibility that a material misstatement of the company’s financial statements will not be prevented or detected on a timely basis. Therefore, there are two key requirements to consider for a material weakness assessment:

1. The magnitude of a potential misstatement is material, and
2. The likelihood that the misstatement is not prevented / detected is at least “reasonably possible” (in other words, the likelihood is more than “remote”).

Unlike the other two classifications of internal control deficiencies, detected material weaknesses that are not remediated by year-end result in the external auditors issuing an adverse opinion on the company’s ICFR audit.

Companies do not want to receive an adverse ICFR audit opinion because it can trigger negative reactions from creditors and investors (e.g., decreased share prices, increased management turnover).

---

Tango’s Tests of Internal Controls Over Accounts Receivable

Jones Auditors, Tango’s external auditor, is assessing the operating effectiveness of controls over the accounts receivable (AR) processes as part of the Internal Controls Over Financial Reporting (ICFR) audit.

Tango has a standard sales contract, but sales personnel often modify the standard contract terms. Sales personnel often grant unauthorized and unrecorded sales discounts to customers without the knowledge of AR personnel. Since AR personnel are unaware of the sales discounts, the entire sales amount is recorded as an outstanding balance on the AR aging and results in sales and AR overstatements. Customers having received a sales discount, deduct the discount amounts when paying their invoices.

The external auditors explain that the magnitude of a possible misstatement resulting from this breakdown in controls is approximately 4.5% of income before taxes.

Further, the likelihood that there is a misstatement that is not prevented / detected, as a result of this internal control deficiency, is estimated at 70%.
Since this control deficiency was detected at year-end, Tango does not have time to remediate it before Jones Auditors renders an ICFR audit opinion. Additional control tests revealed that related monitoring controls were not operating effectively and so would not mitigate this deficiency. Based on these findings, Jones Auditors explains to you that the internal controls over AR are deficient and that their assessment is “material weakness.”

To support their conclusion, Jones Auditors explains that they relied on your in-house IAP to perform AR controls testing. That is, your in-house IAP who are Tango employees assisted Jones Auditors by executing controls testing leading to the “material weakness” control assessment. Jones Auditors provides you with a copy of the audit workpaper documenting the testing results (see workpaper on next page).

The audit manager and partner from Jones Auditors reviewed all AR control testing and re-testing procedures and results before assessing the internal control deficiency as “material weakness.”

The “material weakness” control assessment means that Tango's AR controls could not prevent or quickly detect a material misstatement in the financial statements. Therefore, Jones Auditors will render an adverse opinion on the ICFR audit.
Excerpts from Audit Workpapers for Accounts Receivable

Company Name: Tango Sierra Incorporated
Balance Sheet Date: December 31, 2013

Audit Objectives

<table>
<thead>
<tr>
<th>Financial Statement Assertions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue recs for transactions which relate to services actually provided to customers</td>
</tr>
<tr>
<td>Appropriateness of allowance for uncollectible accounts</td>
</tr>
</tbody>
</table>

Audit Steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSM</td>
<td>Test sample of sales contracts and associated invoices, verify transaction amounts and terms to specific AR account balances</td>
</tr>
<tr>
<td>VSA</td>
<td>Verify appropriate approval for non-standard sales and AR terms</td>
</tr>
</tbody>
</table>

Workpaper Ref

<table>
<thead>
<tr>
<th>Ref</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSM-25</td>
<td>Togo Sierra Inc., Internal Auditing</td>
</tr>
<tr>
<td>SD-26</td>
<td>Togo Sierra Inc., Internal Auditing</td>
</tr>
</tbody>
</table>

Summary Results

Sales contract testing indicates that sales personnel often override standard contract terms and issue unauthorized sales discounts to customers (SD-25). These discounts are not recorded and result in overstated accounts receivable.

The potential misstatement is estimated to be approximately 4.5% of net income before taxes.

The likelihood that a misstatement that is not prevented / detected resulting from this internal control deficiency is estimated at 70%.

