AUDITOR INTEGRATION OF IT SPECIALIST INPUT ON INTERNAL CONTROL ISSUES: HOW A WEAKER TEAM IDENTITY CAN BE BENEFICIAL

BY

CASSANDRA RUTH ESTEP

DISSERTATION

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Doctoral Committee:

Professor Mark Peecher, Chair
Assistant Professor Tim Bauer, Director of Research
Professor Ken Trotman, University of New South Wales
Professor Michael Williamson
Professor Dolores Albarracin

Abstract

In this dissertation, I investigate how auditors integrate information technology (IT) specialist input on internal control over financial reporting (ICFR) issue classifications. Given the ill-structured nature of ICFR issue classifications and the importance of appropriate classification due to the potential impact on audit quality, combining knowledge from different perspectives is likely beneficial. Drawing on social identity theory, expertise, and advice literatures, I predict and find benefits result from a weaker shared team identity between auditors and IT specialists. Specifically, I find auditors with a weaker team identity place more weight on IT specialist input for IT-related issues and are more likely to differentiate between more and less accurate input, compared to auditors sharing a stronger team identity with the IT specialist providing the input. My dissertation provides a better understanding of how a key aspect of the audit team environment, team identity, influences auditor integration of input from audit specialists. The implications of my dissertation are of interest to researchers, regulators, and practitioners, especially as recent audit firm initiatives likely increase the extent to which auditors and IT specialists view themselves as one team.

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I. INTRODUCTION

Audits teams made up of auditors and specialists, including IT, valuation, and tax, commonly work together to complete the required audit procedures and reach (ideally) appropriate audit conclusions. Regulators are concerned with the number of internal control over financial reporting (ICFR) related audit deficiencies noted in PCAOB inspection reports and cite ineffective coordination and communication with IT specialists as a root cause of these deficiencies (PCAOB 2012). The classification of ICFR issues (i.e., material weakness versus significant deficiency versus control deficiency) impacts the adjustments required to planned audit procedures (PCAOB 2007), and thus, directly influences overall audit quality. The ill-structured nature and limited guidance in standards make ICFR classification difficult (Earley, Hoffman, and Joe 2008). As such, integrating auditor perspectives with perspectives of individuals with differing functional backgrounds, such as information technology (IT) specialists with expertise in control areas, is likely beneficial. In this dissertation, I experimentally investigate auditor integration of input from IT specialists in the context of evaluating ICFR issues and how a key aspect of the audit team environment, strength of team identity, influences the extent of integration.

IT plays a key role in financial statement audits today due to the complexity of business environments and increased use of a controls-based audit approach (EY 2012; PwC 2012; Curtis, Jenkins, Bedard, and Deis 2009). Research shows that auditors generally are not well equipped to evaluate IT-related control risks and deficiencies (Brazel and Agoglia 2007; Wolfe, Mauldin, and Diaz 2009). IT specialists often view themselves as risk and control experts (Bauer and Estep 2014) as their work typically focuses on risk and control areas. While better classifications of ICFR issues could occur from combining auditor and IT specialist knowledge, especially

when an issue is IT-related, evidence of integration problems exists. In addition to the concerns regarding communication and coordination between auditors and IT specialists noted above, regulators contend, and recent interview-based research finds, that auditors overrely on specialist areas (Griffith, Hammersley, and Kadous 2014; Griffith 2015a; Boritz, Kochetova-Kozloski, Robinson, and Wong 2015). Overreliance could result from auditors 1) taking information provided by specialists without question, or 2) discounting issues brought up by specialists so the auditor can continue to rely, as planned, on specialist areas for the audit. These regulator concerns and research findings motivate the need to identify ways to improve auditor integration of specialist input.

Recognizing team member expertise helps decision makers use input from others to (try to) improve judgments (Harvey, Harries, and Fischer 2000; Einhorn, Hogarth, and Klempner 1977). In the auditor-specialist context, relevant social identities can influence the salience of specialist expertise. Social identities, such as team identity (i.e., the extent to which individuals view themselves and others as part of the same team) influence perceptions of self and others, increasing similarity perceptions for in-group members and dissimilarity perceptions for out-group members. As a result, *higher* (lower) perceived similarity likely *decreases* (increases) the salience of a specialist's expertise, which will impact the weight auditors place on input received.

Social identity theory studies show individuals tend to hold more positive impressions of in-group members and highly value information from those with whom they share stronger social identities. However, a stronger team identity may not always be beneficial in the auditor-specialist context as stronger identities, or social bonds, can also heighten the risk of being too trusting (Dukerich, Kramer, and Parks 1998; Kadous, Leiby, and Peecher 2013). To understand how the strength of team identity influences auditor integration of IT specialist input, I

investigate how an aspect of input quality – input accuracy – and team identity jointly influence input weighting across different types of ICFR issues – those that overlap (IT-related) and do not overlap (non-IT related) with the IT specialists' area of expertise. Input accuracy refers to input that differs in terms of the level of correctness; more accurate input is closer to being correct than less accurate input. Examining input accuracy provides a comparative benchmark for evaluating the appropriateness of the weight of input employed by auditors.

Auditors can likely identify more versus less accurate input for non-IT related issues due to the relevance of their own knowledge and expertise. However, sharing a stronger team identity with IT specialists can increase auditors' propensity to blindly trust (Kadous et al. 2013) and decreases the salience of specialists' IT expertise as auditors will perceive IT specialists as more similar to themselves (Ashforth and Mael 1989). Thus, for non-IT related issues, I predict auditors with a stronger team identity will weight input relatively heavily regardless of input accuracy, while auditors with a weaker team identity will more heavily weight more versus less accurate input.

For IT-related ICFR issues, auditors' knowledge and expertise is less helpful for distinguishing between input accuracy levels (compared to non-IT issues). A weaker team identity heightens the salience of the IT specialist's domain of expertise as these auditors see the IT specialist as more dissimilar than themselves. Auditors sharing a weaker team identity will view IT specialist input as more informative (Gino, Shang, and Croson 2009), compared to auditors sharing a stronger team identity. Thus, for IT-related ICFR issues, I predict auditors with a weaker team identity will weight input received from an IT specialist more heavily than those with a stronger identity.

My study employs a 2x2x(2x2) mixed design. I manipulate stronger versus weaker team identity with the IT specialist and more versus less accurate input between subjects. Experienced auditor participants read and provide judgments on four client cases with ICFR issues adapted from Earley, Hoffman, and Joe (2008). The within-subjects manipulations occur via client case as each client case contains an ICFR issue that is either IT-related or not IT-related. For robustness, I include higher and lower severity cases; my main interest lies in investigating the higher severity (i.e., more problematic) cases. Results for the lower severity cases are discussed in supplemental analyses.

Participants provide initial severity and classification judgments of the ICFR issues in each case and then receive a description of an IT specialist who will be providing input on each case, with wording inducing either a stronger or weaker team identity with the IT specialist (between-subjects). The IT specialist in the stronger (weaker) condition enjoys (does not enjoy) thinking about audit versus consulting-related issues, sits (does not sit) with the audit team while on-site at the client, and the participant views the IT specialist as a core (just obligatory) member of the team. Participants then provide final judgments for each case while viewing their initial judgment and IT specialist input, which varies in its accuracy. The degree to which auditors weight the IT specialist input for their ICFR issue classification judgments serves as the main dependent variable of interest.

Consistent with my predictions, I find benefits to auditors who share a weaker team identity with IT specialists. My main results show, for a non-IT related issue, auditors are more likely to appropriately differentiate between more and less accurate input when they share a weaker versus stronger team identity. When an ICFR issue is IT-related, auditors with a weaker team identity weight input received from an IT specialist heavier than those with a stronger

identity. Further, auditors with a weaker team identity more frequently mention the IT specialist and the IT aspects of the case when describing their judgment rationale.

My dissertation provides evidence on how a weaker team identity can be beneficial, supported by social identity theory. Auditors with a weaker versus stronger team identity weight input more on IT-related issues, i.e., where IT specialists' input is most relevant and important due to auditor's lack of knowledge and expertise. Further, auditors with a stronger team identity are less sensitive to input quality across both IT and non-IT issues than auditors with a weaker team identity. Thus, I identify an aspect of the audit team environment, audit team identity strength that can decrease the likelihood of auditors benefitting from a specialist's expertise, which is key given the importance of audit specialists in today's audit environment (Griffith et al. 2014; Boritz et al. 2015; Griffith 2015a, 2015b). While I investigate IT specialists, my theory likely generalizes to other audit specialists (e.g., tax, valuation). Future research should continue to investigate influence of audit team identity on how auditors and specialists work together.

As prior research on social identity theory shows, there are certainly benefits of a stronger team identity between auditors and specialists, such as loyalty, cooperation, and information sharing. My dissertation highlights a downside to stronger team identity, where the decrease in the salience of IT specialist expertise results in less integration of IT specialist input on IT-related issues. This motivates future research to examine conditions under which the same degree of integration can occur with stronger team identities. For example, two-way interaction between auditors and IT specialists could help overcome this issue, provided other process losses of interacting groups are not activated (Trotman, Bauer, and Humphreys 2015).

My dissertation also highlights a previously unidentified benefit of audit firms increasing focus on consulting services. While firms are pushing auditors and specialists to adopt a one-

team perspective (EY 2013; Bauer and Estep 2016), the dual role of specialists as auditors and consultants can decrease the extent to which auditors identify with and view specialists as part of the audit team, increasing the salience of their expertise. Thus, in addition to the knowledge spillovers gained from specialists working on consulting engagements (Deloitte 2013; PwC 2013), auditors will be more likely to incorporate input on matters directly related to the specialists' area of expertise due to specialists' dual roles.

I organize the remainder of this dissertation as follows. Chapter II provides theory and hypotheses development. Chapter III describes the experimental design employed to test the hypotheses. Chapter IV discusses results and Chapter V concludes, including fruitful avenues for future research.

II. THEORY AND HYPOTHESIS DEVELOPMENT

IT specialist input on ICFR issues

Internal control over financial reporting (ICFR) issues indicate failures in internal control, and have serious implications for financial reporting quality. The classification of ICFR issues as a control deficiency, significant deficiency, or material weakness directly impacts audit quality as the level of severity of the ICFR issue determines the degree to which the planned audit procedures need to be altered (PCAOB 2007). Insufficient adjustments to planned audit procedures in light of ICFR issues may result in insufficient evidence to support audit conclusions. Attaining accuracy and/or consensus on ill-structured tasks, such as classifying an ICFR issue, is difficult (Earley et al. 2008). Integrating different perspectives from individuals with differing functional backgrounds likely helps improve classification accuracy/consensus.

While Auditing Standard No. 5 (PCAOB 2007) provides guidance for classifying identified ICFR deficiencies, this guidance is subjective and often difficult to apply to actual deficiencies. For example, a material weakness, the most severe classification, exists if "there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis" (PCAOB 2007, A7). A significant deficiency, the next most severe classification, is defined as "a deficiency…that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of the company's financial reporting" (PCAOB 2007, A11).[1] Indicators of material weaknesses in ICFR include identification of fraud, restatement of previously issued financial statements, and ineffective oversight of the company's external financial reporting and ICFR by the company's audit committee (PCAOB 2007, 69). Regulators have recently expressed concern

[1] Significant deficiencies are typically reported internally to the audit committee by either client management or the auditor, but not externally reported (PCAOB 2007).

that companies and auditors have a difficult time assessing the classification of ICFR deficiencies noted and/or anchor on the indicators, resulting in underreporting of material weaknesses and reporting of material weaknesses only when a related material misstatement has been identified (Chasan 2013; Croteau 2013; Franzel 2014).

While auditors rely on specialists for certain procedures, auditors determine final judgments and decisions in the audit context and own the workpapers and audit file (Bauer and Estep 2014; Griffith 2015a). Unlike formal consultation, auditors have no obligation to follow any input or advice received from audit specialists (Boritz et al. 2015; Bauer and Estep 2016). Prior literature on advice shows that judges seek out and weight advice in order to improve their judgments and to share responsibility (Harvey and Fischer 1997; Bonaccio and Dalal 2006). Given that auditors utilize specialists on audits because they are ill-equipped to perform certain aspects of the audit (PCAOB 2012, 2015), improving judgment and shared responsibility likely motivate auditors to at least attempt to assess and incorporate input received from IT specialists.[2]

IT specialists play an increasingly important role in audits as both business complexity and reliance on system generated data and reports grow (Brynjolfsson and McAfee 2011; EY 2012; PwC 2012).[3] They directly influence external financial statement audits for public companies due to the requirement of an opinion over ICFR and increasing reliance on IT as part of a controls-based audit approach (Janvrin, Bierstaker, and Lowe 2008; Curtis, Jenkins, Bedard, and Deis 2009; Bauer and Estep 2014, 2016). IT specialist work on an audit engagement

[2] I use the term "input" to represent information, advice, or recommendations that auditors receive from IT specialists. My definition of input is similar to "advice" in prior psychology and auditing literature and points to the ownership auditors ultimately have over the audit process.

[3] AU Section 336 *Using the Work of a Specialist* does not apply to tax or IT specialists, nor does it apply to specialists employed by the auditor's firm (PCAOB 2003). These types of specialists fall under Auditing Standard No. 10 *Supervision of the Audit Engagement* (PCAOB 2010). The PCAOB recently solicited comments on Staff Consultation Paper No. 2015-01 *The Auditor's Use of the Work of Specialists*, which considers potential revisions to these standards to improve guidance around the use of specialist work, including possibly revising the definition of specialist to include tax and IT specialist areas and extend the revised AU Section 336 guidance to apply to specialists employed by the auditor's firm as well.

typically focuses on risk and control areas, and IT specialists often view themselves as risk and control experts (Bauer and Estep 2014).

IT specialists are frequently included on audit engagements (Janvrin et al. 2009; Bauer and Estep 2016), but are generally less homogenous than auditors, often varying in educational background and lacking training as accountants (Brazel and Agoglia 2007; Bauer and Estep 2014). Audit firms typically employ IT specialists either as part of the assurance or advisory (i.e., consulting) group within the firm. Audit firms have expanded their consulting practices considerably in recent years (Rapoport 2012; *The Economist* 2012), with consulting related revenue exceeding audit revenue at Big 4 firms in 2013 (Lisic, Myers, Pawlewicz, and Seidel 2015). Audit specialists, including IT, serve dual roles in audit firms today: consultant on advisory engagements and auditor on integrated and financial statement audit engagements. Audit firms claim that specialists' expertise improves audit quality due to bringing knowledge gained from serving on consulting engagements to audit engagements (Deloitte 2013; PwC 2013).[4] However, the extent to which the potential benefits of the knowledge spillover from specialists are realized depends on whether auditors integrate information and input received.

IT specialists can provide insight and knowledge on ICFR issues in general, but input on issues with IT aspects is especially valuable as evidence exists that auditors are not well equipped to evaluate IT-related risks and control deficiencies. For example, Wolfe et al. (2009) show auditors are susceptible to management persuasion tactics for IT, but not manual control issues. Auditors with lower self-perceived IT expertise assess control risk lower than auditors with higher self-perceived IT expertise (Brazel and Agoglia 2007). Further, auditors often lack even a base level of training in IT areas and thus, may not understand the purpose and scope of

[4] Data from a sample of IT specialists (N = 24) provides support for IT specialists spending time on both audit and advisory/consulting engagements. On average, IT specialists in the sample spend 66% on audits, 32% on consulting/advisory, and 2% on other areas; only three spend 100% of their time dedicated to audit work.

IT specialist work and subsequent reliance allowable (PCAOB 2012; Bauer and Estep 2014, 2016). Regulators allege a lack of appropriate testing related to system-generated report data used in control and substantive testing. When IT-related control issues are identified, insufficient adjustments to planned audit procedures occur, resulting in ineffective audit procedures and lowered audit quality (PCAOB 2012).

Given the ill-structured nature of classifying ICFR deficiencies and evidence of ineffective auditor decision making in this setting, auditor integration of input from IT specialists on IT-related ICFR issues is particularly important. It is unclear whether auditors properly use input received from IT specialists. Regulators allege and recent research suggests overreliance on audit specialists and specialist areas. Overreliance can result from 1) not challenging specialist provided input (i.e., accepting at face value) or 2) ignoring issues and concerns raised by specialists, resulting in inappropriate reliance (or overreliance) on specialist areas, e.g., IT audit aspects. Regulators allude to the first type of overreliance in discussing concerns about reliance on valuation specialists; for example, auditors purportedly do not expend the effort to understand or challenge the assumptions valuation specialists include in valuation models. For IT specialists, the second type of overreliance has been noted. Specifically, PCAOB inspectors noted undue reliance on IT-dependent controls and system generated information and cite ineffective communication and coordination with IT specialists as a root cause of this undue reliance.

For auditors to properly integrate IT specialist input, they first need to recognize input received as important. Tension exists in the current context as to whether or not auditors will recognize IT specialist input as important. Prior studies show auditors dispute the value of IT specialists and often view IT specialists as "budget busters" (Vendrzyk and Bagranoff 2003; Curtis et al. 2009; Bauer and Estep 2016). Bauer and Estep (2016) provide evidence that

relationship quality has been improving in recent years and auditors are better able to see the value in IT specialists and their input on audit engagements.

Weight of input: Influence of team identity

Prior research shows recognition of specific team member's expertise is key to improving judgments (Einhorn et al. 1977; Libby, Trotman, and Zimmer 1987) and integration of information received from others (Harvey et al. 2000). While IT specialists are by definition the IT experts on the team, the social aspect of the exchange of information between auditors and IT specialists may influence the extent to which auditors recognize and acknowledge that expertise. Social identities influence attitudes and behaviors of individuals, perceptions of in-group (i.e., those with whom an individual shares a relevant, salient identity) and out-group members, and perceptions of self (Tajfel 1978; Ashforth and Mael 1989). Bauer and Estep (2016) provide evidence that variation exists in the level of team identity between auditors and IT specialists on audit engagements (i.e., the extent to which auditors and IT specialists see themselves as one audit team). As lower level identities (e.g., department, workgroup) can have relatively more influence on behavior (Ashforth and Johnson 2001) than higher level identities (e.g., professional and organizational), the strength of shared team identity between auditors and IT specialists is an important social identity to consider in this context and likely influences auditor's perceptions or recognition of IT specialist expertise.[5]

Work on social identity theory shows individuals typically value input more from an in-group member than out-group member and have more positive impressions of in-group members (Ashforth and Mael 1989; Dovidio, Gaertner, and Validzic 1998; Van der Vegt and Bunderson

[5] Tension exists as to whether team identity is influential in the audit team setting as Smith and Kida (1991) show some established judgment-related biases do not generalize to settings where auditors perform familiar tasks. However, evidence of influential team identities has been noted across a variety of organizational and professional settings including research and development teams, military training, and medicine (e.g., Van der Vegt and Bunderson 2005; Hewett, Watson, Gallois, Ward, and Leggett 2009; Schaubroeck, Peng, and Hannah 2013).

2005; Kane, Argote, and Levine 2005; Kane 2010). For example, Kane et al. (2005) provide evidence that groups sharing an identity with a rotating member more likely adopt a superior production routine from that rotator than groups that do not share an identity with the rotator. Research in accounting also provides evidence of the benefits of a stronger team identity. For example, a stronger team identity leads to greater coordination, which improves the effectiveness of a horizontal incentive system (Towry 2003) and increased group cohesion leads to more creative group solutions (Chen, Williamson, and Zhou 2012). King (2002) finds group affiliation among auditor-subjects diminishes the negative bias resulting from repeated auditor-client interactions due to social pressure to conform to group norms in an experimental economics setting. Despite the likely increase in perceived value of IT specialist input, it is unclear whether increasing the strength of team identity would benefit auditor weighting of IT specialist input.

Sharing a stronger audit team identity with an IT specialist increases the perceived similarity with that IT specialist (Ashforth and Mael 1989) and makes the IT expertise of the specialist less salient. Thus, auditors who share a stronger audit team identity view the IT specialists as more similar to themselves.[6] A stronger shared identity can also result in members placing too much trust in information from an in-group member (Dukerich et al. 1998). Kadous et al. (2013) find that auditors weight advice from a stronger social bond peer similarly regardless of whether strong or weak justification (i.e., higher or lower input quality) accompanies the advice; they refer to this tendency as evidence of auditors employing a trust

[6] Research on groupthink is consistent with the premise that a stronger team identity (and increased perceived similarity) may result in negative team behaviors. Groupthink refers to the tendency of group members to think and act similarly due to a desire for harmony and conformity. A large literature provides evidence of poorer decision quality resulting from groupthink as members are less likely to bring up dissenting viewpoints, challenge one another, or critically evaluate alternatives (see Esser 1998 for a review).

heuristic. When a weaker social bond exists, auditors' weight on advice increases, with stronger justification strength.[7]

In the current study, I investigate a different aspect of input quality – accuracy of input. IT specialist input likely varies in terms of quality (e.g., accuracy) due to differences in skills and ability, as well as training and knowledge (Brazel and Agoglia 2007; Bauer and Estep 2014).[8] I use the term "accuracy" to refer to the level of correctness, i.e., more accurate input is closer to being correct than less accurate input. This differs from justification strength as accuracy could be the same across levels of justification strength. Specialists (or experts) do not always provide accurate, unbiased input (e.g., Cain, Loewenstein, and Moore 2005, 2011; Koch and Schmidt 2010). Thus, understanding auditors' ability to discern between levels of input accuracy is important, especially given concerns related to overreliance and discounting of IT specialist input discussed above. Investigating input accuracy provides a benchmark for evaluating the weight auditors place on input. While justification strength could also provide a benchmark for comparing weight of input, differentiating between levels of justification strength may not require context specific knowledge and experience. The ability of auditors to determine input accuracy likely depends on the relevance of auditor knowledge and experience to the type of issue being evaluated (e.g., whether or not it contains an IT aspect). Given the influence of context related knowledge and experience in my setting, I build my hypotheses by ICFR issue type, first considering non-IT related ICFR issues and then IT-related.

[7] Kadous et al. (2013) manipulate the strength of the social bond between the auditor and advisor via personal affiliation and potential for future interaction. For the stronger (weaker) social bond condition, the advisor, who is not a member of the audit team, is very much like (unlike) "someone who has helped you on work-related tasks in the past, someone you know well and like, and someone you expect to continue to interact with in the future" (Kadous et al. 2013). Future interaction with the advisor is very likely (unlikely).

[8] In fact, in a separate ongoing experiment with IT specialists, I find variation in the input IT specialists provide for the client ICFR cases used in this study. The input spans the range from inaccurate to accurate.

Non-IT related ICFR issues

For non-IT related ICFR issues, auditors have relevant knowledge to help them critically evaluate input received. In fact, one might question why auditors would even contemplate input from IT specialists on non-IT related ICFR issues. As mentioned earlier, IT specialist work focuses on risks and controls in general and is not limited to IT risks and IT controls. IT specialists often perform the work for entire control processes on audits (Bauer and Estep 2016) and may help clients design control procedures (both IT and non-IT) on advisory engagements. IT specialists frequently provide input on all types of control issues as at a minimum, they will review the list of identified control deficiencies and related classification before signing off on the audit file. IT specialists may even be the audit team members identifying the non-IT related ICFR issues in the first place. Even with the relevance of auditor knowledge and experience on non-IT ICFR issues, IT specialists are a credible source of input on these types of issues.

A stronger team identity increases the level of trust between the auditor and IT specialist (Haslam and Ellemers 2005) and as discussed above, the likelihood of seeing the IT specialist as a similar other, decreasing the salience of IT expertise. Gino et al. (2009) find individuals weight information more from a similar versus a dissimilar advisor when the judgment is about their own behavior. Individuals perceive advice from similar advisors as more informative about one's own behavior. The context of Gino et al. (2009) focuses on the concept of self and behaviors related to the self, which is different from making audit-related judgments. However, I expect the theory to generalize to the context of my study; non-IT related ICFR issues will be perceived as both the auditor and IT specialist's domain in the presence of a stronger team identity. Thus, auditors who share a stronger team identity with an IT specialist providing input will weight the

input relatively heavily regardless of input accuracy, despite having relevant knowledge to help evaluate input quality.

Auditors with a weaker team identity, given the absence of trust to rely on, will likely use their relevant knowledge to appropriately place heavier weight on more (versus less) accurate input for non-IT related issues. In sum, I expect a smaller difference in input weighting between more and less accurate input for auditors with a stronger versus weaker team identity. My formally stated hypothesis follows. Refer to Figure 1, Panel A for a graphical depiction.

> **Hypothesis 1:** For non-IT related ICFR issues, auditors who share a stronger team identity with an IT specialist will weight input relatively heavily regardless of input accuracy, but auditors who share a weaker team identity will weight input relatively heavily if it is more accurate and relatively lightly if it is less accurate.

IT-related ICFR issues

For IT-related issues, I expect auditors have less relevant knowledge to evaluate IT input (as compared to non-IT issues). One might expect auditors to defer to IT specialist judgment on IT-related issues given the overlap with the IT specialist's area of expertise. However, this could depend on the level of team identity strength given the importance of expertise recognition (Einhorn et al. 1977; Libby et al. 1987; Harvey and Fischer 1997; Harvey et al. 2000) and the influence of team identity strength on perceptions of expertise. Auditors who share a weaker team identity better recognize the IT expertise of the IT specialist than auditors who share a stronger team identity. Gino et al. (2009) show that the weight placed on information received from an advisor in making a judgment depends on both similarity with the advisor and the target of the judgment. As discussed above, they find individuals weight information more from a similar versus a dissimilar advisor when the judgment is about their own behavior. They also find individuals weight information less from a similar versus dissimilar advisor when the target of the judgment is others' behavior. This is again due to the perceived informativeness of the

advice – they perceive advice from dissimilar advisors as more informative about others' behavior. Also, as mentioned above, tension exists as to whether the theory will generalize to the current context as Gino et al. (2009) focus on the concept of self and one's own behavior, not a professional judgment context.

In the current context, IT-related issues will be seen as the IT specialist's domain for auditors sharing a weaker team identity. Auditors sharing a stronger team identity are less able to perceive that their similar other (the IT specialist) has salient expertise and thus, may view the IT-related issue as outside the domain of both the auditor and IT specialist. Therefore, auditors who share a weaker team identity (i.e., those for whom the IT specialist's domain of expertise is more salient) will more heavily weight IT specialist input on IT-related issues. Hypothesis 2 states my formal prediction. Refer to Figure 1, Panel B for a graphical depiction.

> **Hypothesis 2:** For IT-related ICFR issues, auditors with a weaker team identity will weight input received from an IT specialist more heavily than those with a stronger team identity.

An implication of Hypotheses 1 and 2 is a two-way interaction between ICFR issue type and team identity. When evaluating non-IT related (IT-related) ICFR issues, auditors who share a stronger versus weaker team identity with the IT specialist will weight input received more (less).

III. RESEARCH METHOD

Participants

Practicing auditors were recruited for participation through the Center for Audit Quality and American Accounting Association Access to Audit Personnel program.[9] A total of 101 participants from the eight CAQ member firms completed the experimental instrument via the online survey tool Qualtrics.[10] Participants are all senior-level auditors with 46.44 months of experience, on average.[11] Seventy-seven participants are CPAs, none are CISAs (certified information systems auditors – a common certification for IT specialists), and participants spend 35% of their time, on average, on SOX-related work.[12]

Task and design

My study employs a 2x2x(2x2) mixed design. I manipulate team identity and input quality between-subjects. Participants read and provide judgments on four client cases with ICFR issues adapted from Earley et al. (2008). Each case is for a different client and provides details regarding identified ICFR issues for a particular account or process. Participants were instructed to evaluate each case independently.[13] The within-subjects manipulations occur via the client cases. Two cases contain no IT components and two contain IT components (*Type*: Non-IT versus IT-related), with a higher and lower issue severity case for each type (*Severity*: Higher versus Lower). For lower severity cases, the ICFR issues fall between a control deficiency and

[9] I revised my instrument prior to data collection based on comments from the eight CAQ firms that improved the information provided and validated the materials would seem reasonable to the auditor participants.

[10] Of the 101 participants, 79 are Big 4 auditors and 22 are non-Big 4 auditors.

[11] While managers and partners will likely perform the final internal control classifications due to reporting-related decisions, senior-level auditors often make the initial assessments and higher-level auditors are influenced by recommendations made by subordinates (Earley et al. 2008; Ricchiute 1999). Further, senior and manager level auditors are most likely to be interacting with IT specialists on audit engagements, therefore my participants are an appropriate group to investigate how auditors integrate input from IT specialists.

[12] Months of experience in public accounting is significantly higher for those in the stronger versus weaker team identity condition ($p = 0.023$). Percentage of time spent on auditing (consulting) is marginally lower (higher) for those in the more versus less accurate condition with $p = 0.099$ ($p = 0.085$). Inferences remain unchanged when controlling for these variables.

[13] The order of completing client cases was randomized across participants.

significant deficiency and for higher severity, between a significant deficiency and material weakness, by design (Earley et al. 2008). I include two levels of severity for robustness and to provide a more complete picture of the audit environment as the various levels of severity have different reporting consequences. My main interest, however, lies in examining the higher severity (i.e., more troublesome) issue cases.[14] Therefore, I focus on these cases in my main results, and discuss results for the lower severity cases in supplemental tests. Refer to Appendix A for the experimental instrument.

Auditors assume the role of the lead auditor on the client engagements and perform initial ICFR issue classifications for the four cases. The case then informs participants that the lead IT specialist on the engagements has reviewed the client cases and presents a description of the IT specialist. The between-subjects manipulation of stronger versus weaker team identity takes place within this description and is described in detail in the next section. I reinforce the manipulation via an open-ended question asking participants to consider what it would be like to work with this IT specialist and enter any thoughts that come to mind.

After completing the open-ended questions regarding the IT specialist who will be providing input, the case informs participants that they will provide final judgments for each client case, this time receiving input from the IT specialist. I embed the between-subjects manipulation of input quality within the input received by providing more versus less accurate (i.e., higher versus lower quality) ICFR issue classification ratings from the IT specialist; the details of this manipulation are provided in the next section.

[14] Further, my theory and predictions are more likely to hold for high severity issues given auditors' asymmetric loss function and the potential for conservatism (Smith and Kida 1991) in the lower severity issues.

For each case, participants are reminded of their initial rating, receive IT specialist input (as described above), and perform final judgments.[15] Following these assessments, participants complete task-related questions including a team identity manipulation check, and rating the quality of the IT specialist input, and the competence, trustworthiness, and objectivity of the IT specialist. I also collect additional post-test measures related to experience with and perspectives on IT specialists and controls, self-perceived IT expertise (Brazel and Agoglia 2007), and professional background information. Refer to Appendix A for the full experimental instrument

Independent variables

Team identity

I induce a stronger versus weaker team identity between-subjects through three pieces of information about the IT specialist.[16] First, the IT specialist particularly enjoys (does not particularly enjoy) thinking about financial statement audit issues as compared to advisory/consulting issues for the stronger (weaker) condition.[17] As described earlier, in recent years, audit firms focus more heavily on advisory/consulting work and IT specialists serve dual roles, which likely influences the extent to which auditors share a team identity with IT specialists. Second, the IT specialist appears to want to be a helpful (only technically a) member of the team and tries to sit with (sits away from) the audit team while on-site for the stronger (weaker) condition. Bauer and Estep (2016) find sitting together or separate at client sites is a

[15] The final judgments are performed in the same case order as the initial judgments.

[16] Sharing a social identity can increase perceptions of competence (Sidanius, Pratto, and Mitchell 1994). Thus, I attempt to control for this by including a statement regarding the competency of the IT specialist on both audit and advisory/consulting engagements indicating the IT specialist splits time between the two in both conditions. See Appendix A for the experimental instrument, including the full descriptions provided in each condition.

[17] One may ask, how would an auditor find out this type of information about an IT specialist in the real world? Given that auditors and IT specialists interact throughout the year on audit engagements and are sometimes on-site at the client together, auditors may learn the other engagements IT specialists work on and IT specialists' views on the different types of engagements from casual and/or coordination discussions with the IT specialist. Bauer and Estep (2016) find that auditors are aware of the dual role of IT specialists as they express concerns regarding IT specialists' consulting focus and prioritization impacting audit-related work.

common factor associated with the strength of team identity. Finally, the participant views the IT specialist as a core (just obligatory) member of the team for stronger (weaker) team identity.[18]

Prior empirical research on team identity has typically taken one of two approaches for investigating the team identity construct: 1) field study where team identity is measured (e.g., Van der Vegt and Bunderson 2005) or 2) a lab experiment using students where team identity is manipulated via visual (e.g., shared color of name tags), linguistic (e.g., use of them versus us), and/or common fate (e.g., experimental payout determined by team actions versus individual actions) (e.g., Kane 2010). In reference to the first possible approach, I chose to manipulate (rather than simply measure) perceptions of team identity in order to allow for strong causal inferences. The second approach was not an option as my participants are working professionals who would be completing the experimental materials during firm training on their own computers. Thus, I designed the above described team identity manipulation to elicit stronger versus weaker perceptions of team identity through activating team-related and integration concepts.[19]

I purposefully avoided a manipulation similar to Kadous et al. (2013) (described in footnote 7) as I wanted to elicit team identity through team-related and integration concepts rather than a strong personal connection. Further, team identity is a multi-faceted construct that incorporates components such as cooperation, interaction, coordination, trust, etc. I strip away the interaction/personal connection piece with my manipulation and experimental design (as only one-way communication occurs from the IT specialist to the auditor) in order to provide a more narrow focus on other aspects of identity (e.g., perception of being part of the same team, trust). My manipulation design attempts to turn only one team identity "dial" as cleanly as possible. I

[18] The words "helpful", "technically", "core", and "obligatory" appear in all conditions to keep word choice consistent. See Appendix A for the experimental instrument, including the detailed manipulations.
[19] As later analyses show, my manipulation was successful.

leave it to future research to investigate the effects of other aspects of team identity, including interaction and personal connections.

Input quality

I embed the input quality between-subjects manipulation of more versus less accurate input within the input provided by the IT specialists for each case. As described further below, participants rate ICFR issue severity for each case on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). The same scale is used for the IT specialist input. For the two higher severity cases, participants in the more (less) accurate condition receive from the IT specialist a rating of 8.5 (3.5) and a classification that lies between a significant deficiency and material weakness (control deficiency and significant deficiency). For the two lower severity cases, I reverse these input ratings and classifications; participants in the more (less) accurate condition receive from the IT specialist a rating of 3.5 (8.5) and a classification that lies between a control deficiency and significant deficiency (significant deficiency and material weakness).[20] Refer to Appendix A for experimental instrument, including the detailed between-subjects conditions.

Dependent variables

Participants perform two initial classification assessments for each case: 1) rating ICFR issue severity on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11) and 2) classifying the ICFR issue using a forced-choice scale (Control deficiency, Significant deficiency, or Material weakness). Elicited final judgments include the same severity rating and ICFR issue classification judgments as in the

[20] An 8.5 on the ICFR issue severity rating scale corresponds to an ICFR issue being at the midpoint of a significant deficiency and a material weakness. A 3.5 on the severity rating scale corresponds to an ICFR issue being at the midpoint of a control deficiency and a significant deficiency. I hold constant justification for the provided rating for each case across the input quality conditions.

initial judgments, as well as the rationale for judgments (open-ended), and the degree of changes desired to planned audit procedures due to the issue on an 11-point scale with endpoints of "No changes required" (0) and "Substantial changes" (10). Weight of input employed by auditors in the control severity judgment is the key dependent variable. Following prior literature, weight of input is calculated using the formula below (Bonaccio and Dalal 2006; Gino et al. 2009; Kadous et al. 2013):

$$\frac{|\text{Final rating} - \text{Initial rating}|}{|\text{IT specialist rating} - \text{Initial rating}|}$$

Participants provided the initial and final ratings on the scales as described in the above paragraph. The IT specialist rating was provided to participants via the input quality manipulation, described in the previous section. This rating was either a 3.5 or an 8.5 depending on participant's assigned input quality condition and case. These ratings coincide with the rating scale used by participants for their initial and final ratings.

The weight of input measure is subject to limitations, thus careful analysis of the data is required (Bonaccio and Dalal 2006). First, when the initial rating equals the IT specialist rating, it returns an undefined value; this occurs for only three observations in my study (<1%) and following prior research (e.g., Yaniv 2004; Gino et al. 2009), I drop these observations from analysis. Second, the weight of input measure does not differentiate between judgments moving away from versus toward input. For example, for one observation the initial rating is 9, input is 3.5, and the final rating is 10.5; the weight of input value is 0.273 suggesting higher weighting even though the individual is moving away from input. Moving away from input occurs for 23 observations (~5%) and I adjust these weight of input values to 0. Third, the measure has a lower bound of zero, but no upper bound and when a final judgment overshoots the input received, the weight of input value is greater than 1. For example, for one observation the initial rating is 6,

input is 8.5, and the final judgment is 11, yielding a weight of input of 2. This occurs for 19 observations (~5%) and I truncate these weight of input values to 1. Finally, an initial judgment is not provided for one observation; thus I drop this observation from analysis as the weight of input cannot be calculated. The number of dropped and adjusted observations does not significantly differ across between-subject conditions (Stronger-More Accurate: 11, Stronger-Less Accurate: 12, Weaker-More Accurate: 12, Weaker-Less Accurate: 11; $p = 1.000$) or within-subject cases (Higher-Non-IT: 9, Higher-IT: 7, Lower-Non-IT: 16, Lower-IT: 10; $p = 0.7570$) using Fisher's exact test.

IV. RESULTS

Manipulation and recall checks

To test the effectiveness of my team identity manipulation, I use the *Inclusion of Other in the Self* scale (Aron, Aron, and Smollan 1992), a validated measure of identity (Tropp and Wright 2001) that has been used in prior identity-related audit research (Bauer 2015). I present participants with images of two overlapping circles labeled "Self" and "IT specialist." Seven variations are presented, coded one through seven, ranging from no overlap (weakest identity – coded as 1) to near-complete overlap (strongest identity – coded as 7). Participants select the image that best describes how "your personal attributes, qualities, and values align or overlap with the attributes, qualities, and values of the IT specialist who provided the input to you." Ratings are significantly higher for the stronger versus weaker team identity condition (4.57 versus 3.64, $t_{94} = 3.56$, $p < 0.001$).[21,22] I also ask participants a team-related recall check: "In terms of being a member of the team, you view the IT specialist who provided the input as:" that is rated on an 11-point scale with endpoints of "More obligatory than core" (-5) and "More core than obligatory" (5). Ratings are significantly higher for the stronger versus weaker team identity condition (1.85 versus -0.17, $t_{99} = 4.71$, $p < 0.001$).

To verify the within-subjects case severity manipulation, I run a repeated measures ANOVA on the initial issue severity ratings (see Table 1). Only a main effect of Severity is significant ($F_{96} = 13.34$, $p < 0.001$) and the means for the two higher severity cases are rated higher than the lower severity cases (6.75 and 6.43 versus 5.67 and 5.86).

[21] Five participants did not provide a response to this question.
[22] All reported p-values are two-tailed unless otherwise noted.

Hypotheses tests

Table 2, Panel A provides descriptive statistics for the weight of input employed across conditions for each of the four client cases and Panel B lists the repeated measures ANOVA results. Figure 2 provides a graphical depiction of the means. As noted in the method section, I manipulate issue severity for robustness and my main interest lies in the higher severity cases. Therefore, I focus on these higher severity cases in the following main results analyses and discuss the lower severity cases in supplemental tests.

Tests of Hypothesis 1: Non-IT related issue

I predict in H1, for non-IT related ICFR issues, auditors who share a stronger team identity with an IT specialist will weight input relatively heavily regardless of input accuracy, but auditors who share a weaker team identity will weight input relatively heavily if it is more accurate and relatively lightly if it is less accurate. As a first test of H1, I compare the difference in weight of input of more and less accurate input for stronger versus weaker identity. The test I use is identical to the standard disordinal interaction. I expect: Stronger/More accurate – Stronger/Less accurate < Weaker/More accurate – Weaker/Less accurate. Table 3 reports the results. In support of H1, the test is significant (see (1) in Table 3; $F_{1,93} = 3.23$, $p = 0.038$, one-tailed).

I perform simple effects tests to further investigate H1. Table 3 presents the results.[23] I find auditors with a weaker team identity weight input significantly heavier when receiving more versus less accurate input (see (2) in Table 3; $p < 0.001$, one-tailed). Auditors sharing a stronger identity with the IT specialist do not differentially weight across input accuracy conditions (see (3) in Table 3; $p = 0.357$). Auditors receiving less accurate input weight input differently

[23] While not reported in Table 3, I find a significant main effect of Input Quality, where auditors place more weight on more accurate input than less accurate input ($F_{1,93} = 9.75$, $p = 0.002$).

depending on strength of identity with stronger identity auditors placing heavier weight on input than weaker identity auditors (see (4) in Table 3; p = 0.032, one-tailed). Finally, auditors receiving more accurate input do not differentially weight across team identity conditions (see (5) in Table 3; p = 0.527).[24] Thus, I find strong support for H1.

Tests of Hypothesis 2: IT-related issue

In H2, for IT-related ICFR issues, I predict auditors with a weaker team identity will weight input received from an IT specialist heavier than those with a stronger team identity. To test H2, I test for a main effect of team identity by comparing the weight of input for weaker versus stronger identity across input accuracy levels. Results indicate that for the IT-related issue case, auditors with a weaker identity weight input significantly more than auditors with a stronger identity (see (1) in Table 4; p = 0.031, one-tailed). Thus, H2 is supported.

I also perform additional tests for the IT-related case; Table 4 reports the results.[25] I compare the difference in weight of input of more and less accurate input for stronger versus weaker identity. The test is insignificant (see (2) in Table 4; $F_{1,93} = 0.81$, p = 0.371). However, the simple effects of more versus less accurate input within each identity condition provide evidence of stronger team identity auditors being less sensitive to input quality levels. Auditors with a stronger team identity do not differentially weight input across more and less accurate input (see (3) in Table 4; $F_{1,93} = 1.41$, p = 0.238). However, auditors with a weaker team identity place significantly heavier weight on more versus less accurate input (see (4) in Table 4; $F_{1,93}$ = 0.6.30, p = 0.014). In further support of weaker identity auditors using more appropriate input weighting, auditors with a weaker team identity place heavier weight on input than auditors with

[24] I also run a planned contrast with weights (1, 1, 1, -3) corresponding to (Stronger/More accurate, Stronger/Less accurate, Weaker/More accurate, Weaker/Less accurate). The planned contrast is significant: $F_{1,93} = 11.01$, p < 0.001, one-tailed.

[25] While not reported in Table 4, I find a significant main effect of Input Quality, where auditors place more weight on more accurate input than less accurate input ($F_{1,93} = 6.76$, p = 0.011).

a stronger team identity when input is more accurate (see (5) in Table 4; $F_{1,93} = 4.08$, $p = 0.046$), but not less accurate (see (6) in Table 4; $F_{1,93} = 0.47$, $p = 0.497$).

Summary

As mentioned earlier, H1 and H2 imply an interaction between Team Identity and Issue Type. Per Table 2, Panel A, the mean weight of input for participants in the stronger team identity condition is higher than the weaker condition for non-IT related ICFR issues (0.40 versus 0.31, respectively) and lower for IT-related ICFR issues (0.29 versus 0.37, respectively). This pattern is significant as indicated by the Team Identity*Issue Type interaction in Table 2, Panel B ($p = 0.013$).

In summary, I find strong support for H1 and H2. I find evidence that auditors with a weaker team identity exhibit preferable weighting strategies for higher severity issues, the focus of these tests and the issues most concerning from an audit quality effectiveness perspective. Auditors with a weaker identity place heavier weight on more (versus less) accurate input and place heavier weight on input from IT specialists on issues in the area of their expertise compared to participants with a stronger team identity.

Supplemental tests

Lower Severity Issues

The pattern of results for the lower severity cases shows directionally heavier weighting for less versus more accurate input (see Figure 2, Panel B). Recall from the design of the input accuracy manipulation, for lower severity cases, less accurate input reflects higher severity than more accurate input. Heavier weight on the less accurate input is consistent with auditor conservatism, or the tendency to give more attention to, and be more influenced by, negative information or outcomes; see Smith and Kida (1991) for a review of the extensive literature

supporting auditor conservatism. Thus, conservative auditors are more likely to anchor on input signaling high severity, which is the less accurate input for cases where the ICFR issue is truly low in severity. This conservatism tendency is significant, as indicated by the two-way interaction of Severity*Input Quality in the repeated measures ANOVA captured in Table 2, Panel B ($p < 0.001$). For the higher (lower) severity cases, auditors place heavier weight on input in the more (less) accurate input condition. In Tables 5 and 6, I report results of the same tests for H1 and H2 for the lower severity cases as I perform above for higher severity cases.

For H1, the results in Table 5 provide evidence of a trust heuristic pattern (heavier weighting in stronger team identity condition regardless of input accuracy and differential weighting for the weaker team identity condition across input accuracy levels), but with heavier weighting in the less rather than more accurate condition for the weaker team identity. Specifically, auditors with a weaker team identity receiving less accurate input weight that input significantly heavier than weaker team identity auditors receiving more accurate input (see (2) in Table 5; $p = 0.008$, one-tailed). Auditors in the weaker/less accurate condition do not weight input significantly different from auditors who share a stronger team identity also receiving less accurate input (see (4) in Table 5; $p = 0.378$, one-tailed). Finally, for auditors receiving more accurate input, those with a weaker team identity weight input significantly lighter than auditors with a stronger team identity (see (5) in Table 5; $p = 0.025$).

Table 6 reports results for H2 tests of the lower severity, IT-related issue. Results indicate that auditors do not weight input differently across identity conditions (see (1) in Table 6; $p = 0.498$, one-tailed). Thus, H2 is not supported for the lower severity ICFR issues.

In summary, the non-IT related lower severity case shows continued presence of a trust heuristic for auditors with a stronger team identity. However, auditor tendency for conservatism

results in inappropriately placing heavier weight on less versus more accurate input. Arguably, this inappropriate heavier weight creates an efficiency rather than effectiveness problem. For the lower severity IT-related issue, the strength of team identity did not influence auditor weight on IT specialist input.

Outcome judgments

Correctness of classification. To verify participants attend to the differential input from IT specialists across input quality conditions, I test for differences in the final ICFR classifications provided. Regulator concerns of overreliance (PCAOB 2012, 2015) and recent interview-based literature providing evidence of overreliance on, and trust in, audit specialists (Griffith et al. 2014; Boritz et al. 2015) support the idea that these classifications will be influenced by IT specialist input. However, IT specialist input may not impact auditor classifications as recent experimental work on audit specialists shows that incorporating information from specialists depends on whether auditors are motivated to incorporate cues from specialists (Griffith 2015b). Further, IT specialists express concerns that auditors are ignoring the input they provide on audit engagements (Bauer and Estep 2016). However, given the influence of advisor input evident in prior auditing studies in both formal (Ng and Shankar 2010; Gold, Knechel, and Wallage 2012) and informal (Kadous et al. 2013) advice settings, if attended to, I expect auditor classifications of ICFR issues will be influenced by the IT specialist input received.

I create a binary variable to capture whether the final ICFR issue classification provided is correct. For the two higher (lower) severity cases, a classification of significant deficiency or material weakness (control deficiency or significant deficiency) is correct; a classification of control deficiency (material weakness) is incorrect. Table 7, Panel A captures the percentage of

correct classifications across cases. The percentage correct is higher in the more versus less accurate condition for all cases. To test for a significant difference in correctness between more versus less accurate input conditions, I run a repeated measures generalized linear model with the correctness of the ICFR classification as the dependent variable. As documented in Table 7, Panel B, a significant main effect of accuracy is present ($p < 0.001$) providing support for more (less) accurate input resulting in more (less) correct ICFR issue classifications.[26] The marginally significant interaction of Severity*Input Quality is due to a larger difference in correct classifications between the more and less accurate input quality conditions for higher versus lower severity cases. The difference in the percentage of correct classifications between more and less accurate conditions is 25% across the higher severity cases (95% - 70%) and 10% across the lower severity cases (87% - 77%). This provides evidence the improvement in ICFR classifications is greater for higher severity cases. Overall, this analysis shows participants attend to the differential information received across input quality conditions as their final judgments significantly differ.