Jones Auditors LLP - Internal Control Assessment:

Material Weakness

Control Tests performed by: Tango Sierra Internal Auditors - Kelly Smith (Staff Auditor) - Employee
Date: 1/5/2014

Reviewed and approved by: Jones Auditors LLP - Internal Control (Audit Manager)
Date: 1/6/2014

Reviewed and approved by: Jones Auditors LLP - Practice Partner (Audit Partner)
Date: 1/10/2014

©2013 Jones Auditors LLP. All rights reserved. Internal Control Assessment performed by Jones Auditors LLP. Document was reviewed and approved by Jones Auditors LLP and is not considered an unaudited report. This document is intended for informational purposes and is not intended to be a substitute for internal control assessments or support a statutory audit.
Participants who are randomly assigned to the Not Rely / More Ambiguous condition see the following screens:

At Tango, you have an internal audit function (IAF). Your IAF is of a high quality and is competent as many of these internal auditors have professional certifications e.g., CPA, CIA, etc. Your internal auditors have many years of prior experience performing internal controls and financial statement audits. They are knowledgeable about Tango’s accounting and business operations and have worked for Tango for many years.

Both the external auditors and your internal audit function report to and have direct access to the Audit Committee of Tango’s Board of Directors.

External Auditor Reliance on the Client’s Internal Audit Function (IAF)

Auditing standards give external auditors the option to rely (use) on a client’s IAF to help perform testing for the internal controls over financial reporting (ICFR) audit provided the function meets certain criteria. Jones Auditors evaluated and determined that your IAF meets the criteria laid out in the auditing standards. That is, your IAF is sufficiently competent and objective to assist the external auditors in year-end ICFR audit testing.

Any decision by the external auditors to rely on the client’s IAF in year-end ICFR audit testing is strictly optional and is not required by auditing standards – even if the IAF meets the criteria outlined in the standards. Further, the external auditors’ decision whether or not to rely on the your IAF for internal controls testing has no impact on audit fees or on the external auditors’ perceived quality of your IAF.
Internal Controls Over Financial Reporting (ICFR) and Sarbanes-Oxley (SOX) Act of 2002

Accounting regulations (i.e., SOX Section 302) require that CFOs conduct their own testing to determine whether their company's internal controls are operating effectively. At Tango, internal controls testing is not conducted by your internal audit function for SOX reporting purposes. Rather, Tango has a separate Controls Testing department that performs all internal controls testing and reports their conclusions to you, the CFO.

There are three classifications for deficient internal controls with the most severe being a "material weakness." A material weakness is a deficiency in internal controls, such that there is a reasonable possibility that a material misstatement of the company's financial statements will not be prevented or detected on a timely basis. Therefore, there are two key requirements to consider for a material weakness assessment:

1. The magnitude of a potential misstatement is material; and
2. The likelihood that the misstatement is not prevented / detected is at least "reasonably possible" (in other words, the likelihood is more than "remote").

Unlike the other two classifications of internal control deficiencies, detected material weaknesses that are not remediated by year-end result in the external auditors issuing an adverse opinion on the company's ICFR audit.

Companies do not want to receive an adverse ICFR audit opinion because it can trigger negative reactions from creditors and investors (e.g., decreased share prices, increased management turnover).

Tango's Tests of Internal Controls over Accounts Receivable

Jones Auditors, Tango's external auditor, is assessing the operating effectiveness of controls over the accounts receivable (AR) processes as part of the Internal Controls Over Financial Reporting (ICFR) audit.

Tango has a standard sales contract, but sales personnel occasionally modify the standard contract terms. Sales personnel occasionally grant unauthorized and unrecorded sales discounts to customers without the knowledge of AR personnel. Since AR personnel are unaware of the sales discounts, the entire sales amount is recorded as an outstanding balance on the AR aging and results in sales and AR overstatements. Customers, having received a sales discount, deduct the discount amounts when paying their invoices.

The external auditors explain that the magnitude of a possible misstatement resulting from this breakdown in controls is approximately 6% of income before taxes.

Further, the likelihood that there is a misstatement that is not prevented / detected, as a result of this internal control deficiency, is estimated at 25%.
Since this control deficiency was detected at year-end, Tango does not have time to remediate it before Jones Auditors renders an ICFR audit opinion. Additional control tests revealed that related monitoring controls were not operating effectively and so would not mitigate this deficiency. Based on these findings, Jones Auditors explains to you that the internal controls over AR are deficient and that their assessment is “material weakness.”

To support their conclusion, Jones Auditors explains that they did not rely on your IAF to perform AR controls testing. That is, auditors from Jones Auditors LLP executed controls testing themselves leading to the “material weakness” control assessment. Jones Auditors provides you with a copy of the audit workpaper documenting the testing results [see workpaper on next page].

The audit manager and partner from Jones Auditors reviewed all AR control testing and re-testing procedures and results before assessing the Internal control deficiency as “material weakness.”

The “material weakness” control assessment means that Tango’s AR controls could not prevent or quickly detect a material misstatement in the financial statements. Therefore, Jones Auditors will render an adverse opinion on the ICFR audit.
Excerpts from Audit Workpapers for Accounts Receivable

Company Name: [Redacted]
Balance Sheet Date: December 31, 2013

Audit Objectives
Internal controls are operating effectively to ensure that receivables reflected in the balance sheet exist, and include all authentic obligations of third parties to the entity.

Financial Statement Assertions
Existence or occurrence
Rights and obligations

Audit Steps
From sample of sales contracts and associated invoices, sends transaction amounts and terms to specific AR account balances.

Prepared by: JONES Auditors LLP
Workpaper Ref. SD-25

Verify appropriate approval for non-standard sales and AR terms.

Prepared by: JONES Auditors LLP
Workpaper Ref. SD-25

Summary Results:
Sales contract testing indicates that sales personnel often override standard contract terms and issue unrecorded sales discounts to customers (SD-23). These discounts are not recorded and result in unrecorded accounts receivable.

The potential misstatement is estimated to be approximately 6% of net income before taxes.

The likelihood that a misstatement that is not prevented / detected resulting from this internal control deficiency is estimated at 20%.

Potential mitigating controls are not operating effectively (e.g., reports of contract modifications / exceptions not consistently reviewed) (ARE-5).

JONES Auditors LLP - Internal Control Assessment:
Accounts Receivable

Control Tests performed by: JONES Auditors LLP - [Redacted] (Staff Auditor)
Date: 1/9/2014

Reviewed and approved by: JONES Auditors LLP - [Redacted] (Audit Manager)
Date: 1/9/2014

Reviewed and approved by: JONES Auditors LLP - [Redacted] (Audit Partner)
Date: 1/10/2014

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All rights reserved. No part of this material may be reproduced, stored in a retrieval system, or transmitted in any form without written permission of JONES Auditors LLP.
Participants who are randomly assigned to the Not Rely / Less Ambiguous condition see the following screens:

1. Information about the company's internal audit function (IAF) and the qualifications of the internal auditors.

2. Explanation of the decision-making process for relying on the IAF in year-end IFR audit testing.
Internal Controls Over Financial Reporting (ICFR) and Sarbanes Oxley (SOX) Act of 2002

Accounting regulations (i.e., SOX Section 302) require that CFOs conduct their own testing to determine whether their company’s internal controls are operating effectively. At Tango, internal controls testing is not conducted by your internal audit function for SOX reporting purposes. Rather, Tango has a separate Controls Testing department that performs all internal controls testing and reports their conclusions to you, the CFO.

There are three classifications for deficient internal controls with the most severe being a “material weakness.” A material weakness is a deficiency in internal controls, such that there is a reasonable possibility that a material misstatement of the company’s financial statements will not be prevented or detected on a timely basis. Therefore, there are two key requirements to consider for a material weakness assessment:

1. The magnitude of a potential misstatement is material, and
2. The likelihood that the misstatement is not prevented / detected is at least “reasonably possible” (in other words, the likelihood is more than “remote”).

Unlike the other two classifications of internal control deficiencies, detected material weaknesses that are not remediated by year-end result in the external auditors issuing an adverse opinion on the company’s ICFR audit.

Companies do not want to receive an adverse ICFR audit opinion because it can trigger negative reactions from creditors and investors (e.g., decreased share prices, increased management turnover).

Tango’s Tests of Internal Controls over Accounts Receivable

Jones Auditors, Tango’s external auditor, is assessing the operating effectiveness of controls over the accounts receivable (AR) processes as part of the Internal Controls Over Financial Reporting (ICFR) audit.

Tango has a standard sales contract, but sales personnel often modify the standard contract terms. Sales personnel often grant unauthorized and unrecorded sales discounts to customers without the knowledge of AR personnel. Since AR personnel are unaware of the sales discounts, the entire sales amount is recorded as an outstanding balance on the AR aging and results in sales and AR overstatements. Customers, having received a sales discount, deduct the discount amounts when paying their invoices.

The external auditors explain that the magnitude of a possible misstatement resulting from this breakdown in controls is approximately 4.8% of income before taxes.