Final severity rating. In this section, I investigate the influence of my between- and within-subjects variables on the final severity ratings provided by participants. Table 8, Panel A provides the descriptive statistics of the final severity ratings for each case by condition. I perform a repeated measures ANOVA with the final ICFR issue severity rating as the dependent variable (see Table 8, Panel B). Given the within-subjects manipulation of severity, higher (lower) ratings for higher (lower) severity cases are more accurate. Similar to the analysis on correct classifications, I find a significant Severity*Input Quality interaction ($F_{1, 97} = 50.26$, $p < 0.001$). Final ICFR issue severity ratings are higher (lower) for higher severity cases when

[26] I also ran logit regressions and found similar results regarding a main effect of input quality and no other significant effects.

auditors are provided more (less) accurate input. For lower severity cases, ratings are lower (higher) for more (less) accurate input.[27]

Panels C, D, E, and F in Table 8 summarize the results of main and simple effects by case. For the higher severity-non-IT related case (Table 8, Panel C), final severity ratings are significantly higher for the more versus less accurate condition (see (2); $F_{1, 97} = 11.22$, $p = 0.001$). Consistent with stronger team identity auditors weighting input similarly across more and less accurate input, final severity judgments are significantly different across more and less accurate input (see (4); $F_{1, 97} = 10.39$, $p = 0.002$). Stronger-more accurate condition ratings are higher than stronger-less accurate condition ratings. Consistent with weaker team identity auditors differentially weighting input across more and less accurate input, final severity judgments do not significantly differ across more and less accurate input (see (5); $F_{1, 97} = 2.32$, $p = 0.131$).

For the higher severity-IT related case (Table 8, Panel D), final severity ratings are significantly higher for the more versus less accurate condition (see (2); $F_{1, 97} = 19.74$, $p < 0.001$). Final severity judgments are significantly different across more and less accurate input for both stronger (see (4); $F_{1, 97} = 9.94$, $p = 0.002$) and weaker (see (5); $F_{1, 97} = 9.80$, $p = 0.002$) team identity auditors. Auditors in the more accurate conditions rate the issue higher than auditors in the less accurate condition.

For the lower severity-non-IT related case (Table 8, Panel E), final severity ratings are significantly higher for the less versus more accurate condition (see (2); $F_{1, 97} = 14.58$, $p < 0.001$). Consistent with stronger team identity auditors weighting input similarly across more and less accurate input, final severity judgments are significantly different across more and less accurate input (see (4); $F_{1, 97} = 15.59$, $p < 0.001$). Stronger-less accurate condition ratings are

[27] Inferences are unchanged when controlling for initial ICFR severity rating judgments

higher than stronger-more accurate condition ratings. Consistent with weaker team identity differentially weighting input across more and less accurate input, final severity judgments do not significantly differ across more and less accurate input (see (5); $F_{1, 97} = 2.16$, $p = 0.145$). Additionally (and again consistent with the weight of input results), the difference in final severity ratings of more and less accurate input conditions is larger for stronger versus weaker team identity auditors at a marginally significant level (see (3); $F_{1, 97} = 2.99$, $p = 0.087$).

For the lower severity-IT-related case (Table 8, Panel F), final severity ratings are significantly higher for the less versus more accurate condition (see (2); $F_{1, 97} = 15.98$, $p < 0.001$). Final severity judgments are significantly different across more and less accurate input for both stronger (see (4); $F_{1, 97} = 12.20$, $p = 0.001$) and weaker (see (5); $F_{1, 97} = 4.70$, $p = 0.033$) team identity auditors. Auditors in the less accurate conditions rate the issue higher than auditors in the more accurate condition.

Perceptions of IT specialist and input received

I collected measures related to participants' perceptions of the IT specialist and the input received. I elicited overall quality of the IT specialist input on an 11-point scale with endpoints of "Very low quality" (0) and "Very high quality" (10), the competence (11-point scale with endpoints "Very low competence" and "Very high competence"), objectivity (11-point scale with endpoints "Not at all objective" and "Extremely objective"), and trustworthiness (11-point scale with endpoints "Not at all trustworthy" and "Extremely trustworthy") of the IT specialist providing the input, and whether the participant would want to work with the IT specialist again on an 11-point scale with endpoints of "Definitely not" (-5) and "Definitely" (5). I run separate ANOVAs (see Table 9, Panels A through E) with each of these measures as the dependent

variable and find a significant main effect of team identity ($p < 0.02$) on all five measures.[28] Perceptions of the IT specialist and the IT specialist's input are significantly more favorable for the stronger versus weaker team identity condition. Thus, these results provide support for the increased level of trust when a stronger team identity is present. Further, these results are interesting to consider because, despite having a significantly more favorable impression of the IT specialist, auditors who share a stronger team identity with an IT specialist do not weight input significantly higher overall than auditors who share a weaker team identity.

Open-ended responses

Identity manipulation. After reading the description of the IT specialist providing input (where the team identity manipulation took place), participants were asked the following open-ended question: "You may or may not have not worked with an IT specialist quite like this in the past, but please take a minute to think about what it would be like to work with this person. What are some thoughts that come to mind? Please type your thoughts below and again, take only a minute to do this."[29] The coding categories (described in Table 10) aim to capture what concepts were activated for participants by the team identity manipulation and what aspects of the manipulation stood out. Additionally, an alternative explanation for H2 results, regarding auditors with a weaker team identity placing heavier weight on IT specialist input than auditors with a stronger team identity, is that auditors with a weaker team identity perceive the IT specialist to be more competent about IT-related matters than auditors with a stronger team identity, due to the team identity manipulation.[30] A coder with five years of Big 4 audit

[28] Reported results are robust to controlling for these factors.
[29] The team identity manipulation took place before the input quality manipulations, therefore analyses are only required for the team identity conditions.
[30] While this explanation is unlikely as auditors with a stronger team identity rated the IT specialist as more competent overall than auditors with a weaker team identity, perceptions of IT-related competence could have differed.

experience and I coded responses; both coders were blind to experimental conditions. Initial intercoder agreement was 91.32%, with a Kappa of 0.693 ($p < 0.001$ indicating agreement better than chance). We reconciled all items of disagreement.

Auditors with a stronger team identity are significantly more likely to mention the IT specialists' IT-related competence than auditors with a weaker team identity (16 versus one, respectively, $p < 0.001$).[31] Participants are more likely to mention effectiveness concerns related to the IT specialist and IT specialist's work in the weaker versus stronger team identity condition (15 versus one, respectively, $p < 0.001$). Thus, the alternative explanation posed above is unlikely. Further, as the goal of the team identity manipulation was to prompt team-related concepts such as integration, a large number of participants mention these in both team identity conditions (Stronger: 21 and Weaker: 23, $p = 0.625$).

More participant responses are positive for stronger versus weaker team identity conditions (39 versus 5, respectively, $p < 0.001$) and more responses are negative for weaker versus stronger (29 versus 1, respectively, $p < 0.001$). No differences were noted across the team identity conditions in terms of mentioning specific aspects of the manipulation: IT specialist preference for auditing or consulting (Stronger: 11 versus Weaker: 10, $p = 0.846$), IT specialist experience with both auditing and advisory engagements (Stronger: five versus Weaker: five, $p = 0.974$), whether the IT specialist was a helpful member of the team or only technically a member (Stronger: six versus Weaker: four, $p = 0.527$), whether or not the IT specialist sits with the audit

[31] There is no difference across conditions in mentioning the IT specialists' audit-related or general competence; see Table 10.

team (Stronger: 1 versus Weaker: 4, p = 0.162), and whether the IT specialist is a core or obligatory member of the team (Stronger: four versus Weaker: four p = 0.977).[32]

Final judgment rationale. Following the completion of the final severity rating and forced choice classification in each case, participants were asked to "Please document the rationale for the judgment and classification you just completed on the previous page." Table 11 captures the results of coding those responses and related analyses. The coding categories (described in Table 11) aim to capture whether the theory-based expectation regarding the increased salience of the IT specialists' expertise for auditors in the weaker team identity condition holds. I expect that auditors sharing a weaker team identity with the IT specialist providing input will be more likely to mention the IT specialist in their rationale and be more likely to notice the IT aspects of the cases. A coder with five years of Big 4 audit experience and I coded responses; both coders were blind to experimental conditions. Initial intercoder agreement was 92.96%, with a Kappa of 0.760 ($p < 0.001$ indicating agreement better than chance). We reconciled all items of disagreement.

Results of coding are consistent with my theory-based expectations. Auditors with a weaker team identity are more likely to mention the IT aspects of the cases than auditors with a stronger team identity; this difference is marginally significant (Table 11, Panel A; p = 0.055, one-tailed).[33] Further, auditors with a weaker team identity are more likely to mention the IT specialist in their rationale responses than auditors with a stronger team identity (Table 11, Panel B; p = 0.043, one-tailed).[34] A significant Type*Input Quality interaction is also present (p =

[32] There was no difference across team identity conditions in the number of participants who did not mention any of the code categories (Stronger: three versus Weaker: five, p = 0.444) nor the length of response (Mean for stronger: 252.98 versus Mean for weaker: 264.72, t = -0.40, p = 0.693).

[33] I control for the total length of the rational responses as participants who wrote more would be more likely to mention specific case facts, including any IT aspects.

[34] I control for the total length of rational responses as participants who wrote more would be more likely to mention the IT specialist input.

0.047); auditors are most likely to mention the IT specialist when the input they receive is more accurate and the case is IT-related.

We also coded for whether the participants mention agreeing or disagreeing with the IT specialist. Table 11, Panel C captures the results of mentioning agreement with the IT specialist. A significant Severity*Input Quality interaction is present ($p = 0.010$); auditors are most likely to mention agreement with the IT specialist in the higher severity cases when input is more accurate. Table 11, Panel D captures the results of mentioning disagreement with the IT specialist. While not significant ($p = 0.106$), auditors in the weaker team identity condition are the more likely to mention disagreement than auditors in the stronger team identity. Auditors in the less accurate condition are (at a marginally significant level, $p = 0.084$) more likely to disagree than auditors in the more accurate condition; this appears to be driven by those in the weaker-less accurate condition. A significant Severity*Input Quality interaction is present ($p = 0.050$), where auditors are more likely to disagree in the higher severity cases when input is less accurate. Again, this appears to be driven by auditors in the weaker-less accurate condition.

Table 11, Panel E captures the descriptive statistics and repeated measures ANOVA for the number of case facts mentioned by participants in their rationale responses.[35] A marginally significant Input Quality*Team Identity interaction exists ($p = 0.090$); in both the stronger and weaker team identity conditions, auditors mention more case facts when the IT specialist input is more versus less accurate. The difference between number of case facts in more and less accurate conditions is larger for auditors in the weaker versus stronger team identity condition. Table 11, Panel F captures the descriptive statistics and repeated measures ANOVA for the length of the

[35] I control for the total length of the rational responses as participants who wrote more would be more likely to mention a higher number of case facts.

rationale responses (i.e., the character count of the response). No significant differences are noted across the between- or within-subjects variables.

Systematic versus heuristic processing

The Elaboration Likelihood Model of Persuasion (Petty and Cacioppo 1986) is a potentially relevant mechanism for investigating and describing the differences in how auditors with different levels of team identity strength process information received from IT specialists. Prompting a weaker team identity could result in high elaboration likelihood due to auditors having high motivation to process the input information received. A stronger team identity could result in low elaboration likelihood and a reliance on simple cues (such as trust) to make decisions. Some of the results described for stronger versus weaker team identity conditions is consistent with this heuristic versus systematic processing, respectively. For example, the lower sensitivity of auditors with a stronger team identity to input quality levels is consistent with heuristic processing of the IT specialist input (described by Kadous et al. (2013) as the trust heuristic). The differentiation between input quality levels by weaker team identity auditors is consistent with more systematic processing. The open-ended responses, however, do not provide consistent (or inconsistent) evidence of different elaboration levels. The number of case facts participants mention in the judgment rationale responses does not differ, nor does the length of responses, across team identity conditions. This could be due to the absence of differential elaboration *or* due to the design of the open-ended rationale question being unable to capture differences in elaboration. Prior accounting research on the Elaboration Likelihood Model has used surprise free recall exercises to purposefully measure whether differences in elaboration is present across conditions by measuring differences in case facts recalled, links made between cases facts, and links to other knowledge (e.g., Griffith 2015b). As the rationale responses were

not my main dependent variable of interest, I did not design the question with the goal of measuring these items. Future research should investigate whether the strength of team identity between auditors and specialists impacts the level of elaboration auditors employ when processing evidence received from specialists.

Decision strategies

Table 12 summarizes the results of identifying participant decision strategy based on initial judgment, final judgment, and IT specialist input received. This analysis provides a more nuanced view into how the participants arrived at their final judgments, beyond the weight of input measure. Table 12, Panel B provides evidence of weaker team identity auditors using a better decision strategy than stronger team identity auditors related to when participants matched the IT specialist input in their final judgment. A significant Input Quality*Team Identity interaction is present ($p = 0.028$), where weaker team identity auditors more often match input when it is more versus less accurate, while stronger team identity auditors more often match input when it is less versus more accurate. Further, a significant Type*Team Identity interaction is present, where stronger team identity auditors are more likely match IT specialist input in non-IT related issues and weaker team identity auditors are more likely to match input in the IT-related issues.

Evidence related to other decision strategies supports the tendency for auditors to exhibit conservatism, as discussed earlier. Table 12, Panel A summaries the results related to instances when participants moved from their initial judgments away from IT specialist input to arrive at their final judgments. A significant Severity*Input Quality interaction exists ($p = 0.020$), where auditors more frequently move away from input in the higher severity cases when input is less accurate and in the lower severity cases when input is more accurate. The input provided in the

higher severity-less accurate and lower severity-more accurate indicate the issue is of lower severity. Similarly, in Table 12, Panel C, participants are most likely to stay with their initial judgments (i.e., final judgment is equal to initial judgment) when input is less accurate in the higher severity cases and more accurate in the lower severity cases.[36] Again, these are the conditions where input indicates the issue is less severe. Finally, Table 12, Panel D provides evidence of auditors being more likely to move toward input (but not average; the decision strategy of averaging is discussed next) that indicates an issue is of high severity. Participants most frequently moved from initial judgments toward the IT specialist input to arrive at final judgments when input is more accurate in the higher severity cases and less accurate in the lower severity cases. These are the conditions where input indicates the issue is of high severity. Taken together, the patterns of these decision strategies across the conditions and cases provides strong evidence of the tendency for auditor conservatism, or a desire to avoid negative audit outcomes that might result from stating an issue is of low severity and subsequently discovering the issue actually of high severity.

Table 12, Panel E provides the results related to instances when participants averaged their initial judgment and the IT specialist input to arrive at their final judgment. Averaging has been noted as a best practice approach for incorporating input into one's judgments (regardless of the quality or certainty of the input) to reach the highest quality decisions across a wide variety of decision contexts (Soll and Larrick 2009). A marginally significant Type*Input Quality interaction ($p = 0.073$) exists; participants are most likely to average when the case is IT-related and they receive more accurate input. Participants are least likely to average when the

[36] A marginally significant four-way Severity*Type*Input Quality*Team Identity interaction is present ($p = 0.077$) for the decision strategy of not changing from initial judgment. This indicates different patterns exist in terms of the frequency off auditors not changing from their initial judgment for the between-subjects conditions (Input Quality x Team Identity) across the four client cases.

case is IT-related and they receive less accurate input. Participants are equally likely to average across input quality conditions when the case is not IT-related.

V. CONCLUSION

In today's audit ecology, audits teams made up of auditors and specialists work together to complete the required audit procedures and determine appropriate audit conclusions. To improve our understanding of the audit teaming environment, I investigate how auditors integrate input received from IT specialists (Trotman et al. 2015). Drawing on social identity theory, expertise and advice literatures, I specifically examine the extent to which auditors weight input received from an IT specialist on ICFR issue classification judgments and how the strength of team identity influences the weight placed on input. I predict and find auditors who share a weaker team identity place heavier weight on more (versus less) accurate input and auditors who share a stronger team identity with an IT specialist weight input relatively heavily regardless of input accuracy for non-IT related ICFR issues. For IT-related issues, auditors who share a weaker team identity with the IT specialist providing input weight the input received heavier than auditors who share a stronger team identity.

Regulators and recent research highlight concerns regarding overreliance on specialist areas and ineffective communication and coordination between auditors and IT specialists. My dissertation investigates a potential underlying cause of these issues – the way in which auditors integrate input from IT specialists. Thus, I bridge the lines of research on audit specialists (e.g., Griffith 2015a, 2015b; Griffith et al. 2014; Bauer and Estep 2014, 2016; Boritz et al. 2015) and advice taking in auditing (e.g., Ng and Shankar 2010; Gold, Knechel, and Wallage 2012; Kadous et al. 2013).

I find evidence of benefits to auditors sharing a weaker team identity with audit specialists; that is, auditors weight input from the specialist more heavily (compared to those auditors with a stronger team identity) when the issue overlaps with the domain of the

specialist's expertise. Auditors with a weaker team identity appropriately differentiate between levels of input quality for more severe issues as auditors who share a stronger team identity with the IT specialist providing input are less sensitive to levels of input quality. However, I also find evidence of a preference for conservatism, indicating auditors with a weaker team identity are not necessarily always differentiating based on the level of input quality, but rather employing a conservative heuristic. This heuristic can still be viewed as functional from an effectiveness perspective, as it only results in an inappropriate weighting scheme in the lower severity issues.

An interesting implication to consider regarding the downside of a stronger team identity between auditors and IT specialists is that a stronger team identity may be more likely to form on clients with economic importance (in general and to the audit firm) as those auditors and IT specialists likely spend more time together on site at the client. However, a stronger team identity may be more likely to form on smaller clients due to easier communication on smaller teams and a more cohesive feel among audit team members (Bauer and Estep 2016). Further, a large literature exists supporting the positive benefits of a stronger team identity such as increased cooperation, loyalty, and information sharing. Therefore, encouraging a weaker team identity between auditors and IT specialists may result in sacrificing these benefits. My dissertation motivates future research to find ways to capitalize on these benefits of stronger team identity and the input integration benefits of a weaker team identity identified in my study. Further, future research should investigate the implications of team identity on interactions between auditors and other specialists, such as tax or valuation, especially as recent research highlights ongoing issues with valuation specialists on audit engagements (Griffith et al. 2014). Future research can also consider the implications of team and shared identities with specialists outside of the firm.

The implications as well as limitations of my dissertation provide fruitful avenues for future research. While my experimental design allows for control to make causal inferences, the lack of interaction between auditors and IT specialists could alter the impact of stronger and weaker team identities the way auditors and IT specialists work together. Further, the participants made their ICFR assessment judgments in isolation, whereas in the audit environment, these decisions would be made in a hierarchical team setting (e.g., Chen, Trotman, and Zhou 2015). Future research should investigate whether these interpersonal interactions influence the way in which audit specialist input is integrated into audit team decisions, as well as whether a stronger team identity could be more beneficial in the auditor-specialist setting in the presence of interpersonal interaction for other aspects of teaming behavior, such as information sharing.

While I investigate the effects of a shared team identity between auditors and IT specialists, other relevant social identities exist, such as client identity, organizational identity, and professional identity (Bamber and Iyer 2002, 2007; Suddaby et al. 2009; Bauer 2015). Depending on the strength and salience of these various identities (Bauer 2015), interactions could occur that influence how auditors differentially weight input from specialists, especially when the input is consistent or inconsistent with client preferences. Finally, other contextual features of the audit environment, such as time pressure, budget pressure, or client importance, could influence how willing auditors are to listen to audit specialists. Future research can investigate these potential interacting variables to further improve our understanding of how auditors incorporate input from audit specialists.

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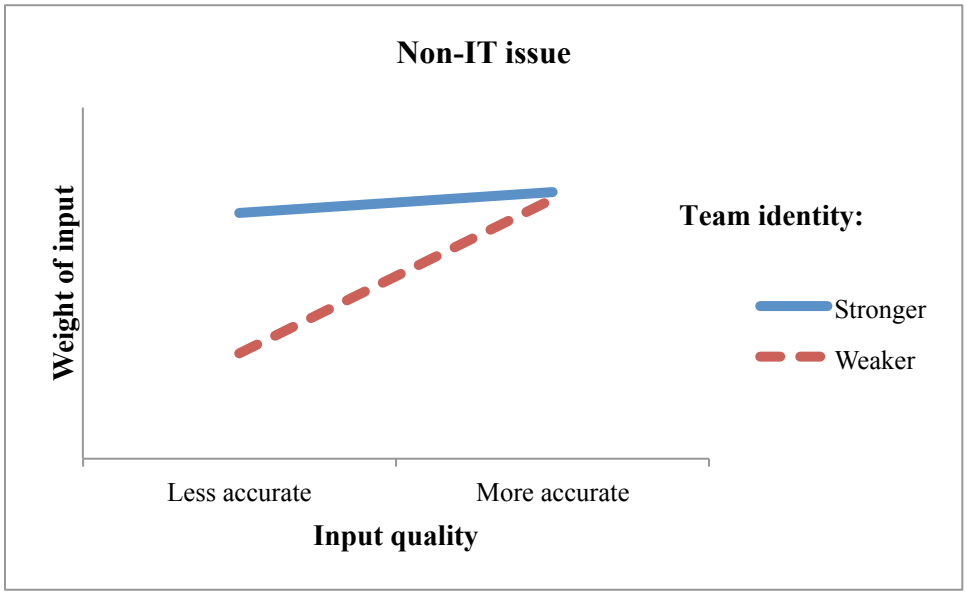
FIGURES

Figure 1
Hypotheses Graphs

Panel A: Hypotheses 1 Prediction



Panel B: Hypotheses 2 Prediction

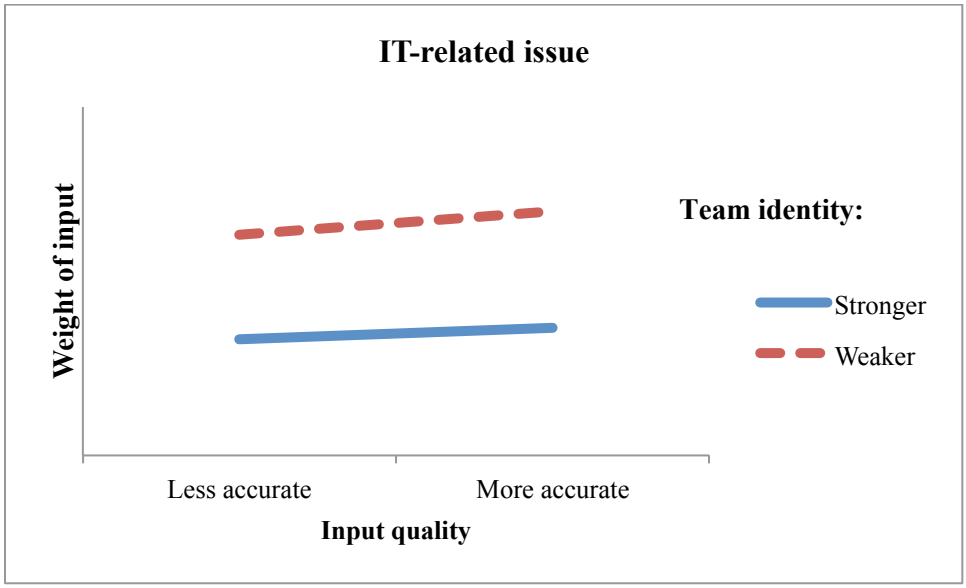
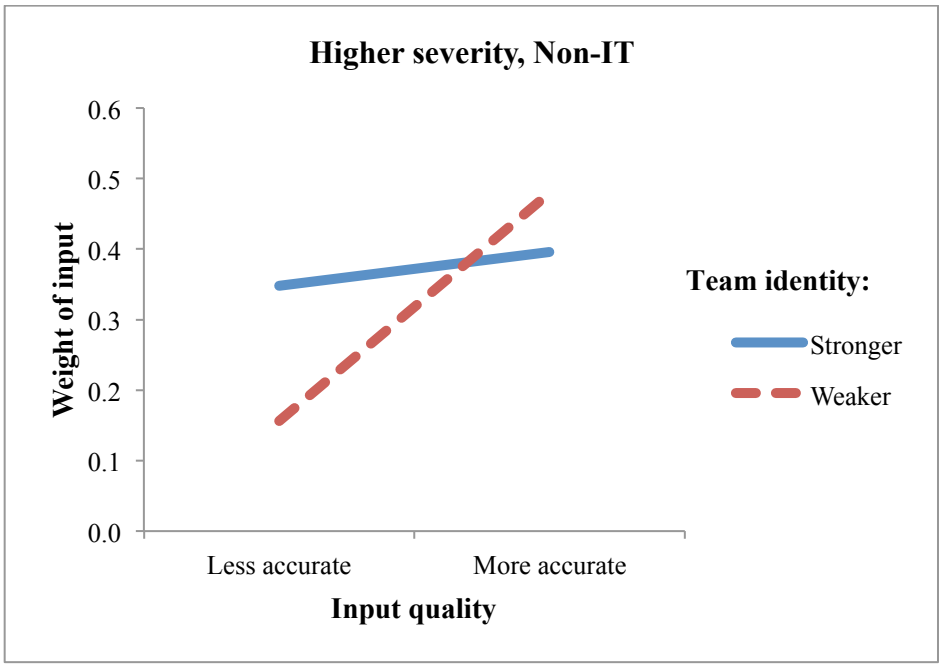


Figure 2
Results Graphs

Panel A: Higher Severity Cases[a]



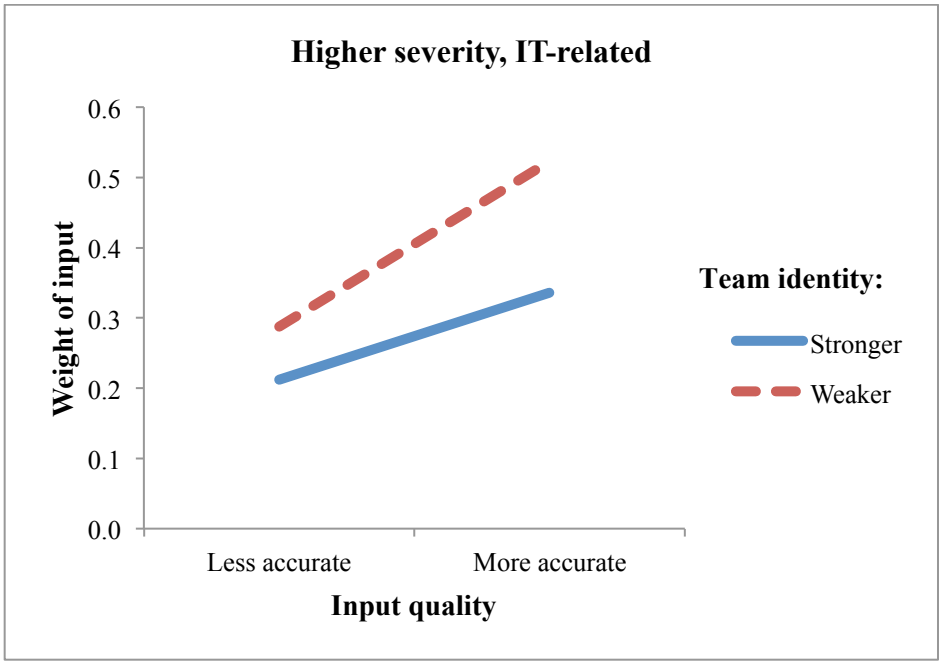
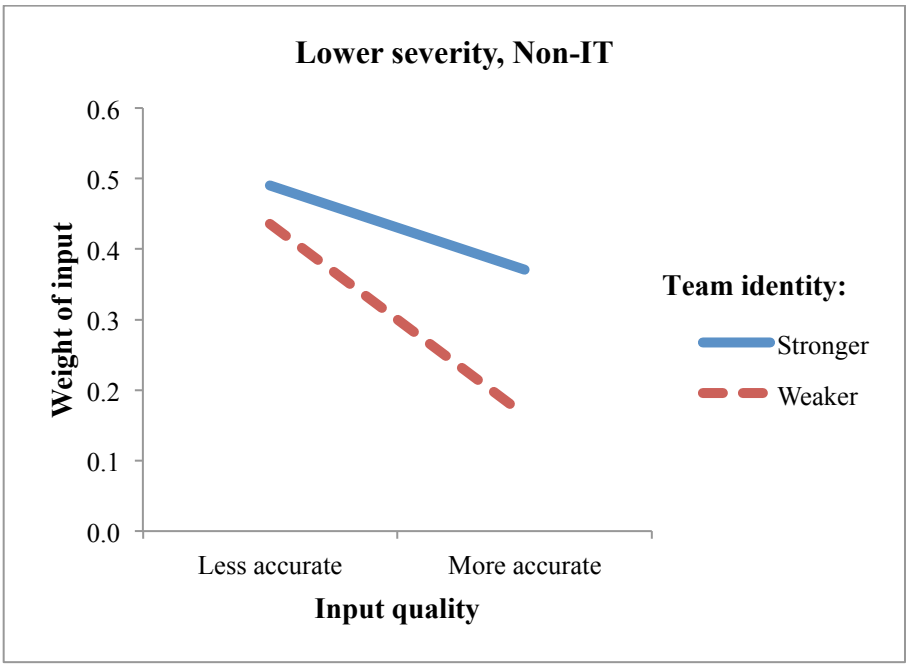
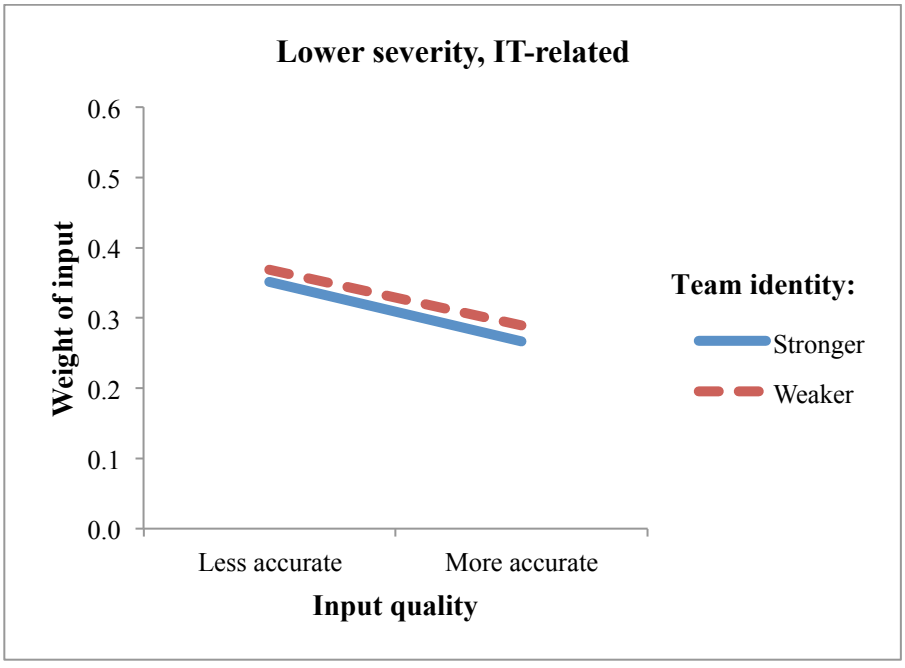


Figure 2 (continued)
Results Graphs

Panel B: Lower Severity Cases[a]





[a] Refer to Table 1 for variable descriptions.

TABLES

Table 1
Initial Severity Rating

Panel A: Descriptive statistics – Mean, (Standard Error), Number of observations

Within: Severity		Team Identity	Within: Type: No IT — Input Quality: Less	Within: Type: No IT — Input Quality: More	Within: Type: No IT — Average across input quality	Within: Type: IT — Input Quality: Less	Within: Type: IT — Input Quality: More	Within: Type: IT — Average across input quality	Within: Type: Average across type — Input Quality: Less	Within: Type: Average across type — Input Quality: More	Within: Type: Average across type — Average across input quality
Higher		Stronger	7.19 (0.51) 25	6.88 (0.51) 26	7.04 (0.36) 51	6.33 (0.48) 25	6.37 (0.39) 26	6.35 (0.30) 51	6.76 (0.35) 50	6.63 (0.32) 52	6.69 (0.24) 102
		Weaker	6.79 (0.61) 23	6.18 (0.46) 27	6.46 (0.37) 50	6.46 (0.52) 23	6.55 (0.41) 27	6.51 (0.32) 50	6.63 (0.39) 46	6.36 (0.31) 54	6.49 (0.25) 100
			7.00 (0.39) 48	6.53 (0.35) 53	6.75 (0.26) 101	6.39 (0.35) 48	6.46 (0.28) 53	6.43 (0.22) 101	6.70 (0.26) 96	6.49 (0.22) 106	6.59 (0.17) 202
Lower		Stronger	5.95 (0.48) 24	5.47 (0.47) 26	5.70 (0.33) 50	6.18 (0.52) 25	5.82 (0.39) 26	6.00 (0.32) 51	6.07 (0.35) 49	5.65 (0.30) 52	5.85 (0.23) 101
		Weaker	4.92 (0.58) 23	6.24 (0.47) 27	5.63 (0.38) 50	5.68 (0.51) 23	5.74 (0.54) 27	5.71 (0.37) 50	5.30 (0.39) 46	5.99 (0.36) 54	5.67 (0.26) 100
			5.44 (0.38) 47	5.86 (0.33) 53	5.67 (0.25) 100	5.94 (0.36) 48	5.78 (0.33) 53	5.86 (0.24) 101	5.69 (0.26) 95	5.82 (0.23) 106	5.76 0.17 201
Average across severity		Stronger	6.58 (0.36) 49	6.18 (0.36) 52	6.37 (0.25) 101	6.26 (0.35) 50	6.09 (0.28) 52	6.17 (0.22) 102	6.42 (0.25) 99	6.14 (0.22) 104	6.27 (0.17) 203
		Weaker	5.85 (0.44) 46	6.21 (0.33) 54	6.05 (0.27) 100	6.07 (0.36) 46	6.15 (0.34) 54	6.11 (0.25) 100	5.96 (0.28) 92	6.18 (0.24) 108	6.08 (0.18) 200
			6.23 (0.28) 95	6.20 (0.24) 106	6.21 (0.18) 201	6.17 (0.25) 96	6.12 (0.22) 106	6.14 (0.16) 202	6.20 (0.19) 191	6.16 (0.16) 212	6.18 (0.12) 403

Table 1 (continued)
Initial Severity Rating

Panel B: Repeated measures ANOVA[a]

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.55	1	0.55	0.06	0.805
Team identity	6.17	1	6.17	0.69	0.410
Input Quality*Team Identity	8.44	1	8.44	0.94	0.336
Error	865.59	96	9.02		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	71.17	1	71.17	13.34	<0.001
Severity*Input Quality	2.84	1	2.84	0.53	0.468
Severity*Team Identity	<0.01	1	<0.01	<0.01	0.983
Severity*Input Quality*Team Identity	0.52	1	9.52	1.78	0.185
Error	512.32	96	5.34		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.35	1	0.35	0.09	0.768
Type*Input Quality	0.02	1	0.02	0.01	0.940
Type*Team Identity	1.81	1	1.81	0.45	0.506
Type*Input Quality*Team Identity	1.55	1	1.55	0.38	0.537
Error	389.27	96	4.06		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	10.03	1	10.03	1.78	0.186
Severity*Type*Input Quality	9.81	1	9.81	1.74	0.190
Severity*Type*Team Identity	6.75	1	6.75	1.20	0.277
Severity*Type*Input Quality*Team Identity	3.04	1	3.04	0.54	0.465
Error	541.77	96	5.64		

[a] Input Quality and Team Identity are manipulated at two levels each between-subjects, more versus less accurate and stronger versus weaker, respectively. Severity and Type are manipulated at two levels each within-subjects, higher versus lower and non-IT versus IT-related issue, via the four client cases. For the dependent variable, initial severity rating, participants provided judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). All p-values are two-tailed unless otherwise noted.

Table 2
Weight of Input from IT Specialist

Panel A: Descriptive statistics – Mean, (Standard Error), Number of observations[a]

Within: Severity		Team Identity		Non-IT: Input Quality Less	Non-IT: Input Quality More	Non-IT: Average across type	IT-related: Input Quality Less	IT-related: Input Quality More	IT-related: Average across type	Average across type: Input Quality Less	Average across type: Input Quality More	Average across type: Average across type
Higher		Stronger		0.35 (0.07) 25	0.40 (0.07) 26	0.37 (0.05) 51	0.21 (0.06) 24	0.34 (0.06) 24	0.27 (0.04) 48	0.28 (0.05) 49	0.37 (0.05) 50	0.32 (0.03) 99
		Weaker		0.16 (0.05) 23	0.48 (0.07) 27	0.33 (0.05) 50	0.29 (0.08) 23	0.52 (0.07) 27	0.41 (0.05) 50	0.22 (0.05) 46	0.50 (0.05) 54	0.37 (0.04) 100
				0.26 (0.04) 48	0.44 (0.05) 53	0.35 (0.03) 101	0.25 (0.05) 47	0.43 (0.05) 51	0.35 (0.03) 98	0.25 (0.03) 95	0.44 (0.03) 104	0.35 (0.02) 199
Lower		Stronger		0.49 (0.08) 24	0.37 (0.08) 26	0.43 (0.05) 50	0.35 (0.06) 25	0.27 (0.06) 26	0.31 (0.05) 51	0.42 (0.05) 49	0.32 (0.05) 52	0.37 (0.04) 101
		Weaker		0.44 (0.07) 23	0.16 (0.06) 27	0.29 (0.05) 50	0.37 (0.07) 23	0.29 (0.07) 27	0.33 (0.05) 50	0.40 (0.05) 46	0.23 (0.04) 54	0.31 (0.03) 100
				0.46 (0.05) 47	0.27 (0.05) 53	0.36 (0.04) 100	0.36 (0.05) 48	0.28 (0.05) 53	0.32 (0.03) 101	0.41 (0.04) 95	0.27 (0.03) 106	0.34 (0.02) 201
Average across severity		Stronger		0.42 (0.05) 49	0.38 (0.05) 52	0.40 (0.04) 101	0.28 (0.05) 49	0.30 (0.04) 50	0.29 (0.03) 99	0.35 (0.04) 98	0.34 (0.03) 102	0.35 (0.02) 200
		Weaker		0.30 (0.05) 46	0.32 (0.05) 54	0.31 (0.03) 100	0.33 (0.05) 46	0.41 (0.05) 54	0.37 (0.04) 100	0.31 (0.04) 92	0.36 (0.03) 108	0.34 (0.02) 200
				0.36 (0.04) 95	0.35 (0.03) 106	0.36 (0.03) 201	0.31 (0.03) 95	0.35 (0.03) 104	0.33 (0.02) 199	0.33 (0.03) 190	0.35 (0.02) 210	0.34 (0.02) 400

Table 2 (continued)
Weight of Input from IT Specialist

Panel B: Repeated measures ANOVA[a]

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.08	1	0.08	0.45	0.505
Team identity	0.02	1	0.02	0.14	0.709
Input Quality*Team Identity	0.06	1	0.06	0.32	0.574
Error	15.95	93	0.17		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	<0.01	1	<0.01	<0.01	0.951
Severity*Input Quality	2.53	1	2.53	23.64	<0.001
Severity*Team Identity	0.23	1	0.23	2.15	0.146
Severity*Input Quality*Team Identity	0.42	1	0.42	3.88	0.052
Error	9.95	93	0.11		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.04	1	0.04	0.44	0.507
Type*Input Quality	0.02	1	0.02	0.17	0.684
Type*Team Identity	0.60	1	0.60	6.37	0.013
Type*Input Quality*Team Identity	0.02	1	0.02	0.17	0.683
Error	8.78	93	0.09		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.02	1	0.02	0.28	0.600
Severity*Type*Input Quality	0.08	1	0.08	1.05	0.308
Severity*Type*Team Identity	0.02	1	0.02	0.29	0.594
Severity*Type*Input Quality*Team Identity	0.17	1	0.17	2.29	0.133
Error	6.84	93	0.07		

[a] Input Quality and Team Identity are manipulated at two levels each between-subjects, more versus less accurate and stronger versus weaker, respectively. Severity and Type are manipulated at two levels each within-subjects, higher versus lower and non-IT versus IT-related issue, via the four client cases. The dependent variable, weight of input, is calculated via the following formula:

$$\frac{|\text{Final rating} - \text{Initial rating}|}{|\text{IT specialist rating} - \text{Initial rating}|}$$

where participants provide initial and final rating judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). Refer to Table 1 for independent variable descriptions. All p-values are two-tailed unless otherwise noted.

Table 3
Higher Severity Case: Tests of H1 – Non-IT related Issue

Dependent variable: Weight of Input from IT Specialist[a]

Expectation	SS	df	MS	F-Ratio	p-Value
(1) [Stronger/More accurate – Stronger/Less accurate] < [Weaker/More accurate – Weaker/Less accurate] [b]	0.34	1	0.34	3.23	0.038
Error	9.73	93	0.11		
(2) Weaker/More accurate > Weaker/Less accurate [b]	1.30	1	1.30	12.45	<0.001
Error	9.73	93	0.11		
(3) Stronger/More accurate = Stronger/Less accurate	0.09	1	0.09	0.86	0.357
Error	9.73	93	0.11		
(4) Stronger/Less accurate > Weaker/Less accurate [b]	0.37	1	0.37	3.52	0.032
Error	9.73	93	0.11		
(5) Stronger/More accurate = Weaker/More accurate	0.04	1	0.04	0.40	0.527
Error	9.73	93	0.11		

[a] The dependent variable, weight of input, is calculated via the following formula:

$$\frac{|\text{Final rating} - \text{Initial rating}|}{|\text{IT specialist rating} - \text{Initial rating}|}$$

where participants provide initial and final rating judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). Refer to Table 1 for independent variable descriptions. Hypothesis tests are performed based on repeated measures ANOVA captured in Table 2, Panel B. All p-values are two-tailed unless otherwise noted.

[b] One-tailed p-value.

Table 4
Higher Severity Case: Tests of H2 – IT-related Issue

Dependent variable: Weight of Input from IT Specialist[a]

Expectation	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
(1) Weaker > Stronger[b]	0.39	1	0.39	3.56	0.031
Error	10.12	93	0.11		

Additional tests	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
(2) [Stronger/More accurate – Stronger/Less accurate] vs. [Weaker/More accurate – Weaker/Less accurate]	0.09	1	0.09	0.81	0.371
Error	10.12	93	0.11		
(3) Stronger/More accurate vs. Stronger/Less accurate	0.15	1	0.15	1.41	0.238
Error	10.12	93	0.11		
(4) Weaker/More accurate vs. Weaker/Less accurate	0.69	1	0.69	6.30	0.014
Error	10.12	93	0.11		
(5) Stronger/More accurate vs. Weaker/More accurate	0.44	1	0.44	4.08	0.046
Error	10.12	93	0.11		
(6) Stronger/Less accurate vs. Weaker/Less accurate	0.05	1	0.05	0.47	0.497
Error	10.12	93	0.11		

[a] The dependent variable, weight of input, is calculated via the following formula:

$$\frac{|\text{Final rating} - \text{Initial rating}|}{|\text{IT specialist rating} - \text{Initial rating}|}$$

where participants provide initial and final rating judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). Refer to Table 1 for independent variable descriptions. Hypothesis tests are performed based on repeated measures ANOVA captured in Table 2, Panel B. All p-values are two-tailed unless otherwise noted.

[b] One-tailed p-value.

Table 5
Lower Severity Case: Tests of H1 – Non-IT related Issue

Dependent variable: Weight of Input from IT Specialist[a]

Expectation	SS	df	MS	F-Ratio	p-Value
(1) [Stronger/More accurate – Stronger/Less accurate] < [Weaker/More accurate – Weaker/Less accurate] [b]	0.22	1	0.22	1.82	0.091
Error	11.47	93	0.12		
(2) Weaker/More accurate > Weaker/Less accurate	0.91	1	0.91	7.39	0.008[c]
Error	11.47	93	0.12		
(3) Stronger/More accurate = Stronger/Less accurate	0.07	1	0.07	0.58	0.447
Error	11.47	93	0.12		
(4) Stronger/Less accurate > Weaker/Less accurate [b]	0.01	1	0.01	0.10	0.378
Error	11.47	93	0.12		
(5) Stronger/More accurate = Weaker/More accurate	0.64	1	0.64	5.21	0.025
Error	11.47	93	0.12		

[a] The dependent variable, weight of input, is calculated via the following formula:

$$\frac{|\text{Final rating} - \text{Initial rating}|}{|\text{IT specialist rating} - \text{Initial rating}|}$$

where participants provide initial and final rating judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). Refer to Table 1 for independent variable descriptions. Hypothesis tests are performed based on repeated measures ANOVA captured in Table 2, Panel B. All p-values are two-tailed unless otherwise noted.

[b] One-tailed p-value.

[c] While significant, this difference is not in the expected direction as Weaker/More accurate < Weaker/Less accurate.

Table 6
Lower Severity Case: Tests of H2 – IT-related Issue

Dependent variable: Weight of Input from IT Specialist[a]

Expectation	SS	df	MS	F-Ratio	p-Value
(1) Weaker > Stronger[b]	<0.01	1	<0.01	<0.01	0.498
Error	10.19	93	0.11		

Additional tests	SS	df	MS	F-Ratio	p-Value
(2) [Stronger/More accurate – Stronger/Less accurate] vs. [Weaker/More accurate – Weaker/Less accurate]	0.01	1	0.01	0.04	0.850
Error	10.19	93	0.11		
(3) Stronger/More accurate vs. Stronger/Less accurate	0.13	1	0.13	1.19	0.278
Error	10.19	93	0.11		
(4) Weaker/More accurate vs. Weaker/Less accurate	0.08	1	0.08	0.72	0.398
Error	10.19	93	0.11		
(5) Stronger/More accurate vs. Weaker/More accurate	0.01	1	0.01	0.02	0.894
Error	10.19	93	0.11		
(6) Stronger/Less accurate vs. Weaker/Less accurate	0.01	1	0.01	0.02	0.893
Error	10.19	93	0.11		

[a] The dependent variable, weight of input, is calculated via the following formula:

$$\frac{|\text{Final rating} - \text{Initial rating}|}{|\text{IT specialist rating} - \text{Initial rating}|}$$

where participants provide initial and final rating judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). Refer to Table 1 for independent variable descriptions. Hypothesis tests are performed based on repeated measures ANOVA captured in Table 2, Panel B. All p-values are two-tailed unless otherwise noted.

[b] One-tailed p-value.

Table 7
Correctness of ICFR Issue Classification

Panel A: Descriptive statistics – Percentage of participants with correct classification[a]

Within: Issue Type

Within: Severity		Team Identity		Non-IT: Input Quality Less	Non-IT: Input Quality More	IT-related: Input Quality Less	IT-related: Input Quality More	Average across type: Input Quality Less	Average across type: Input Quality More
	Higher	Stronger		72%	92%	68%	92%	70%	92%
		Weaker		65%	96%	74%	100%	70%	98%
			Total	69%	94%	71%	96%	70%	95%
	Lower	Stronger		72%	88%	80%	92%	76%	90%
		Weaker		74%	85%	83%	81%	78%	83%
			Total	73%	87%	81%	87%	77%	87%
	Average across severity	Stronger		72%	90%	74%	92%	73%	91%
		Weaker		70%	91%	78%	91%	74%	91%
			Total	71%	91%	76%	92%	73%	91%

Table 7 (continued)
Correctness of ICFR Issue Classification

Panel B: Repeated measures Generalized Linear Model[a]

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	3.11	1	3.11	19.18	<0.001
Team identity	<0.01	1	<0.01	<0.01	0.970
Input Quality*Team Identity	0.01	1	0.01	0.04	0.850
Error	15.74	97	0.16		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	<0.01	1	<0.01	0.02	0.900
Severity*Input Quality	0.62	1	0.62	3.74	0.056
Severity*Team Identity	0.07	1	0.07	0.39	0.532
Severity*Input Quality*Team Identity	0.15	1	0.15	0.92	0.340
Error	16.13	97	0.17		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.10	1	0.10	0.82	0.367
Type*Input Quality	0.05	1	0.05	0.40	0.530
Type*Team Identity	0.01	1	0.01	0.12	0.732
Type*Input Quality*Team Identity	0.05	1	0.05	0.38	0.537
Error	11.81	97	0.12		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.01	1	0.01	0.11	0.741
Severity*Type*Input Quality	0.04	1	0.04	0.37	0.542
Severity*Type*Team Identity	0.09	1	0.09	0.84	0.363
Severity*Type*Input Quality*Team Identity	<0.01	1	<0.01	<0.01	0.977
Error	9.86	97	0.10		

[a] Correctness of ICFR issue classification is measured as follows: For the two higher (lower) severity cases, a classification of significant deficiency or material weakness (control deficiency or significant deficiency) is correct; a classification of control deficiency (material weakness) is incorrect. Refer to Table 1 for independent variable descriptions. All p-values are two-tailed unless otherwise noted.