Further, the likelihood that there is a misstatement that is not prevented / detected, as a result of this internal control deficiency, is estimated at 70%.
Since this control deficiency was detected at year-end, Tango does not have time to remediate it before Jones Auditors renders an ICFR audit opinion. Additional control tests revealed that related monitoring controls were not operating effectively and so would not mitigate this deficiency. Based on these findings, Jones Auditors explains to you that the internal controls over AR are deficient and that their assessment is "material weakness."

To support their conclusion, Jones Auditors explains that they did not rely on your IAF to perform AR controls testing. That is, auditors from Jones Auditors LLP executed controls testing themselves leading to the "material weakness" control assessment. Jones Auditors provides you with a copy of the audit workpaper documenting the testing results [see workpaper on next page].

The audit manager and partner from Jones Auditors reviewed all AR control testing and re-testing procedures and results before assessing the internal control deficiency as "material weakness."

The "material weakness" control assessment means that Tango's AR controls could not prevent or quickly detect a material misstatement in the financial statements. Therefore, Jones Auditors will render an adverse opinion on the ICFR audit.
Excerpts from Audit Workpapers for Accounts Receivable

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Juse Sierra Incorporated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet Date:</td>
<td>December 31, 20XX</td>
</tr>
</tbody>
</table>

### Audit Objectives

<table>
<thead>
<tr>
<th>Financial Statement Assertions</th>
<th>Audit Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence or occurrence Rights and obligations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Audit Steps</th>
<th>Performed By</th>
<th>Workpaper Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>From sample of sales contracts and associated invoices, verify transaction amounts and terms to specific account balances.</td>
<td>Juse Sierra LLP</td>
<td>SD-25</td>
</tr>
<tr>
<td>Verify appropriate approval for non-standard sales and AR terms.</td>
<td>Juse Sierra LLP</td>
<td>SD-25</td>
</tr>
</tbody>
</table>

### Summary Results:

Sales contract review indicates that sales personnel often override standard contract terms and issue unauthorized sales discounts to customers (SD-25). These discounts are not recorded and result in overstated accounts receivable.

The potential misstatement is estimated to be approximately 4.5% of net income before taxes. The likelihood that a misstatement that is not prevented / detected resulting from this internal control deficiency is estimated at 70%.

Potential mitigating controls are not operating effectively (e.g., reports of contract modifications / exceptions not consistently reviewed) (ARS-5).

The potential misstatement is estimated to be approximately 4.5% of net income before taxes. The likelihood that a misstatement that is not prevented / detected resulting from this internal control deficiency is estimated at 70%.

Potential mitigating controls are not operating effectively (e.g., reports of contract modifications / exceptions not consistently reviewed) (ARS-5).

### Jones Auditors LLP - Internal Control Assessment:

| Accounts Receivable | Material Weakness |

| Control Tests performed by: | Juse Sierra LLP / Kelly Smith (Staff Auditor) |
| Date: | 1/1/2014 |

Reviewed and approved by: Juse Sierra LLP / Internal Auditor (Audit Manager) |
Date: | 1/1/2014 |

Reviewed and approved by: Juse Sierra LLP / Audit Partner (Audit Partner) |
Date: | 1/1/2014 |

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All participants see the following screens:

### Experimental Questions

#### Based on the information provided about Tango's AR control testing and assessment, please answer the following question.

(You may go back to the case materials when answering the questions in this section.)

As Tango’s CFO, how willing are you to accept the external auditor’s control assessment of “material weakness?”

- Very Unwilling
- Unwilling
- Somewhat Unwilling
- Undecided
- Somewhat Willing
- Willing
- Very Willing

#### As Tango’s CFO, how likely are you to challenge the external auditor’s control assessment of “material weakness?”

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Undecided
- Somewhat Likely
- Likely
- Very Likely

#### Think about the AR control deficiency in the case and the magnitude of a potential misstatement.

How easy or difficult was it for you to determine whether the possible misstatement resulting from the AR control deficiency is material in the aggregate?

- Very Easy
- Easy
- Somewhat Easy
- Neither Easy nor Difficult
- Somewhat Difficult
- Difficult
- Very Difficult

#### Think about the AR control deficiency in the case and the likelihood that a misstatement is not prevented / detected.

How easy or difficult was it for you to determine whether the likelihood that a misstatement is not prevented / detected is at least reasonably possible (in other words, more than “remote”)?