Table 8

Final Severity Rating

Panel A: Descriptive statistics – Mean, (Standard Error), Number of observations[a]

Within: Severity		Within: Type	Team Identity	Input Quality: Less	Input Quality: More	
Higher		No IT	Stronger	5.86 (0.38) 25	7.74 (0.37) 26	6.82 (0.30) 51
			Weaker	6.55 (0.59) 23	7.45 (0.30) 27	7.04 (0.32) 50
				6.19 (0.35) 48	7.59 (0.24) 53	6.93 (0.22) 101
		IT	Stronger	5.64 (0.38) 25	7.18 (0.28) 26	6.43 (0.25) 51
			Weaker	6.02 (0.46) 23	7.56 (0.27) 27	6.85 (0.28) 50
				5.82 (0.29) 48	7.37 (0.19) 53	6.64 (0.19) 101
		Average across type	Stronger	5.75 (0.27) 50	7.46 (0.23) 52	6.62 (0.20) 102
			Weaker	6.28 (0.37) 46	7.51 (0.20) 54	6.94 (0.21) 100
				6.01 (0.23) 96	7.48 (0.15) 106	6.78 (0.14) 202
Lower		No IT	Stronger	7.28 (0.41) 25	4.82 (0.38) 26	6.03 (0.32) 51
			Weaker	6.80 (0.49) 23	5.87 (0.48) 27	6.30 (0.35) 50
				7.05 (0.32) 48	5.36 (0.31) 53	6.16 (0.24) 101
		IT	Stronger	7.24 (0.43) 25	5.21 (0.39) 26	6.20 (0.32) 51
			Weaker	6.71 (0.37) 23	5.43 (0.44) 27	6.02 (0.30) 50
				6.98 (0.29) 48	5.32 (0.29) 53	6.11 (0.22) 101
		Average across type	Stronger	7.26 (0.29) 50	5.02 (0.27) 52	6.11 (0.23) 102
			Weaker	6.75 (0.30) 46	5.65 (0.33) 54	6.16 (0.23) 100
				7.02 (0.21) 96	5.34 (0.21) 106	6.14 (0.16) 202
Average across severity		No IT	Stronger	6.57 (0.29) 50	6.28 (0.33) 52	6.42 (0.22) 102
			Weaker	6.67 (0.38) 46	6.66 (0.30) 54	6.67 (0.24) 100
				6.62 (0.24) 96	6.47 (0.22) 106	6.54 (0.16) 202
		IT	Stronger	6.44 (0.30) 50	6.19 (0.27) 52	6.31 (0.20) 102
			Weaker	6.36 (0.30) 46	6.50 (0.29) 54	6.44 (0.21) 100
				6.40 (0.21) 96	6.35 (0.20) 106	6.37 (0.15) 202
		Average across type	Stronger	6.51 (0.21) 100	6.24 (0.21) 104	6.37 (0.15) 204
			Weaker	6.52 (0.24) 92	6.58 (0.21) 108	6.55 (0.16) 200
				6.51 (0.16) 192	6.41 (0.15) 212	6.46 (0.11) 404

Table 8 (continued)
Final Severity Rating

Panel B: Repeated measures ANOVA[a]

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	1.09	1	1.09	0.17	0.679
Team identity	3.18	1	3.18	0.50	0.480
Input Quality*Team Identity	2.72	1	2.72	0.43	0.514
Error	613.64	97	6.33		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	33.93	1	33.93	6.90	0.010
Severity*Input Quality	247.24	1	247.24	50.26	<0.001
Severity*Team Identity	1.27	1	1.27	0.26	0.612
Severity*Input Quality*Team Identity	16.66	1	16.66	3.39	0.069
Error	477.13	97	4.92		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	3.03	1	3.03	1.74	0.190
Type*Input Quality	0.22	1	0.22	0.13	0.722
Type*Team Identity	0.42	1	0.42	0.24	0.626
Type*Input Quality*Team Identity	0.07	1	0.07	0.04	0.843
Error	169.06	97	1.74		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	1.64	1	1.64	0.46	0.500
Severity*Type*Input Quality	0.08	1	0.08	0.02	0.885
Severity*Type*Team Identity	2.32	1	2.32	0.65	0.423
Severity*Type*Input Quality*Team Identity	4.91	1	4.91	1.37	0.245
Error	347.35	97	3.58		

Table 8 (continued)
Final Severity Rating

Panel C: Effects by case – Higher severity-non-IT case [a]

Tests for significant differences	SS	df	MS	F-Ratio	p-Value
(1) Team identity: Stronger versus weaker	1.04	1	1.04	0.24	0.626
Error	419.69	97	4.33		
(2) Input quality: More accurate versus less accurate	48.55	1	48.55	11.22	0.001
Error	419.69	97	4.33		
(3) [Stronger/More accurate – Stronger/Less accurate] vs. [Weaker/More accurate – Weaker/Less accurate]	6.03	1	6.03	1.39	0.241
Error	419.69	97	4.33		
(4) Stronger/More accurate vs. Stronger/Less accurate	44.97	1	44.97	10.39	0.002
Error	419.69	97	4.33		
(5) Weaker/More accurate vs. Weaker/Less accurate	10.05	1	10.05	2.32	0.131
Error	419.69	97	4.33		
(6) Stronger/More accurate vs. Weaker/More accurate	1.09	1	1.09	0.25	0.617
Error	419.69	97	4.33		
(7) Stronger/Less accurate vs. Weaker/Less accurate	5.74	1	5.74	1.33	0.252
Error	419.69	97	4.33		

Panel D: Effects by case – Higher severity-IT-related case [a]

Tests for significant differences	SS	df	MS	F-Ratio	p-Value
(1) Team identity: Stronger versus weaker	3.59	1	3.59	1.19	0.277
Error	292.17	97	3.01		
(2) Input quality: More accurate versus less accurate	59.47	1	59.47	19.74	<0.001
Error	292.17	97	3.01		
(3) [Stronger/More accurate – Stronger/Less accurate] vs. [Weaker/More accurate – Weaker/Less accurate]	0.01	1	0.01	<0.01	0.990
Error	292.17	97	3.01		
(4) Stronger/More accurate vs. Stronger/Less accurate	29.95	1	29.95	9.94	0.002
Error	292.17	97	3.01		
(5) Weaker/More accurate vs. Weaker/Less accurate	29.53	1	29.53	9.80	0.002
Error	292.17	97	3.01		
(6) Stronger/More accurate vs. Weaker/More accurate	1.94	1	1.94	0.64	0.425
Error	292.17	97	3.01		
(7) Stronger/Less accurate vs. Weaker/Less accurate	1.67	1	1.67	0.55	0.458
Error	292.17	97	3.01		

Table 8 (continued)
Final Severity Rating

Panel E: Effects by case – Lower severity-non-IT case [a]

Tests for significant differences	SS	df	MS	F-Ratio	p-Value
(1) Team identity: Stronger versus weaker	1.99	1	1.99	0.40	0.527
Error	478.57	97	4.93		
(2) Input quality: More accurate versus less accurate	71.96	1	71.96	14.58	<0.001
Error	478.57	97	4.93		
(3) [Stronger/More accurate – Stronger/Less accurate] vs. [Weaker/More accurate – Weaker/Less accurate]	14.76	1	14.76	2.99	0.087
Error	478.57	97	4.93		
(4) Stronger/More accurate vs. Stronger/Less accurate	76.94	1	76.94	15.59	<0.001
Error	478.57	97	4.93		
(5) Weaker/More accurate vs. Weaker/Less accurate	10.63	1	10.63	2.16	0.145
Error	478.57	97	4.93		
(6) Stronger/More accurate vs. Weaker/More accurate	14.53	1	14.53	2.95	0.089
Error	478.57	97	4.93		
(7) Stronger/Less accurate vs. Weaker/Less accurate	2.81	1	2.81	0.57	0.452
Error	478.57	97	4.93		

Panel F: Effects by case – Lower severity-IT-related case [a]

Tests for significant differences	SS	df	MS	F-Ratio	p-Value
(1) Team identity: Stronger versus weaker	0.57	1	0.57	0.13	0.716
Error	416.75	97	4.30		
(2) Input quality: More accurate versus less accurate	68.65	1	68.65	15.98	<0.001
Error	416.75	97	4.30		
(3) [Stronger/More accurate – Stronger/Less accurate] vs. [Weaker/More accurate – Weaker/Less accurate]	3.57	1	3.57	0.83	0.365
Error	416.75	97	4.30		
(4) Stronger/More accurate vs. Stronger/Less accurate	52.43	1	52.43	12.20	0.001
Error	416.75	97	4.30		
(5) Weaker/More accurate vs. Weaker/Less accurate	20.20	1	20.20	4.70	0.033
Error	416.75	97	4.30		
(6) Stronger/More accurate vs. Weaker/More accurate	0.67	1	0.67	0.16	0.693
Error	416.75	97	4.30		
(7) Stronger/Less accurate vs. Weaker/Less accurate	3.33	1	3.33	0.78	0.381
Error	416.75	97	4.30		

[a] For the dependent variable, final severity rating, participants provided judgments on an 11-point scale with labels of "Control deficiency" (1), "Significant deficiency" (6), and "Material weakness" (11). Tests for significant differences are performed based on repeated measures ANOVA captured in Table 8, Panel B. All p-values are two-tailed unless otherwise noted. Refer to Table 1 for independent variable descriptions.

Table 9
Perceptions of IT Specialist and Input Received

Panel A: Dependent variable – Quality of IT specialist input[ab]

		Input Quality: Less	Input Quality: More	
Team Identity	Stronger	5.68 (0.37) 25	6.04 (0.34) 26	5.86 (0.25) 51
	Weaker	4.25 (0.27) 23	4.69 (0.37) 27	4.49 (0.23) 50
		4.99 (0.25) 48	5.35 (0.26) 53	

ANOVA

Source	SS	df	MS	F-Ratio	p-Value
Input Quality	4.02	1	4.02	1.36	0.247
Team identity	48.65	1	48.65	16.44	<0.001
Input Quality*Team Identity	0.03	1	0.03	0.01	0.923
Error	287.00	97	2.96		

Panel B: Dependent variable –IT specialist competence[ac]

		Input Quality: Less	Input Quality: More	
Team Identity	Stronger	6.30 (0.33) 25	6.50 (0.33) 26	6.40 (0.23) 51
	Weaker	4.90 (0.26) 23	5.42 (0.34) 27	5.18 (0.22) 50
		5.63 (0.23) 48	5.95 (0.25) 53	

ANOVA

Source	SS	df	MS	F-Ratio	p-Value
Input Quality	3.21	1	3.21	1.23	0.27
Team identity	38.86	1	38.86	14.87	<0.001
Input Quality*Team Identity	0.65	1	0.65	0.25	0.618
Error	253.47	97	2.61		

Table 9 (continued)
Perceptions of IT Specialist and Input Received

Panel C: Dependent variable –IT specialist objectivity[ad]

		Input Quality: Less	Input Quality: More	
Team Identity	Stronger	6.70 (0.32) 25	6.62 (0.22) 26	6.66 (0.19) 51
	Weaker	5.38 (0.31) 23	6.33 (0.39) 27	5.89 (0.26) 50
		6.07 (0.24) 48	6.47 (0.23) 53	

ANOVA

Source	SS	df	MS	F-Ratio	p-Value
Input Quality	4.77	1	4.77	1.87	0.175
Team identity	16.49	1	16.49	6.46	0.013
Input Quality*Team Identity	6.60	1	6.60	2.59	0.111
Error	247.46	97	2.55		

Panel D: Dependent variable –IT specialist trustworthiness[ae]

		Input Quality: Less	Input Quality: More	
Team Identity	Stronger	6.90 (0.26) 25	6.42 (0.31) 26	6.65 (0.21) 51
	Weaker	5.18 (0.28) 23	5.27 (0.37) 27	5.23 (0.24) 50
		6.08 (0.23) 48	5.83 (0.26) 53	

ANOVA

Source	SS	df	MS	F-Ratio	p-Value
Input Quality	0.97	1	0.97	0.39	0.534
Team identity	51.68	1	51.68	20.72	<0.001
Input Quality*Team Identity	2.03	1	2.03	0.82	0.369
Error	241.89	97	2.49		

Table 9 (continued)
Perceptions of IT Specialist and Input Received

Panel E: Dependent variable – Whether would want to work with IT specialist again[af]

		Input Quality: Less	Input Quality: More	
Team Identity	Stronger	2.06	2.45	2.26
		(0.43)	(0.40)	(0.29)
		25	26	51
	Weaker	-0.99	-0.65	-0.81
		(0.35)	(0.52)	0.32
		23	27	50
		0.60	0.87	
		(0.35)	(0.39)	
		48	53	

ANOVA

Source	SS	df	MS	F-Ratio	p-Value
Input Quality	3.31	1	3.31	0.69	0.408
Team identity	237.82	1	237.82	49.71	<0.001
Input Quality*Team Identity	0.02	1	0.02	<0.01	0.950
Error	464.06	97	4.78		

[a]The first table in each panel displays the descriptive statistics: mean, (std. error), n. The second table displays the results of the standard ANOVA.
[b]The overall quality of the IT specialist input was elicited on an 11-point scale with endpoints "Very low quality" (0) and "Very high quality" (10).
[c]The competence of the IT specialist was elicited on an 11-point scale with endpoints "Very low competence" (0) and "Very high competence" (10).
[d]The objectivity of the IT specialist was elicited on an 11-point scale with endpoints "Not at all objective" (0) and "Extremely objective" (10).
[e]The trustworthiness of the IT specialist was elicited on an 11-point scale with endpoints "Not at all trustworthy" (0) and "Extremely trustworthy" (10).
[f]Whether the participant would want to work with the IT specialist again was elicited on an 11-point scale with endpoints "Definitely not" (-5) and "Definitely" (5).

Table 10
Team Identity Manipulation Coding

	Participant count[a]			*Chi-squared test*	
Code category[b]	Total	Stronger	Weaker	X^2 statistic	p-Value
Team integration	44	21	23	0.24	0.625
IT spec. comp. - IT	17	16	1	15.56	<0.001
IT spec. comp. - Audit	17	11	6	1.65	0.199
IT spec. comp. - General	18	9	9	<0.01	0.963
Effectiveness concern	16	1	15	14.89	<0.001
Positive	44	39	5	45.37	<0.001
Negative	30	1	29	37.97	<0.001
IT spec. preference	21	11	10	0.04	0.846
IT spec. experience	10	5	5	<0.01	0.974
Helpful member of team	10	6	4	0.40	0.527
Sit together	5	1	4	1.96	0.162
Core member of team	8	4	4	<0.01	0.977
Other	8	3	5	0.59	0.444

	Stronger			*Weaker*			*t-test*	
	Mean	SE	N	Mean	SE	N	t	P-value
Response length[cb]	252.98	21.55	51	264.72	20.26	50	-0.40	0.693

[a]After reading the team identity manipulation (via the description of the IT specialist providing input), participants were asked the following open-ended question: "You may or may not have not worked with an IT specialist quite like this in the past, but please take a minute to think about what it would be like to work with this person. What are some thoughts that come to mind? Please type your thoughts below and again, take only a minute to do this." This table captures the results of coding those responses and related analyses. Within the table, "Stronger" and "Weaker" refer to the between-subjects Team Identity manipulation. One participant (in the Strong condition) did not provide a response, therefore the max *N* is 50 in each condition.

[b]The following describes the code categories:

Team integration: Mention integration/teaming/involvement between auditors and IT specialists on the audit

IT specialist competence – IT: Mention IT specialist's competence (or knowledge/perspective/insight) related to IT and IT aspects of audit, regardless of whether positive or negative

IT specialist preference: Mention if the IT specialist does or does not have a preference/interest in auditing and audit-related concepts

IT specialist competence – General: Mention IT specialist's competence (or knowledge/perspective/insight) in general, regardless of whether positive or negative

Effectiveness concern: Mention any concerns or problems that could result in the audit due to the IT specialist's competence or work

Positive: Overall commentary regarding IT specialist (and/or involvement of IT specialist) is positive

Negative: Overall commentary regarding IT specialist (and/or involvement of IT specialist) is negative

IT specialist experience: Mention IT specialist's experience with auditing and/or advisory/consulting

IT specialist competence – Audit: Mention IT specialist's competence (or knowledge/perspective/insight) related to auditing, regardless of whether positive or negative

Helpful member of team: Mention the IT specialist being a helpful member of the team or just technically a member of the team

Sit together: Mention anything about the IT specialist sitting (or not sitting) with the team

Core member of team: Refer to the specialist as a core member of the team or an obligatory member of the team

Other: None of the above codes are mentioned, but description is not left blank

[c]Response length is the character count of the response.

TABLE 11
Judgment Rationale Coding

Panel A: IT aspect of case[a]

Counts by condition and case

Within: Issue Type

Non-IT

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	0	0	0
		Weaker	1	0	1
		Total	1	0	
Lower		Stronger	0	0	0
		Weaker	2	0	2
		Total	2	0	
Total across severity		Stronger	0	0	0
		Weaker	3	0	3
		Total	3	0	

IT-related

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	4	6	10
		Weaker	5	7	12
		Total	9	13	
Lower		Stronger	5	3	8
		Weaker	6	7	13
		Total	11	10	
Total across severity		Stronger	9	9	18
		Weaker	11	14	25
		Total	20	23	

Total across type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	4	6	10
		Weaker	6	7	13
		Total	10	13	
Lower		Stronger	5	3	8
		Weaker	8	7	15
		Total	13	10	
Total across severity		Stronger	9	9	18
		Weaker	14	14	28
		Total	23	23	

TABLE 11 (continued)
Judgment Rationale Coding

Panel A (continued): IT aspect of case[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.02	1	0.02	0.15	0.696
Team identity	0.34	1	0.34	2.62	0.109
Input Quality*Team Identity	<0.01	1	<0.01	0.01	0.946
Total response length	0.99	1	0.99	7.62	0.007
Error	12.48	96	0.13		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.06	1	0.06	0.80	0.373
Severity*Input Quality	0.09	1	0.09	1.34	0.250
Severity*Team Identity	0.05	1	0.05	0.69	0.410
Severity*Total response length	0.09	1	0.09	1.24	0.268
Severity*Input Quality*Team Identity	0.01	1	0.01	0.161	0.689
Error	6.77	96	0.07		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.19	1	0.19	1.93	0.169
Type*Input Quality	0.04	1	0.04	0.37	0.547
Type*Team Identity	0.06	1	0.06	0.63	0.430
Type*Total response length	0.65	1	0.65	6.71	0.011
Type*Input Quality*Team Identity	0.08	1	0.08	0.861	0.356
Error	9.25	96	0.10		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.03	1	0.03	0.41	0.524
Severity*Type*Input Quality	0.04	1	0.04	0.63	0.430
Severity*Type*Team Identity	0.01	1	0.01	0.17	0.683
Severity*Type*Total response length	0.02	1	0.02	0.27	0.608
Severity*Type*Input Quality*Team Identity	0.04	1	0.04	0.675	0.413
Error	5.89	96	0.06		

TABLE 11 (continued)
Judgment Rationale Coding

Panel B: Mention IT specialist[a]

Counts by condition and case

Within: Issue Type

Within: Severity		Team Identity	Non-IT: Input Quality = Less	Non-IT: Input Quality = More	Non-IT: *Total*	IT-related: Input Quality = Less	IT-related: Input Quality = More	IT-related: *Total*	Total across type: Input Quality = Less	Total across type: Input Quality = More	Total across type: *Total*
Higher		**Stronger**	2	7	9	6	10	16	8	17	25
		Weaker	10	6	16	8	11	19	18	17	35
		Total	12	13		14	21		26	34	
Lower		**Stronger**	6	6	12	6	6	12	12	12	24
		Weaker	10	7	17	7	11	18	17	18	35
		Total	16	13		13	17		29	30	
Total across severity		**Stronger**	8	13	21	12	16	28	20	29	49
		Weaker	20	13	33	15	22	37	35	35	70
		Total	28	26		27	38		55	64	

TABLE 11 (continued)
Judgment Rationale Coding

Panel B (continued): Mention IT specialist[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.01	1	0.01	0.02	0.888
Team identity	1.45	1	1.45	3.01	0.086
Input Quality*Team Identity	0.34	1	0.34	0.70	0.403
Total response length	1.74	1	1.74	3.62	0.060
Error	46.26	96	0.48		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.07	1	0.07	0.47	0.495
Severity*Input Quality	0.11	1	0.11	0.77	0.383
Severity*Team Identity	<0.01	1	<0.01	<0.01	0.974
Severity*Total response length	0.12	1	0.12	0.83	0.365
Severity*Input Quality*Team Identity	0.27	1	0.27	1.803	0.183
Error	14.21	96	0.15		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.03	1	0.03	0.30	0.588
Type*Input Quality	0.40	1	0.40	4.07	0.047
Type*Team Identity	0.04	1	0.04	0.38	0.541
Type*Total response length	0.02	1	0.02	0.16	0.695
Type*Input Quality*Team Identity	0.57	1	0.57	5.757	0.018
Error	9.47	96	0.10		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.11	1	0.11	1.24	0.268
Severity*Type*Input Quality	<0.01	1	<0.01	0.05	0.833
Severity*Type*Team Identity	0.06	1	0.06	0.71	0.403
Severity*Type*Total response length	0.01	1	0.01	0.11	0.740
Severity*Type*Input Quality*Team Identity	<0.01	1	<0.01	0.019	0.891
Error	8.47	96	0.09		

TABLE 11 (continued)
Judgment Rationale Coding

Panel C: Mention agreement with IT specialist[a]

Counts by condition and case

Within: Issue Type

Non-IT

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		**Stronger**	1	7	8
		Weaker	6	6	12
		Total	7	13	
Lower		**Stronger**	5	5	10
		Weaker	8	4	12
		Total	13	9	
Total across severity		**Stronger**	6	12	18
		Weaker	14	10	24
		Total	20	22	

IT-related

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		**Stronger**	4	10	14
		Weaker	5	8	13
		Total	9	18	
Lower		**Stronger**	3	2	5
		Weaker	5	5	10
		Total	8	7	
Total across severity		**Stronger**	7	12	19
		Weaker	10	13	23
		Total	17	25	

Total across type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		**Stronger**	5	17	22
		Weaker	11	14	25
		Total	16	31	
Lower		**Stronger**	8	7	15
		Weaker	13	9	22
		Total	21	16	
Total across severity		**Stronger**	13	24	37
		Weaker	24	23	47
		Total	37	47	

TABLE 11 (continued)
Judgment Rationale Coding

Panel C (continued): Mention agreement with IT specialist[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.07	1	0.07	0.21	0.651
Team identity	0.32	1	0.32	0.94	0.334
Input Quality*Team Identity	0.56	1	0.56	1.63	0.205
Error	33.11	97	0.34		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.21	1	0.21	1.52	0.220
Severity*Input Quality	0.95	1	0.95	6.99	0.010
Severity*Team Identity	0.04	1	0.04	0.32	0.573
Severity*Input Quality*Team Identity	0.09	1	0.09	0.63	0.431
Error	13.17	97	0.14		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	<0.01	1	<0.01	0.01	0.917
Type*Input Quality	0.09	1	0.09	1.27	0.263
Type*Team Identity	0.02	1	0.02	0.22	0.638
Type*Input Quality*Team Identity	0.17	1	0.17	2.23	0.139
Error	7.23	97	0.08		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.48	1	0.48	4.77	0.031
Severity*Type*Input Quality	<0.01	1	<0.01	0.01	0.940
Severity*Type*Team Identity	0.15	1	0.15	1.46	0.230
Severity*Type*Input Quality*Team Identity	0.01	1	0.01	0.10	0.752
Error	9.85	97	0.10		

TABLE 11 (continued)
Judgment Rationale Coding

Panel D: Mention disagreement with IT specialist[a]

Counts by condition and case

Within: Issue Type

Non-IT

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		**Stronger**	1	0	1
		Weaker	3	0	3
		Total	4	0	
Lower		**Stronger**	0	0	0
		Weaker	1	2	3
		Total	1	2	
Total across severity		**Stronger**	1	0	1
		Weaker	4	2	6
		Total	5	2	

IT-related

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		**Stronger**	0	0	0
		Weaker	3	0	3
		Total	3	0	
Lower		**Stronger**	2	1	3
		Weaker	0	1	1
		Total	2	2	
Total across severity		**Stronger**	2	1	3
		Weaker	3	1	4
		Total	5	2	

Total across type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		**Stronger**	1	0	1
		Weaker	6	0	6
		Total	7	0	
Lower		**Stronger**	2	1	3
		Weaker	1	3	4
		Total	3	4	
Total across severity		**Stronger**	3	1	4
		Weaker	7	3	10
		Total	10	4	

TABLE 11 (continued)
Judgment Rationale Coding

Panel D (continued): Mention disagreement with IT specialist[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.12	1	0.12	3.04	0.084
Team identity	0.10	1	0.10	2.66	0.106
Input Quality*Team Identity	0.02	1	0.02	0.50	0.480
Error	3.78	97	0.04		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	<0.01	1	<0.01	0.03	0.866
Severity*Input Quality	0.17	1	0.17	3.95	0.050
Severity*Team Identity	0.05	1	0.05	1.26	0.264
Severity*Input Quality*Team Identity	0.17	1	0.17	4.03	0.048
Error	4.13	97	0.04		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	<0.01	1	<0.01	<0.01	0.987
Type*Input Quality	<0.01	1	<0.01	<0.01	0.969
Type*Team Identity	0.04	1	0.04	1.57	0.214
Type*Input Quality*Team Identity	<0.01	1	<0.01	<0.01	0.950
Error	2.46	97	0.03		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.01	1	0.01	0.39	0.534
Severity*Type*Input Quality	0.01	1	0.01	0.36	0.549
Severity*Type*Team Identity	0.09	1	0.09	3.66	0.059
Severity*Type*Input Quality*Team Identity	0.01	1	0.01	0.50	0.483
Error	2.38	97	0.03		

TABLE 11 (continued)
Judgment Rationale Coding

Panel E: Number of case facts mentioned[a]

Descriptive statistics – Mean, (SE), Number of observations

Within: Severity		Within: Type	Team Identity	Input Quality: Less	Input Quality: More	
Higher		No IT	Stronger	1.40 (0.20) 25	1.85 (0.33) 26	1.63 (0.19) 51
			Weaker	1.26 (0.28) 23	1.52 (0.19) 27	1.40 (0.16) 50
				1.33 (0.17) 48	1.68 (0.19) 53	1.51 (0.13) 101
		IT	Stronger	1.24 (0.19) 25	1.19 (0.19) 26	1.22 (0.14) 51
			Weaker	1.17 (0.25) 23	1.30 (0.23) 27	1.24 (0.17) 50
				1.21 (0.15) 48	1.25 (0.15) 53	1.23 (0.11) 101
Lower		No IT	Stronger	1.76 (0.23) 25	1.27 (0.21) 26	1.51 (0.16) 51
			Weaker	0.91 (0.18) 23	1.56 (0.25) 27	1.26 (0.16) 50
				1.35 (0.16) 48	1.42 (0.16) 53	1.39 (0.11) 101
		IT	Stronger	1.24 (0.19) 25	1.35 (0.30) 26	1.29 (0.18) 51
			Weaker	1.13 (0.33) 23	1.30 (0.25) 27	1.22 (0.20) 50
				1.19 (0.19) 48	1.32 (0.19) 53	1.26 (0.13) 101

TABLE 11 (continued)
Judgment Rationale Coding

Panel E (continued): Number of case facts mentioned[a]

Repeated measures ANOVA

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	1.91	1	1.91	1.09	0.299
Team identity	0.65	1	0.65	0.37	0.544
Input Quality*Team Identity	5.14	1	5.14	2.93	0.090
Total response length	125.59	1	125.59	71.66	<0.001
Error	168.26	96	1.75		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.17	1	0.17	0.18	0.674
Severity*Input Quality	0.20	1	0.20	0.20	0.652
Severity*Team Identity	0.13	1	0.13	0.13	0.719
Severity*Total response length	0.02	1	0.02	0.02	0.879
Severity*Input Quality*Team Identity	2.33	1	2.33	2.388	0.126
Error	93.61	96	0.98		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.03	1	0.03	0.04	0.849
Type*Input Quality	0.39	1	0.39	0.47	0.494
Type*Team Identity	1.14	1	1.14	1.38	0.243
Type*Total response length	1.31	1	1.31	1.58	0.212
Type*Input Quality*Team Identity	0.95	1	0.95	1.150	0.286
Error	79.48	96	0.83		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	1.60	1	1.60	1.57	0.214
Severity*Type*Input Quality	0.84	1	0.84	0.82	0.368
Severity*Type*Team Identity	<0.01	1	<0.01	<0.01	0.990
Severity*Type*Total response length	4.25	1	4.25	4.15	0.044
Severity*Type*Input Quality*Team Identity	2.71	1	2.71	2.638	0.108
Error	98.43	96	1.03		

TABLE 11 (continued)
Judgment Rationale Coding

Panel F: Rationale response length[a]

Descriptive statistics – Mean, (SE), Number of observations

Within: Severity		Within: Type	Team Identity	Input Quality: Less	Input Quality: More	
Higher		No IT	Stronger	208.64 (27.84) 25	219.38 (50.17) 26	214.12 (28.71) 51
			Weaker	206.48 (35.60) 23	164.41 (25.58) 27	183.76 (21.40) 50
				207.60 (22.14) 48	191.38 (27.83) 53	199.09 (17.93) 101
		IT	Stronger	178.52 (26.75) 25	186.85 (32.61) 26	182.76 (20.97) 51
			Weaker	201.52 (30.23) 23	181.00 (24.49) 27	190.44 (19.04) 50
				189.54 (19.95) 48	183.87 (20.09) 53	186.56 (14.11) 101
Lower		No IT	Stronger	180.60 (25.85) 25	216.54 (37.68) 26	198.92 (22.93) 51
			Weaker	173.52 (27.32) 23	189.33 (27.37) 27	182.06 (19.23) 50
				177.21 (18.59) 48	202.68 (23.00) 53	190.57 (14.94) 101
		IT	Stronger	198.12 (26.00) 25	229.35 (45.13) 26	214.04 (26.14) 51
			Weaker	199.83 (33.35) 23	183.67 (21.72) 27	191.10 (19.14) 50
				198.94 (20.72) 48	206.08 (24.71) 53	202.68 (16.21) 101

TABLE 11 (continued)
Judgment Rationale Coding

Panel F (continued): Rationale response length[a]

Repeated measures ANOVA

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	853.36	1	853.36	0.01	0.913
Team identity	21985.49	1	21985.49	0.31	0.579
Input Quality*Team Identity	34994.75	1	34994.75	0.49	0.484
Error	6879384.76	97	70921.49		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	917.47	1	917.47	0.09	0.769
Severity*Input Quality	19145.26	1	19145.26	1.81	0.181
Severity*Team Identity	2303.57	1	2303.57	0.22	0.641
Severity*Input Quality*Team Identity	314.90	1	314.90	0.03	0.863
Error	1024031.95	97	10557.03		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.01	1	0.01	<0.01	0.999
Type*Input Quality	484.50	1	484.50	0.05	0.829
Type*Team Identity	6563.45	1	6563.45	0.64	0.427
Type*Input Quality*Team Identity	17.03	1	17.03	<0.01	0.968
Error	999815.55	97	10307.38		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	16356.95	1	16356.95	1.38	0.244
Severity*Type*Input Quality	4898.83	1	4898.83	0.41	0.522
Severity*Type*Team Identity	11091.87	1	11091.87	0.93	0.336
Severity*Type*Input Quality*Team Identity	4126.60	1	4126.60	0.35	0.557
Error	1152795.32	97	11884.49		

[a]Participants were asked to "Please document the rationale for the judgment and classification you just completed on the previous page." after completing their final judgments for each case. This table captures the results of coding those responses and related analyses. The following describes the code categories:

Panel A: IT aspect of case – Whether or not an IT aspect of the case was mentioned (0 = no, 1 = yes)

Panel B: Mention IT specialist – Whether or not the IT specialist and/or the input provided by the IT specialist was mentioned (0 = no, 1 = yes)

TABLE 11 (continued)
Judgment Rationale Coding

Panel C: Mention agreement with IT specialist (0 = no, 1 = yes)
Panel D: Mention disagreement with IT specialist (0 = no, 1 = yes)
Panel E: Number of case facts mentioned
Panel F: Rationale response length – Response length is the character count of the response
Refer to Table 1 for independent variable descriptions.

TABLE 12
Decision Strategy Analysis

Panel A: Final judgment moves away from IT specialist input[a]

Counts by condition and case

Within: Issue Type

Non-IT

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	Total
Higher		Stronger	1	0	1
		Weaker	1	0	1
		Total	2	0	
Lower		Stronger	0	1	1
		Weaker	1	4	5
		Total	1	5	
	Total across severity	Stronger	1	1	2
		Weaker	2	4	6
		Total	3	5	

IT-related

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	Total
Higher		Stronger	1	0	1
		Weaker	2	0	2
		Total	3	0	
Lower		Stronger	2	1	3
		Weaker	0	2	2
		Total	2	3	
	Total across severity	Stronger	3	1	4
		Weaker	2	2	4
		Total	5	3	

Total across type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	Total
Higher		Stronger	2	0	2
		Weaker	3	0	3
		Total	5	0	
Lower		Stronger	2	2	4
		Weaker	1	6	7
		Total	3	8	
	Total across severity	Stronger	4	2	6
		Weaker	4	6	10
		Total	8	8	

TABLE 12 (continued)
Decision Strategy Analysis

Panel A (continued): Final judgment moves away from IT specialist input[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	<0.01	1	<0.01	0.04	0.845
Team identity	0.04	1	0.04	0.81	0.371
Input Quality*Team Identity	0.03	1	0.03	0.55	0.460
Error	4.79	97	0.05		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.07	1	0.07	1.68	0.198
Severity*Input Quality	0.23	1	0.23	5.57	0.020
Severity*Team Identity	0.01	1	0.01	0.13	0.722
Severity*Input Quality*Team Identity	0.09	1	0.09	2.01	0.159
Error	4.09	97	0.04		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	<0.01	1	<0.01	<0.01	0.963
Type*Input Quality	0.04	1	0.04	1.49	0.224
Type*Team Identity	0.04	1	0.04	1.49	0.224
Type*Input Quality*Team Identity	<0.01	1	<0.01	<0.01	0.963
Error	2.42	97	0.03		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.01	1	0.01	0.30	0.587
Severity*Type*Input Quality	0.01	1	0.01	0.20	0.653
Severity*Type*Team Identity	0.09	1	0.09	2.62	0.109
Severity*Type*Input Quality*Team Identity	0.01	1	0.01	0.39	0.534
Error	3.38	97	0.04		

TABLE 12 (continued)
Decision Strategy Analysis

Panel B: Final judgment matches IT specialist input[a]

Counts by condition and case

Within: Issue Type

Non-IT

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	1	1	2
		Weaker	1	2	3
		Total	2	3	
Lower		Stronger	4	1	5
		Weaker	0	1	1
		Total	4	2	
Total across severity		Stronger	5	2	7
		Weaker	1	3	4
		Total	6	5	

IT-related

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	1	1	2
		Weaker	0	5	5
		Total	1	6	
Lower		Stronger	2	1	3
		Weaker	2	3	5
		Total	4	4	
Total across severity		Stronger	3	2	5
		Weaker	2	8	10
		Total	5	10	

Total across type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	2	2	4
		Weaker	1	7	8
		Total	3	9	
Lower		Stronger	6	2	8
		Weaker	2	4	6
		Total	8	6	
Total across severity		Stronger	8	4	12
		Weaker	3	11	14
		Total	11	15	

TABLE 12 (continued)
Decision Strategy Analysis

Panel B (continued): Final judgment matches IT specialist input[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.02	1	0.02	0.31	0.577
Team identity	0.01	1	0.01	0.10	0.747
Input Quality*Team Identity	0.31	1	0.31	5.00	0.028
Error	5.99	97	0.06		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.01	1	0.01	0.19	0.661
Severity*Input Quality	0.16	1	0.16	2.24	0.138
Severity*Team Identity	0.08	1	0.08	1.17	0.282
Severity*Input Quality*Team Identity	<0.01	1	<0.01	<0.01	0.980
Error	6.75	97	0.07		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.04	1	0.04	0.72	0.400
Type*Input Quality	0.08	1	0.08	1.59	0.210
Type*Team Identity	0.15	1	0.15	3.08	0.082
Type*Input Quality*Team Identity	0.01	1	0.01	0.12	0.726
Error	4.72	97	0.05		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	<0.01	1	<0.01	0.01	0.946
Severity*Type*Input Quality	0.01	1	0.01	0.20	0.656
Severity*Type*Team Identity	0.05	1	0.05	0.78	0.378
Severity*Type*Input Quality*Team Identity	0.10	1	0.10	1.60	0.209
Error	5.85	97	0.06		

TABLE 12 (continued)
Decision Strategy Analysis

Panel C: No change from initial judgment[a]

Counts by condition and case

Within: Issue Type

Within: Severity		Team Identity	Non-IT: Input Quality = Less	Non-IT: Input Quality = More	Non-IT: Total	IT-related: Input Quality = Less	IT-related: Input Quality = More	IT-related: Total	Total across type: Input Quality = Less	Total across type: Input Quality = More	Total across type: Total
Higher		Stronger	9	9	18	13	8	21	22	17	39
		Weaker	13	8	21	10	5	15	23	13	36
		Total	22	17		23	13		45	30	
Lower		Stronger	6	8	14	6	11	17	12	19	31
		Weaker	6	14	20	8	10	18	14	24	38
		Total	12	22		14	21		26	43	
Total across severity		Stronger	15	17	32	19	19	38	34	36	70
		Weaker	19	22	41	18	15	33	37	37	74
		Total	34	39		37	34		71	73	

TABLE 12 (continued)
Decision Strategy Analysis

Panel C (continued): No change from initial judgment[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.07	1	0.07	0.22	0.639
Team identity	0.09	1	0.09	0.27	0.607
Input Quality*Team Identity	0.11	1	0.11	0.34	0.564
Error	31.42	97	0.32		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.15	1	0.15	0.63	0.431
Severity*Input Quality	2.56	1	2.56	10.81	0.001
Severity*Team Identity	0.18	1	0.18	0.76	0.384
Severity*Input Quality*Team Identity	0.16	1	0.16	0.69	0.409
Error	22.96	97	0.24		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.01	1	0.01	0.04	0.850
Type*Input Quality	0.14	1	0.14	0.74	0.391
Type*Team Identity	0.46	1	0.46	2.42	0.123
Type*Input Quality*Team Identity	0.03	1	0.03	0.15	0.703
Error	18.34	97	0.19		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.05	1	0.05	0.30	0.585
Severity*Type*Input Quality	0.01	1	0.01	0.04	0.852
Severity*Type*Team Identity	0.06	1	0.06	0.34	0.559
Severity*Type*Input Quality*Team Identity	0.51	1	0.51	3.20	0.077
Error	15.41	97	0.16		

TABLE 12 (continued)
Decision Strategy Analysis

Panel D: Final judgment moves toward IT specialist input[a]

Counts by condition and case

Within: Issue Type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	Total
Non-IT					
	Higher	Stronger	12	11	23
		Weaker	5	13	18
		Total	17	24	
	Lower	Stronger	9	10	19
		Weaker	12	6	18
		Total	21	16	
	Total across severity	Stronger	21	21	42
		Weaker	17	19	36
		Total	38	40	
IT-related					
	Higher	Stronger	10	11	21
		Weaker	7	13	20
		Total	17	24	
	Lower	Stronger	13	10	23
		Weaker	12	9	21
		Total	25	19	
	Total across severity	Stronger	23	21	44
		Weaker	19	22	41
		Total	42	43	
Total across type					
	Higher	Stronger	22	22	44
		Weaker	12	26	38
		Total	34	48	
	Lower	Stronger	22	20	42
		Weaker	24	15	39
		Total	46	35	
	Total across severity	Stronger	44	42	86
		Weaker	36	41	77
		Total	80	83	

TABLE 12 (continued)
Decision Strategy Analysis

Panel D (continued): Final judgment moves toward IT specialist input[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.06	1	0.06	0.21	0.652
Team identity	0.13	1	0.13	0.48	0.492
Input Quality*Team Identity	0.02	1	0.02	0.05	0.817
Error	27.28	97	0.28		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	<0.01	1	<0.01	0.01	0.930
Severity*Input Quality	1.59	1	1.59	5.61	0.020
Severity*Team Identity	0.06	1	0.06	0.20	0.654
Severity*Input Quality*Team Identity	1.14	1	1.14	4.03	0.048
Error	27.53	97	0.28		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	0.12	1	0.12	0.53	0.467
Type*Input Quality	0.01	1	0.01	0.02	0.884
Type*Team Identity	0.02	1	0.02	0.10	0.757
Type*Input Quality*Team Identity	0.02	1	0.02	0.08	0.785
Error	22.08	97	0.23		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	0.11	1	0.11	0.64	0.427
Severity*Type*Input Quality	<0.01	1	<0.01	0.02	0.900
Severity*Type*Team Identity	0.07	1	0.07	0.42	0.517
Severity*Type*Input Quality*Team Identity	0.30	1	0.30	1.75	0.189
Error	16.76	97	0.17		

TABLE 12 (continued)
Decision Strategy Analysis

Panel E: Average initial judgment and IT specialist input[a]

Counts by condition and case

Within: Issue Type

Non-IT

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	2	3	5
		Weaker	3	2	5
		Total	5	5	
Lower		Stronger	3	3	6
		Weaker	1	1	2
		Total	4	4	
Total across severity		Stronger	5	6	11
		Weaker	4	3	7
		Total	9	9	

IT-related

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	0	6	6
		Weaker	1	3	4
		Total	1	9	
Lower		Stronger	2	2	4
		Weaker	1	3	4
		Total	3	5	
Total across severity		Stronger	2	8	10
		Weaker	2	6	8
		Total	4	14	

Total across type

Within: Severity		Team Identity	Input Quality: Less	Input Quality: More	*Total*
Higher		Stronger	2	9	11
		Weaker	4	5	9
		Total	6	14	
Lower		Stronger	5	5	10
		Weaker	2	4	6
		Total	7	9	
Total across severity		Stronger	7	14	21
		Weaker	6	9	15
		Total	13	23	

TABLE 12 (continued)
Decision Strategy Analysis

Panel E (continued): Average initial judgment and IT specialist input[a]

Repeated measures GLM

Between Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Input Quality	0.17	1	0.17	1.52	0.220
Team identity	0.08	1	0.08	0.70	0.405
Input Quality*Team Identity	0.05	1	0.05	0.48	0.490
Error	10.98	97	0.11		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity	0.04	1	0.04	0.53	0.469
Severity*Input Quality	0.08	1	0.08	1.06	0.305
Severity*Team Identity	0.01	1	0.01	0.17	0.679
Severity*Input Quality*Team Identity	0.17	1	0.17	2.22	0.140
Error	7.20	97	0.07		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Type	<0.01	1	<0.01	0.01	0.931
Type*Input Quality	0.25	1	0.25	3.29	0.073
Type*Team Identity	0.01	1	0.01	0.10	0.758
Type*Input Quality*Team Identity	<0.01	1	<0.01	<0.01	0.996
Error	7.25	97	0.08		
Within Subjects					
Source	**SS**	**df**	**MS**	**F-Ratio**	**p-Value**
Severity*Type	<0.01	1	<0.01	<0.01	0.960
Severity*Type*Input Quality	0.09	1	0.09	1.44	0.233
Severity*Type*Team Identity	0.09	1	0.09	1.37	0.244
Severity*Type*Input Quality*Team Identity	0.03	1	0.03	0.50	0.480
Error	6.28	97	0.07		

[a]This table captures the results of identifying participant decision strategy based on initial judgment, final judgment, and IT specialist input received. The following describes the decision strategy participants used:

Panel A: Participant moved from initial judgment away from IT specialist input to arrive at final judgment

Panel B: Participant matched IT specialist input in final judgment

Panel C: Participant did not change from initial judgment (i.e., final judgment is equal to initial judgment)

Panel D: Participant moved from initial judgment toward the IT specialist input to arrive at final judgment (but did not average)

Panel E: Participant averaged their initial judgment and the IT specialist input to arrive at final judgment

Refer to Table 1 for independent variable descriptions.

APPENDIX A: EXPERIMENTAL INSTRUMENT

The following pages provide screenshots of the experimental instrument from Qualtrics. Additional information is provided in brackets.

There is no single correct answer to the questions asked in this study; the focus is on gaining a better understanding of how professional judgments are made.

Once you begin the study, please be sure to finish the entire study. Please make sure you have at least 30 minutes of time available to complete this study.

We understand that the amount of information provided to you in these cases may be considerably less than what you normally would have on audit engagements. Nevertheless, your best professional judgment to all questions given the available information is vital to our research and greatly appreciated.

Thank you for your participation!

>>

Client Cases: Instructions

Assume that it is the end of April 2015 and you are the lead auditor on each of the following four audit engagements, which all have a year end of June 30, 2015. The client company scenarios should be considered independently from one another. All of the clients are medium-sized companies that have been in business for more than 25 years and have a moderate/average level of engagement risk. The management at each of the clients assessed the company's internal control over financial reporting to comply with Sections 302 and 404 of SOX and noted the listed issues. Test work is being performed for the Sarbanes-Oxley Act (SOX) 404 component of the integrated audit for 2015. Walkthroughs or tests of operating effectiveness for key controls have not yet been performed, but you are making some preliminary judgments about the control issues at each of the client companies in question.

For each client company you must assess whether the control issues identified by management should be considered to be a control deficiency, a significant deficiency, or a material weakness. Recall that AS 5 states: "The severity of a deficiency does not depend on whether a misstatement actually has occurred but rather on whether there is a reasonable possibility that the company's controls will fail to prevent or detect a misstatement and the magnitude of the potential misstatement resulting from the deficiency or deficiencies." To make this decision, please examine all of the materials thoroughly. For the purposes of evaluating the severity of the control issues, assume no compensating controls are in place.

Please remember to consider each client and the internal control issues independently of the other clients.

>>

[Note: The order of the four cases was randomized across participants.]

Client: Raven Systems Corp.

During the SOX assessment of internal control, several issues in the accounting for fixed assets were identified. First, there was inadequate documentation of fixed assets to assist in the identification and location of certain fixed assets. Specifically, several fixed assets could not be located at the sites that were recorded in the accounting records. Second, the company failed to affix ID tags to fixed assets in locations outside of corporate headquarters. In addition, the company did not document the policies, practices, and procedures pertaining to the classification of certain expenditures as fixed assets. Finally, the requisite documentation supporting the authorization and categorization of fixed assets could not be obtained.

These control issues resulted in an overstatement of fixed assets. Specifically, Repairs and Maintenance Expense amounting to 2.4% of net income was erroneously capitalized as Property, Plant, and Equipment. While the error was detected and corrected during the SOX internal control assessment, the company acknowledges that it could have resulted in a misstatement in the annual financial statements that otherwise would not have been prevented or detected.

Based on your review of the internal control issue described above, please mark your judgment of how best to classify this issue.

Control deficiency — Significant deficiency — Material weakness

1 2 3 4 5 6 7 8 9 10 11

Since the auditor is required to classify an issue into one of the three categories, we ask that you select only ONE of the three choices. Indicate your choice below.

- Control deficiency
- Significant deficiency
- Material weakness

>>

Powered by Qualtrics

Client: Alexander Corp.

The SOX assessment revealed that the company had several issues in internal controls over the completeness and accuracy of its net property and equipment balance and related depreciation expense. Specifically, substantially all of the company's property and equipment records are maintained using databases and spreadsheets, which are not integrated with the company's underlying accounting information and financial reporting system. The company does not have adequate controls to ensure that assets, asset values, capitalization dates and useful lives are complete, accurate and recorded on a timely basis in the accounting information and financial reporting system. Additionally, reconciliation controls over inter-company fixed asset transfers were not operating effectively.

Although no misstatements actually occurred, these control issues could have resulted in a misstatement to the property and equipment and related depreciation expense accounts that would not have been prevented or detected.

Based on your review of the internal control issue described above, please mark your judgment of how best to classify this issue.

Control deficiency — Significant deficiency — Material weakness

1 2 3 4 5 6 7 8 9 10 11

Since the auditor is required to classify an issue into one of the three categories, we ask that you select only ONE of the three choices. Indicate your choice below.

- Control deficiency
- Significant deficiency
- Material weakness

>>

Client: Ballas Company

Inventory represents a significant portion of the company's assets. The company conducts a physical count of inventory once annually. The SOX assessment of the company's internal controls over inventory revealed that the procedures over recording and maintenance of the inventory records were not operating as effectively as management had anticipated. The internal control issue involved inventory being held offsite by a distribution partner. Specifically, the company had relied on the distribution center's internal, computerized reporting system, but the distribution center's computerized system lacked segregation of duties over the receiving and shipping of inventory and the inventory record keeping functions. This resulted in the distribution partner underreporting the level of inventory to the company, which caused gross profit to be misstated in each of the preceding three quarters. Because the external auditor detected the problem and proposed an audit adjustment in each quarter, audit adjustments were made to correct the errors before the quarterly earnings releases. Annual net income was understated by 3.8%, but was corrected when this issue was found during the SOX internal control review.