- Very Easy
- Easy
- Somewhat Easy
- Neither Easy nor Difficult
- Somewhat Difficult
- Difficult
- Very Difficult
As Tango's CFO, please indicate whether you agree / disagree with the following statements about Tango's internal audit function.

When someone praises Tango's internal audit function, it feels like a personal compliment.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

Tango's internal audit function's successes are my successes.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
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</tbody>
</table>
I am very interested in what others think about Tango's internal audit function.

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<th>Strongly Disagree</th>
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</tr>
</tbody>
</table>

When I talk about Tango's internal audit function, I usually say "We" rather than "They".

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
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</table>

When someone criticizes Tango's internal audit function, it feels like a personal insult.

<table>
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<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
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</tbody>
</table>

As Tango's CFO, please indicate whether you agree / disagree with the following statements about Tango's external auditors (Jones Auditors LLP).

I am very interested in what others think about Tango's external auditors.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
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When someone praises Tango's external auditors, it feels like a personal compliment

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<th>Strongly Disagree</th>
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</tbody>
</table>
When I talk about Tango’s external auditors, I usually say “We” rather than “They”.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

When someone criticizes Tango’s external auditors, it feels like a personal insult.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

Tango’s external auditor’s successes are my successes.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

Please answer the following questions and indicate the extent to which you agree / disagree with the following statements (where applicable).

In this case, the materiality of a potential AR misstatement is:
- 6% of income before taxes
- 4.5% of income before taxes

In your opinion, how material is the potential AR misstatement?

Less Material | More Material
---|---
1 | 2 | 3 | 4 | 5 | 6 | 7

Materiality

- Strongly Less Material
- Less Material
- Neither Less nor More Material
- More Material
- Strongly More Material
In this case, the likelihood that an AR misstatement would not be prevented / detected was:

- 75%
- 25%

In your opinion, what was the likelihood that an AR misstatement is not prevented / detected?

- Very Unlikely
- Unlikely
- Somewhat Unlikely
- Unlikely
- Somewhat Likely
- Likely
- Very Likely

Did Tango’s internal audit function assist the external auditors with AR control testing.

- Yes
- No

The AR control deficiency met the criteria for “material weakness.”

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

In our opinion, the control testing results were credible.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

In your opinion, Tango’s internal audit function is competent.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree

In your opinion, Tango’s internal audit function is objective.

- Strongly Disagree
- Disagree
- Somewhat Disagree
- Neither Agree nor Disagree
- Somewhat Agree
- Agree
- Strongly Agree
Please answer the following questions about yourself. All responses are completely anonymous.

Select the label which best broadly describes your background.
- Architecture / Engineering / Construction
- Business / Finance
- Computer / Technology
- Education
- Healthcare
- Legal
- Life Sciences / Physical Sciences / Social Sciences
- Manufacturing / Consumer Goods
- Other (please write in):

What is your current job title (choose the title that is the best match)?

Job Title

How long have you been in this role?

Years

Is your employer publicly traded?
- Yes
- No
Does your company receive an audit of Internal Controls Over Financial Reporting by an external auditor?
○ Yes
○ No

Does your company have an internal audit function?
○ Yes
○ No

Do your external auditors usually get assistance from your company’s internal audit function during internal controls over financial reporting audit testing?

Never  Rarely  Sometimes  Most of the Time  Always  Not Applicable

Are you a CPA?
○ Yes
○ No

Have you ever practiced public accounting (external auditing)?
○ Yes
○ No

How long did you practice public accounting (external auditing)?

Years: 0


Have you ever practiced internal auditing?

☐ Yes
☐ No

How long did you practice internal auditing (years)?

Years

How many years of experience do you have with performing internal control assessments?

Years

How many years of experience do you have with discussing internal control issues with external auditors?

Years

How old are you?

(Years)

What is your gender?

☐ Male
☐ Female
You have reached the end of the survey. Thank you for participating in my study.

To obtain a $15 gift card voucher as a token for your participation, please click the e-gift card you would like to receive:

Amazon.com Gift Card
Walmart Gift Card

To receive the e-gift card, enter an email address when prompted. To protect your anonymity, your email address will be stored in a separate database from the study. Your email addresses will only be used to deliver your e-gift card voucher.

If you do not wish to receive an e-gift card, simply close this browser / tab. Thanks again for your participation.

Have a great day.