Based on your review of the internal control issue described above, please mark your judgment of how best to classify this issue.

Control deficiency — Significant deficiency — Material weakness

1 2 3 4 5 6 7 8 9 10 11

Since the auditor is required to classify an issue into one of the three categories, we ask that you select only ONE of the three choices. Indicate your choice below.

- Control deficiency
- Significant deficiency
- Material weakness

>>

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Client: Harper Corp.

During the SOX assessment of internal controls, the company identified a control issue relating to the service contract process in its Latin American division. The company often performs service work for third parties, for which it recognizes a significant amount of revenue. The evaluation of controls revealed that personnel in the accounting department were not reviewing the underlying documentation that accompanied the recording of this service revenue. This control issue could allow certain personnel to make false or inaccurate statements regarding transactions entered into with third parties, which could result in an overstatement of service revenue.

While no misstatements actually occurred, this control issue could have resulted in a misstatement to sales revenue and/or professional service revenue that would not have been prevented or detected.

Based on your review of the internal control issue described above, please mark your judgment of how best to classify this issue.

Control deficiency — Significant deficiency — Material weakness

1 2 3 4 5 6 7 8 9 10 11

Since the auditor is required to classify an issue into one of the three categories, we ask that you select only ONE of the three choices. Indicate your choice below.

- Control deficiency
- Significant deficiency
- Material weakness

>>

[The following information is displayed for the ***stronger team identity condition*** only.]

Input from IT specialist

For each of the preceding clients, the lead IT specialist (who is on the engagement team for all four clients) has reviewed the information regarding the control issues noted by management at each client. Here is some background on this IT specialist:

- This IT specialist particularly enjoys thinking about issues related to financial statement audits in addition to thinking about broader issues on advisory/consulting engagements.
- This IT specialist is competent in both audit and advisory/consulting engagements, splitting time equally between the two.
- It seems like this IT specialist wants to be a helpful member of the audit engagement team, rather than only technically a member; for example, the IT specialist makes sure to sit with the team when on-site at clients. You view the IT specialist as a core, not just obligatory, member of the team.

You may or may not have not worked with an IT specialist quite like this in the past, but please take a minute to think about what it would be like to work with this person. What are some thoughts that come to mind? Please type your thoughts below and again, take only a minute to do this.

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[The following information is displayed for the ***weaker team identity condition*** only.]

Input from IT specialist

For each of the preceding clients, the lead IT specialist (who is on the engagement team for all four clients) has reviewed the information regarding the control issues noted by management at each client. Here is some background on this IT specialist:

- This IT specialist does not particularly enjoy thinking about issues related to financial statement audits and much prefers thinking about broader, "more interesting" issues on advisory/consulting engagements.
- This IT specialist is competent in both audit and advisory/consulting engagements, splitting time equally between the two.
- It seems like this IT specialist wants to be only technically a member of the audit engagement team, rather than a helpful member; for example, the IT specialist sits separate from the team when on-site at clients. You view this IT specialist as just an obligatory, not core, member of the team.

You may or may not have not worked with an IT specialist quite like this in the past, but please take a minute to think about what it would be like to work with this person. What are some thoughts that come to mind? Please type your thoughts below and again, take only a minute to do this.

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You will now be provided this IT specialist's input for each client and provide your final assessments of the control issues.

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[Note: The cases were presented in the same order as in the initial assessments. The client information and initial rating appeared as below regardless of condition. "Your initial rating" (listed as a "6" in these example screenshots) reflected the number the participant entered during the initial assessment for that case.]

Client: Raven Systems Corp. [Note: This is the same client information provided during the initial assessment.]

During the SOX assessment of internal control, several issues in the accounting for fixed assets were identified. First, there was inadequate documentation of fixed assets to assist in the identification and location of certain fixed assets. Specifically, several fixed assets could not be located at the sites that were recorded in the accounting records. Second, the company failed to affix ID tags to fixed assets in locations outside of corporate headquarters. In addition, the company did not document the policies, practices, and procedures pertaining to the classification of certain expenditures as fixed assets. Finally, the requisite documentation supporting the authorization and categorization of fixed assets could not be obtained.

These control issues resulted in an overstatement of fixed assets. Specifically, Repairs and Maintenance Expense amounting to 2.4% of net income was erroneously capitalized as Property, Plant, and Equipment. While the error was detected and corrected during the SOX internal control assessment, the company acknowledges that it could have resulted in a misstatement in the annual financial statements that otherwise would not have been prevented or detected.

Your initial rating: 6

[Note: The "IT specialist input" information displayed below reflects the ***more accurate*** condition as the control issues described are designed to be between an SD and MW.]

IT specialist input

Recommended rating: 8.5

Rationale: The severity of the issues noted definitely falls between a significant deficiency and a material weakness. The following case facts influenced my judgment:

- Accounting for fixed assets in question
- Lack of documentation
- Erroneous capitalization of 2.4% of net income

[Note: The "IT specialist input" information displayed below reflects the ***less accurate*** condition as the control issues described are designed to be between an SD and MW.]

IT specialist input

Recommended rating: 3.5

Rationale: The severity of the issues noted definitely falls between a control deficiency and a significant deficiency. The following case facts influenced my judgment:

- Accounting for fixed assets in question
- Lack of documentation
- Erroneous capitalization of 2.4% of net income

[Note: The following questions follow regardless of condition.]

Please make your final assessments below.

Based on your review of the internal control issue described above, please mark your judgment of how best to classify this issue.

Control deficiency — Significant deficiency — Material weakness

1 2 3 4 5 6 7 8 9 10 11

Since the auditor is required to classify an issue into one of the three categories, we ask that you select only ONE of the three choices. Indicate your choice below.

- Control deficiency
- Significant deficiency
- Material weakness

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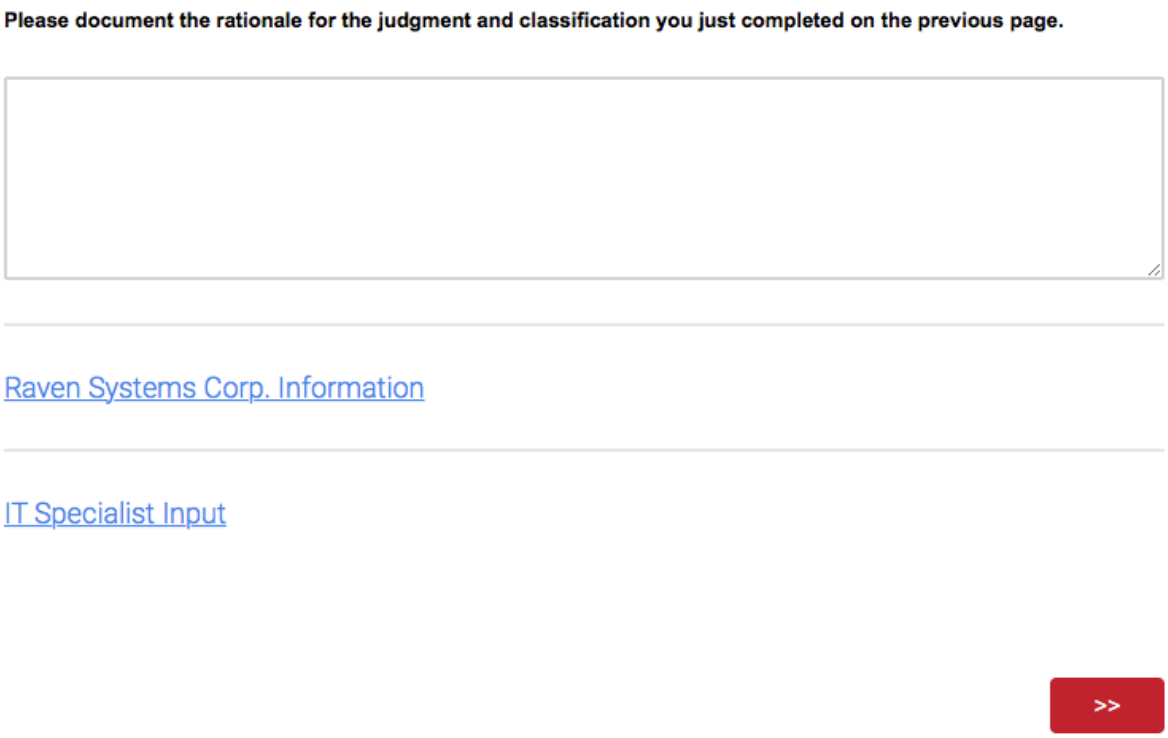
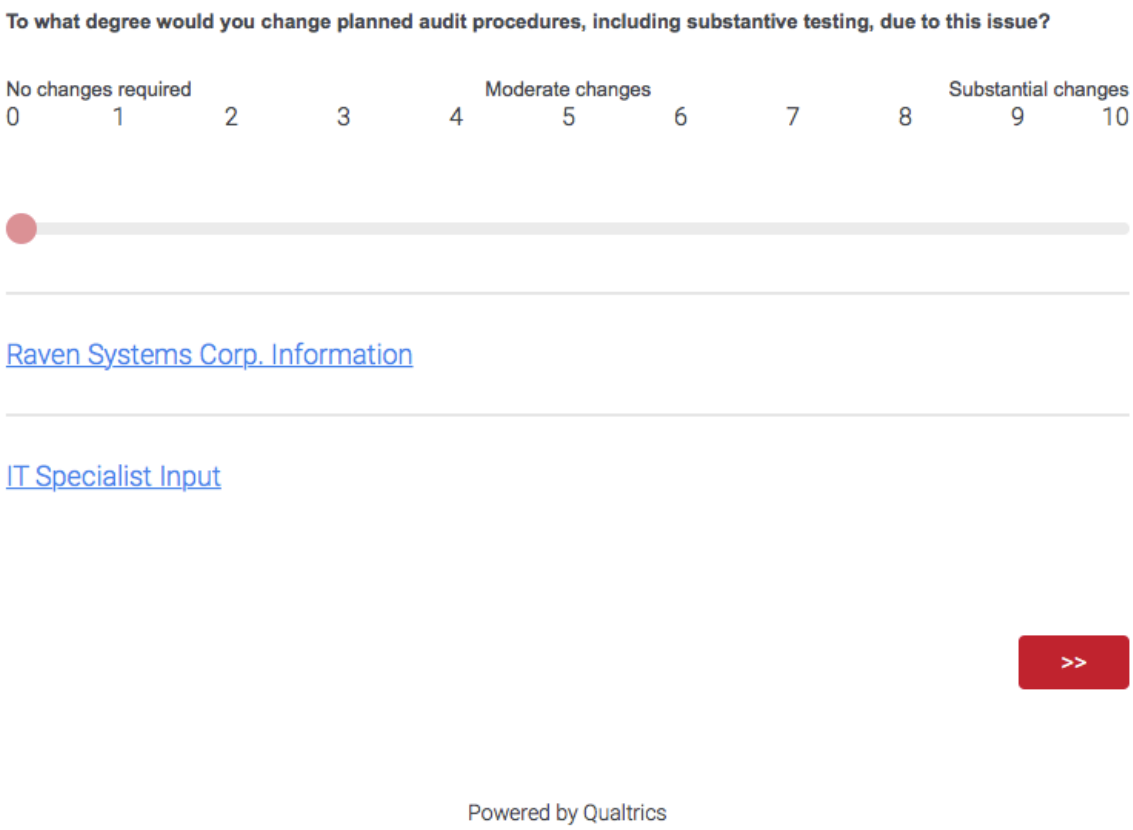


[Note: Clicking on the link labeled “Raven Systems Corp. Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]



[Note: Clicking on the link labeled “Raven Systems Corp. Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]

Client: Alexander Corp. [Note: This is the same client information provided during the initial assessment.]

The SOX assessment revealed that the company had several issues in internal controls over the completeness and accuracy of its net property and equipment balance and related depreciation expense. Specifically, substantially all of the company's property and equipment records are maintained using databases and spreadsheets, which are not integrated with the company's underlying accounting information and financial reporting system. The company does not have adequate controls to ensure that assets, asset values, capitalization dates and useful lives are complete, accurate and recorded on a timely basis in the accounting information and financial reporting system. Additionally, reconciliation controls over inter-company fixed asset transfers were not operating effectively.

Although no misstatements actually occurred, these control issues could have resulted in a misstatement to the property and equipment and related depreciation expense accounts that would not have been prevented or detected.

Your initial rating: 6

[Note: The "IT specialist input" information displayed below reflects the ***more accurate*** condition as the control issues described are designed to be between a CD and SD.]

IT specialist input

Recommended rating: 3.5

Rationale: The severity of the issues noted definitely falls between a control deficiency and a significant deficiency. The following case facts influenced my judgment:

- Completeness and accuracy of property and equipment balance in question
- Use of databases and spreadsheets not integrated with company's system
- No misstatements actually occurred, but could have resulted in a misstatement

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[Note: The "IT specialist input" information displayed below reflects the ***less accurate*** condition as the control issues described are designed to be between a CD and SD.]

IT specialist input

Recommended rating: 8.5

Rationale: The severity of the issues noted definitely falls between a significant deficiency and a material weakness. The following case facts influenced my judgment:

- Completeness and accuracy of property and equipment balance in question
- Use of databases and spreadsheets not integrated with company's system
- No misstatements actually occurred, but could have resulted in a misstatement

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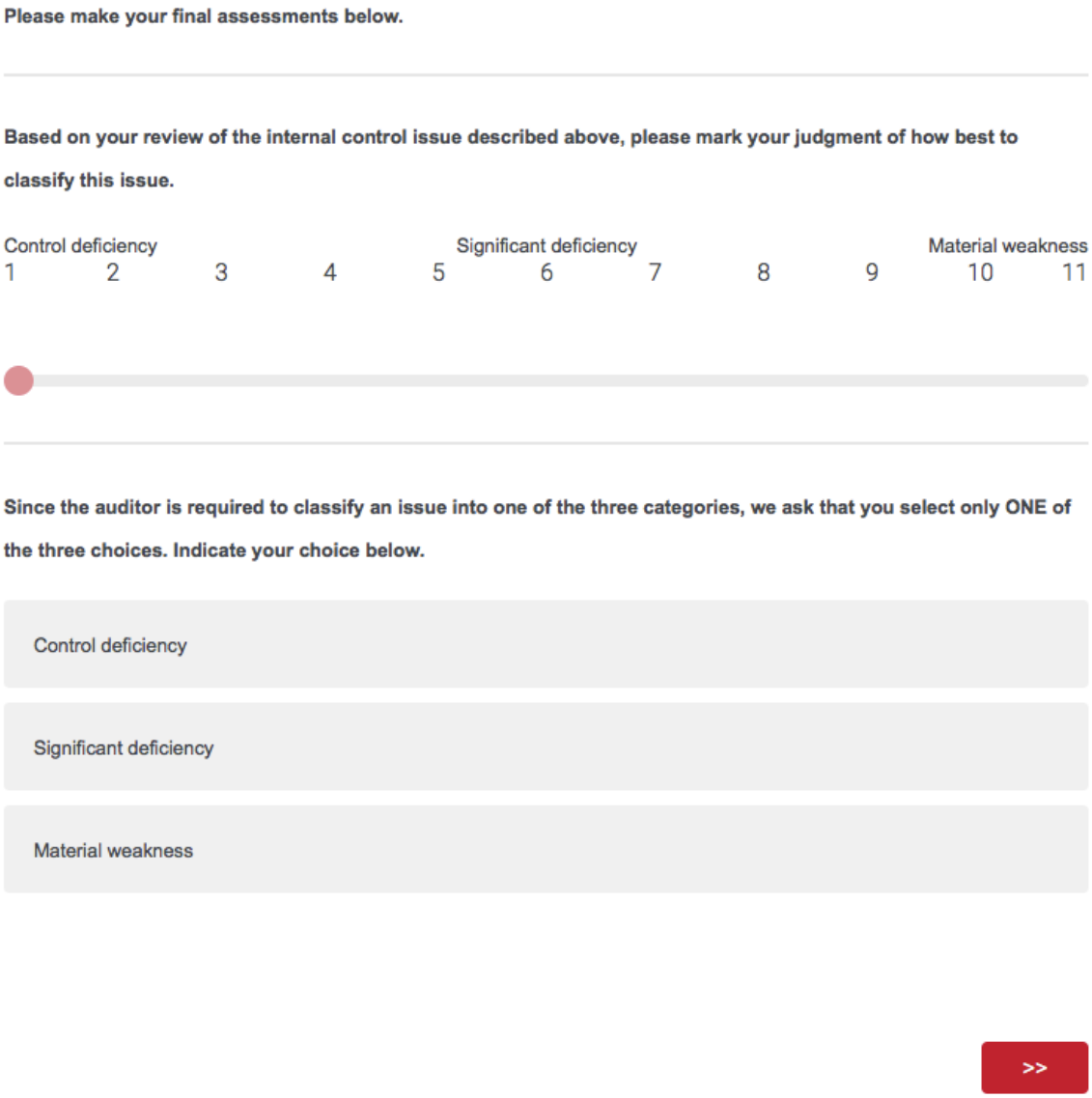
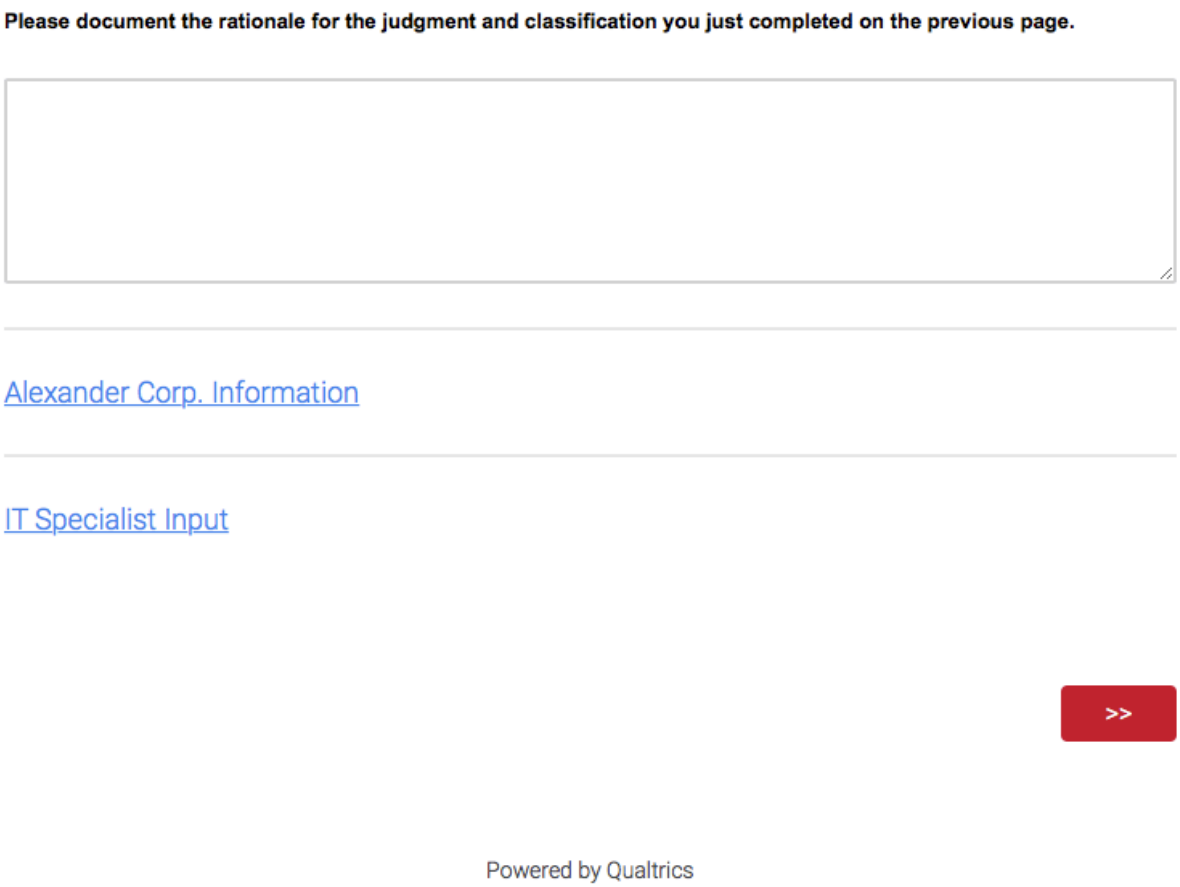
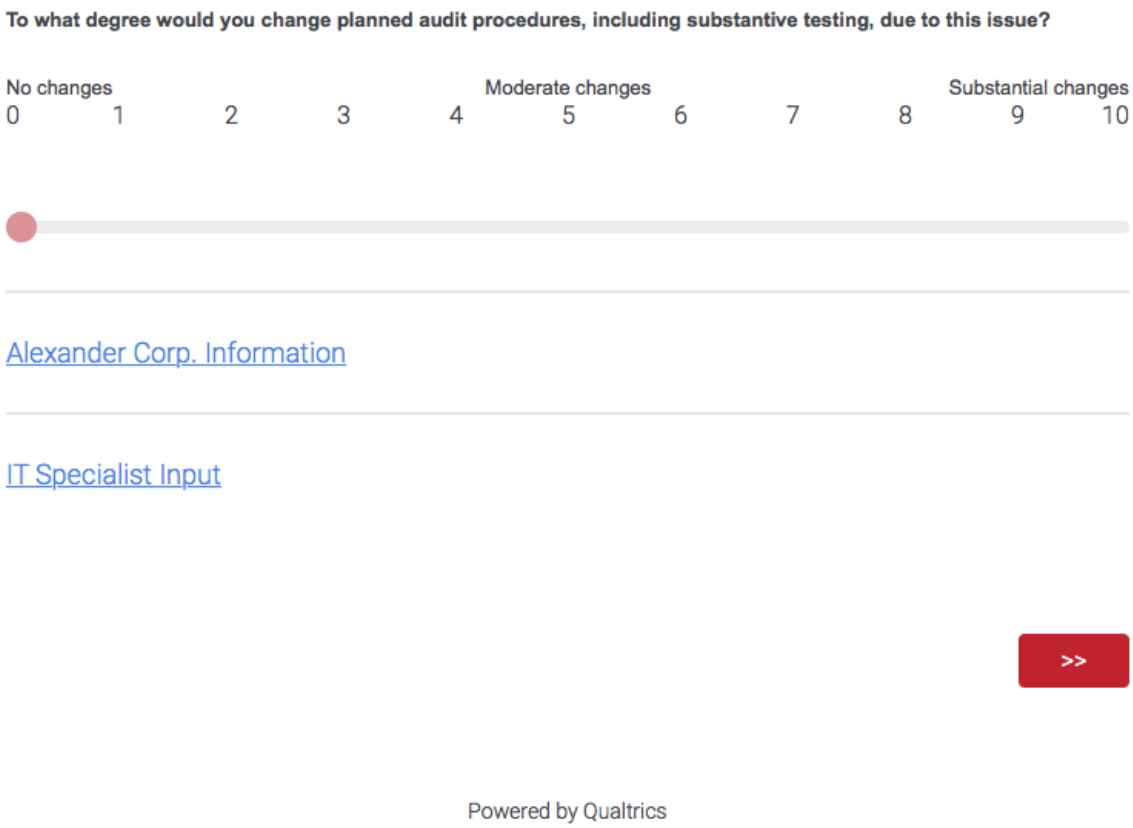
[Note: The following questions follow regardless of condition.]





[Note: Clicking on the link labeled “Alexander Corp. Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]



[Note: Clicking on the link labeled “Alexander Corp. Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]

Client: Ballas Company [Note: This is the same client information provided during the initial assessment.]

Inventory represents a significant portion of the company's assets. The company conducts a physical count of inventory once annually. The SOX assessment of the company's internal controls over inventory revealed that the procedures over recording and maintenance of the inventory records were not operating as effectively as management had anticipated. The internal control issue involved inventory being held offsite by a distribution partner. Specifically, the company had relied on the distribution center's internal, computerized reporting system, but the distribution center's computerized system lacked segregation of duties over the receiving and shipping of inventory and the inventory record keeping functions. This resulted in the distribution partner underreporting the level of inventory to the company, which caused gross profit to be misstated in each of the preceding three quarters. Because the external auditor detected the problem and proposed an audit adjustment in each quarter, audit adjustments were made to correct the errors before the quarterly earnings releases. Annual net income was understated by 3.8%, but was corrected when this issue was found during the SOX internal control review.

Your initial rating: 6

[Note: The "IT specialist input" information displayed below reflects the ***more accurate*** condition as the control issues described are designed to be between an SD and MW.]

IT specialist input

Recommended rating: 8.5

Rationale: The severity of the issues noted definitely falls between a significant deficiency and a material weakness. The following case facts influenced my judgment:

- Inventory procedures in question
- Lack of segregation of duties in computerized system
- Annual net income understated by 3.8%

[Note: The "IT specialist input" information displayed below reflects the ***less accurate*** condition as the control issues described are designed to be between an SD and MW.]

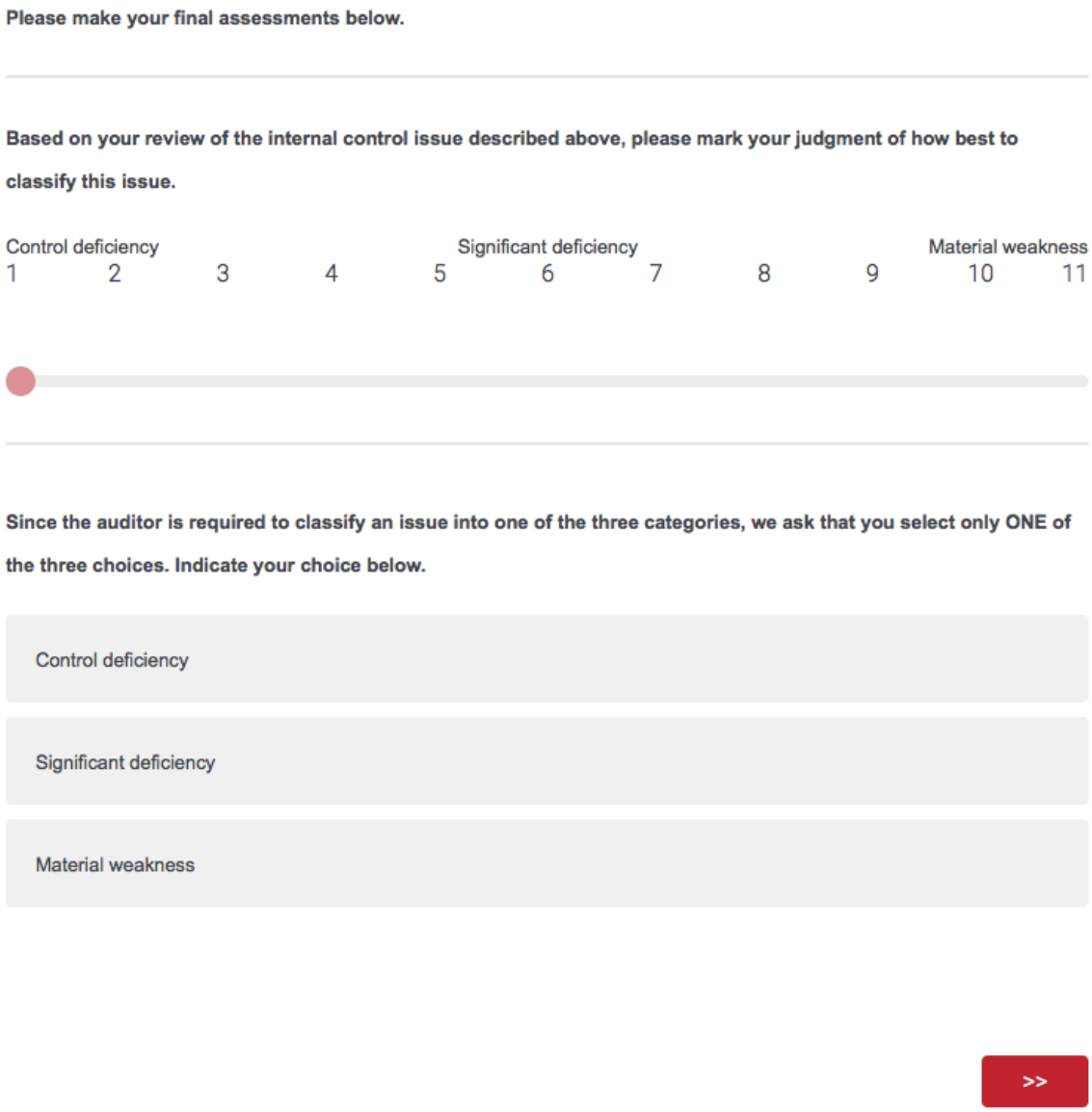
IT specialist input

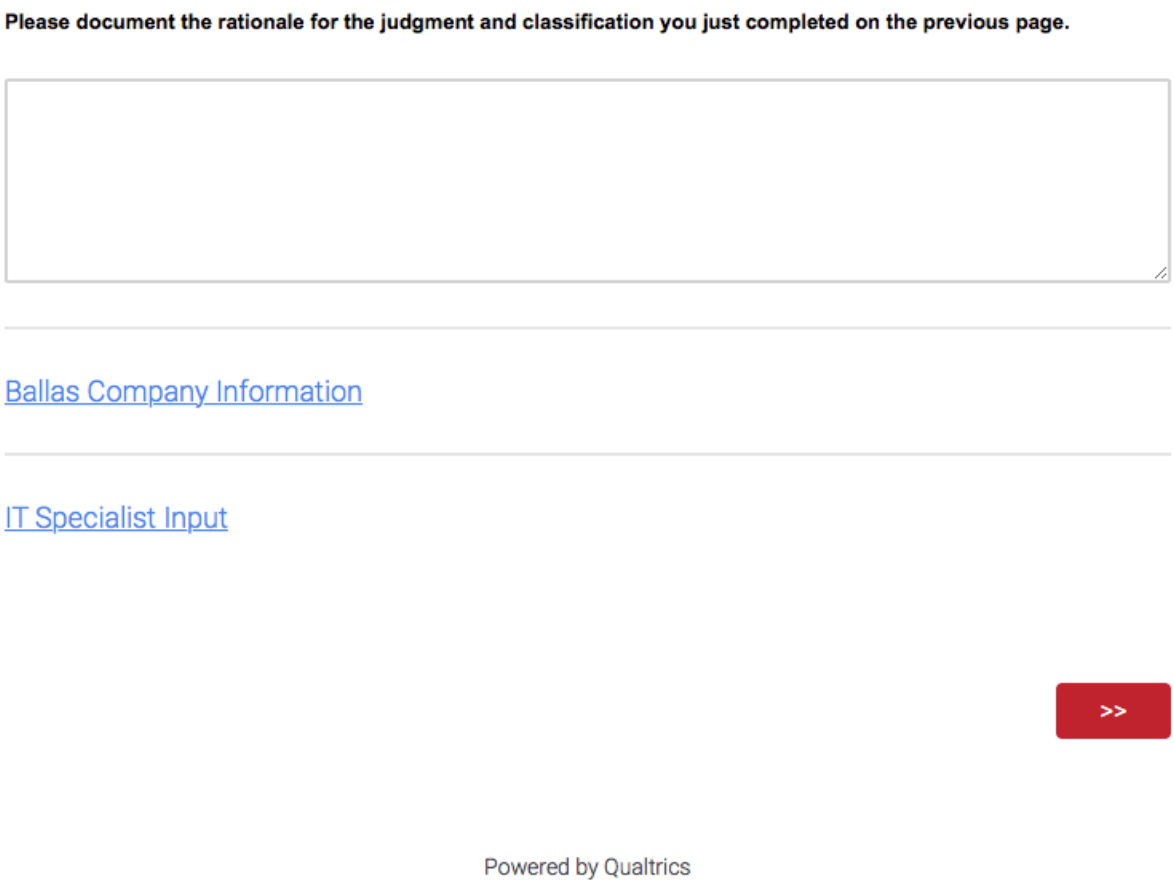
Recommended rating: 3.5

Rationale: The severity of the issues noted definitely falls between a control deficiency and a significant deficiency. The following case facts influenced my judgment:

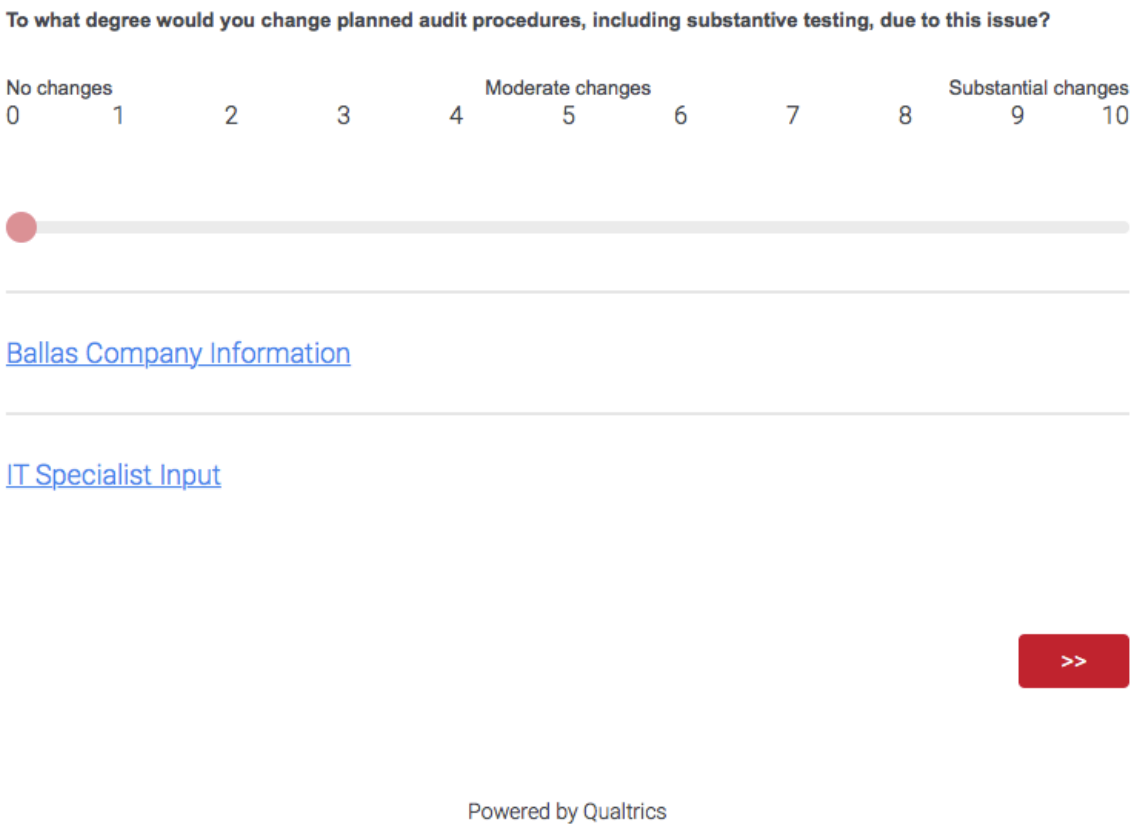
- Inventory procedures in question
- Lack of segregation of duties in computerized system
- Annual net income understated by 3.8%

[Note: The following questions follow regardless of condition.]





[Note: Clicking on the link labeled “Ballas Company Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]



[Note: Clicking on the link labeled “Ballas Company Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]

Client: Harper Corp. [Note: This is the same client information provided during the initial assessment.]

During the SOX assessment of internal controls, the company identified a control issue relating to the service contract process in its Latin American division. The company often performs service work for third parties, for which it recognizes a significant amount of revenue. The evaluation of controls revealed that personnel in the accounting department were not reviewing the underlying documentation that accompanied the recording of this service revenue. This control issue could allow certain personnel to make false or inaccurate statements regarding transactions entered into with third parties, which could result in an overstatement of service revenue.

While no misstatements actually occurred, this control issue could have resulted in a misstatement to sales revenue and/or professional service revenue that would not have been prevented or detected.

Your initial rating: 6

[Note: The "IT specialist input" information displayed below reflects the ***more accurate*** condition as the control issues described are designed to be between a CD and SD.]

IT specialist input

Recommended rating: 3.5

Rationale: The severity of the issues noted definitely falls between a control deficiency and a significant deficiency. The following case facts influenced my judgment:

- Service contract process in question
- Lack of review of documentation
- No misstatements actually occurred, but could have resulted in a misstatement

---

[Note: The "IT specialist input" information displayed below reflects the ***less accurate*** condition as the control issues described are designed to be between a CD and SD.]

IT specialist input

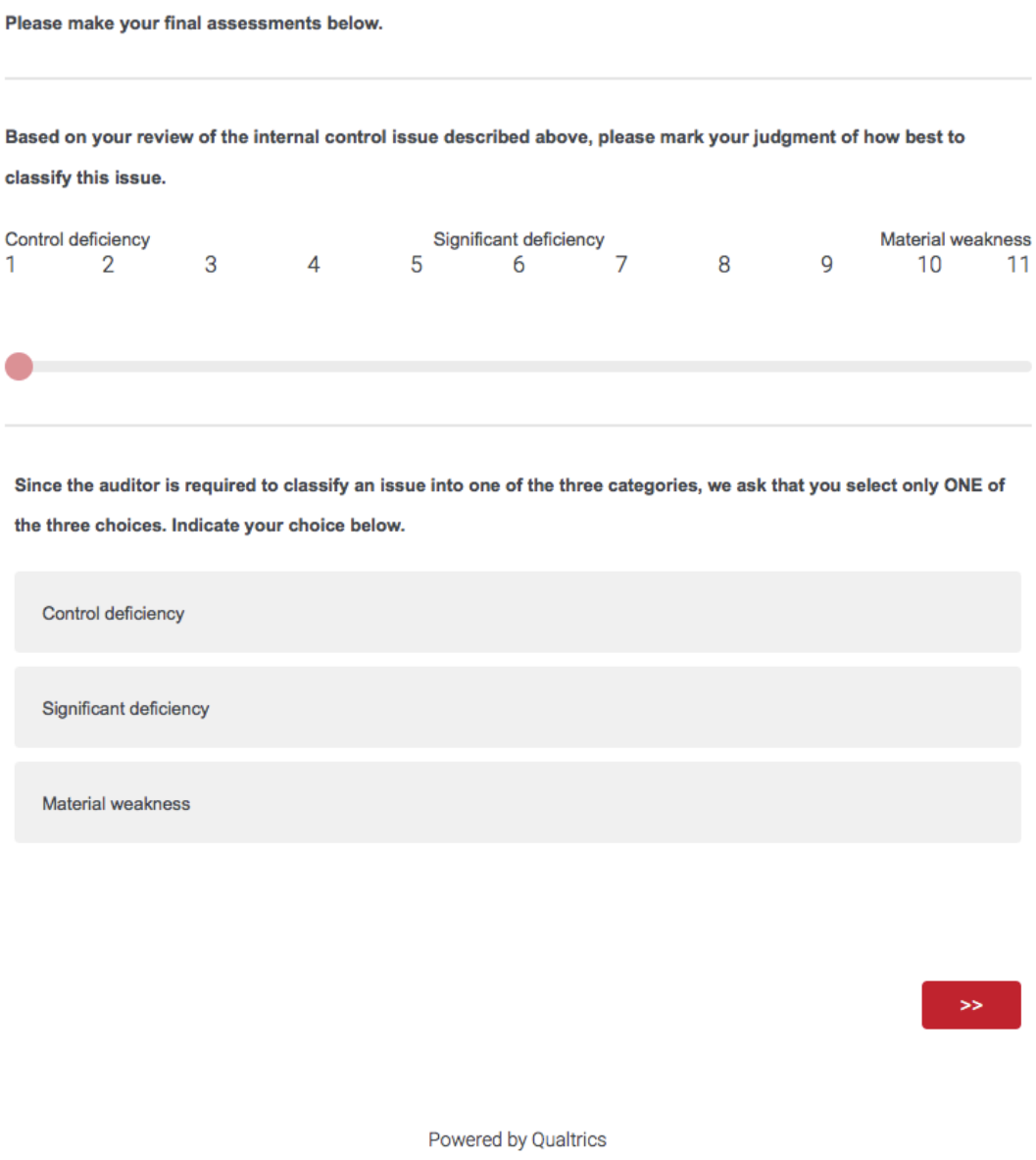
Recommended rating: 8.5

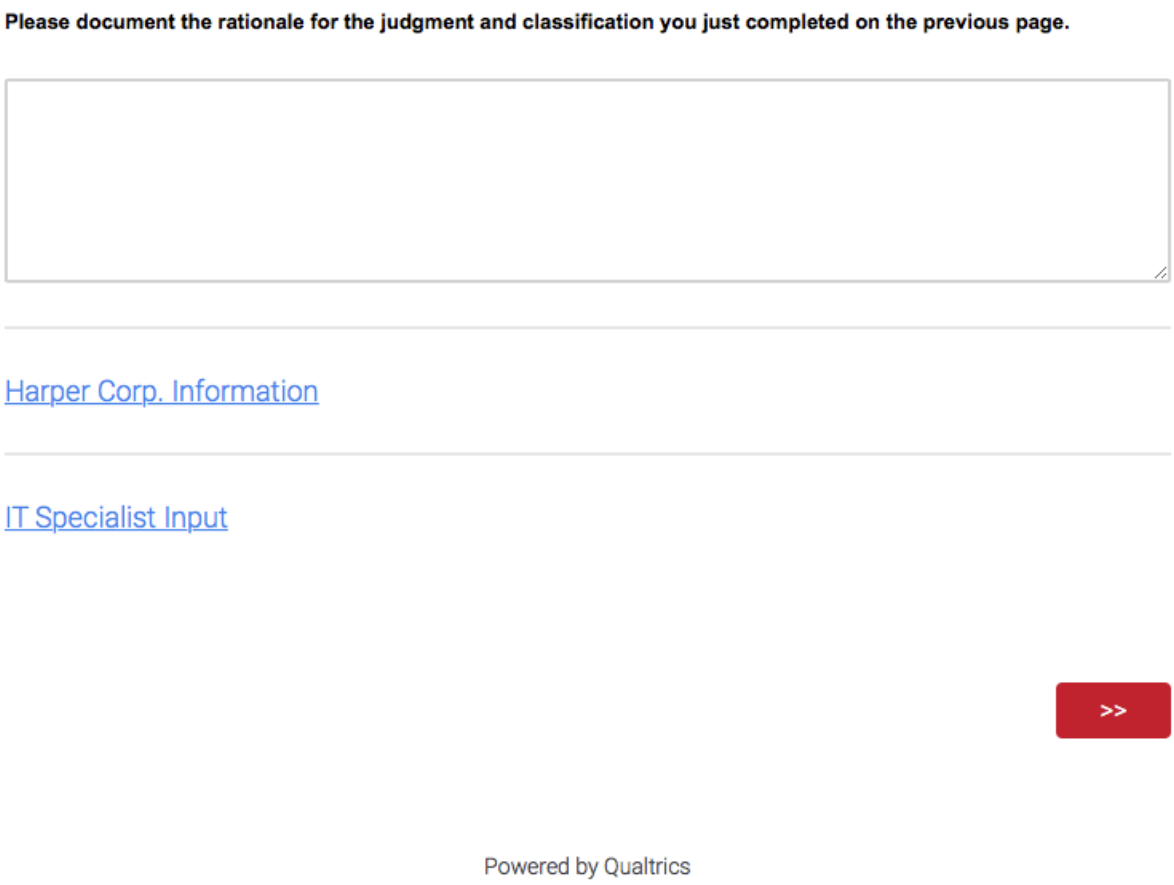
Rationale: The severity of the issues noted definitely falls between a significant deficiency and a material weakness. The following case facts influenced my judgment:

- Service contract process in question
- Lack of review of documentation
- No misstatements actually occurred, but could have resulted in a misstatement

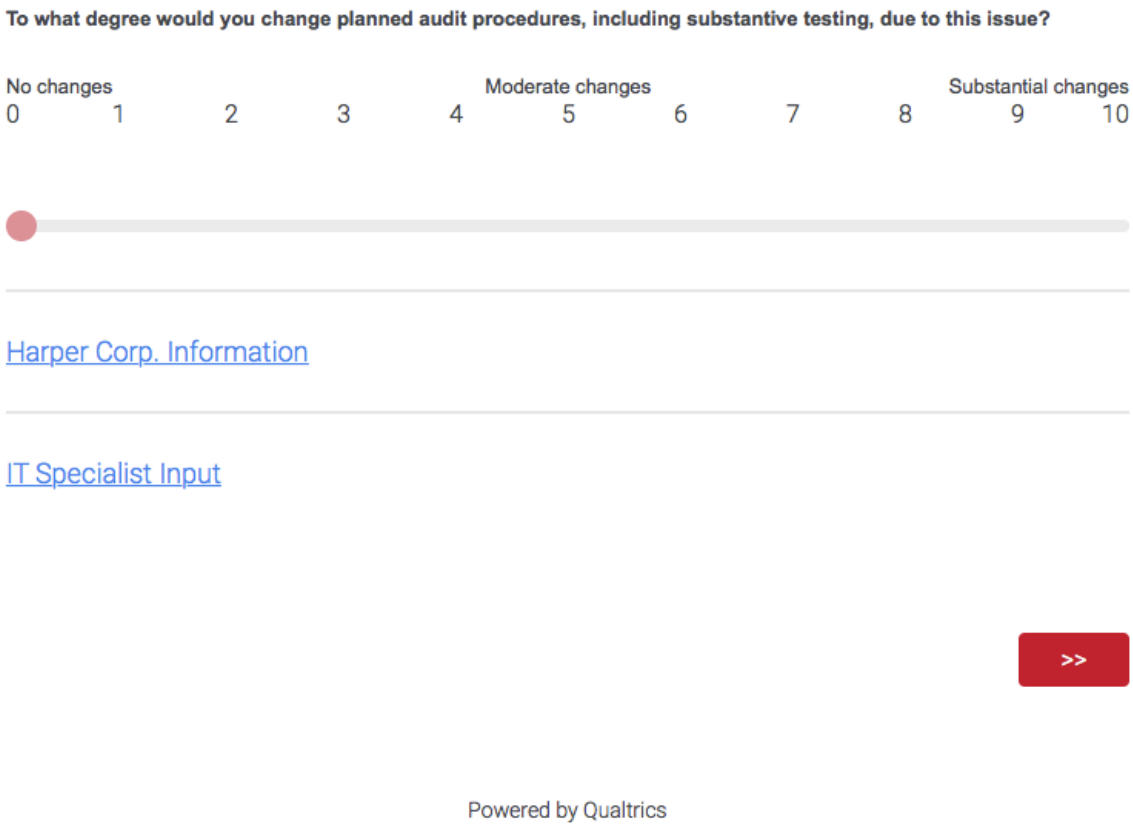
---

[Note: The following questions follow regardless of condition.]





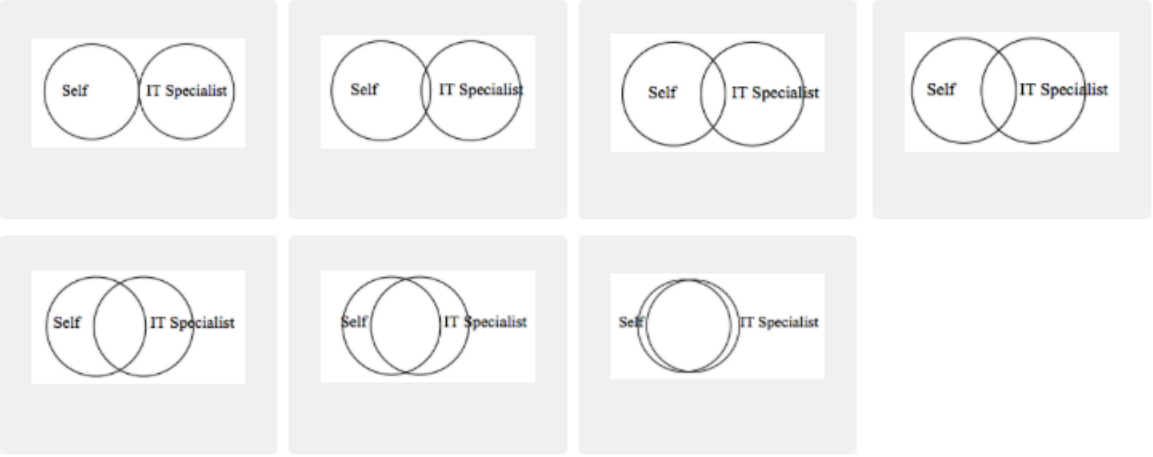
[Note: Clicking on the link labeled “Harper Corp. Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]



[Note: Clicking on the link labeled “Harper Corp. Information” displays the client information; clicking on the “IT Specialist Input” link displays the IT specialist input provided (input provided depends on condition as noted earlier).]

Continuing to think about the client cases you just completed, please answer the following questions.

Select the picture below that best describes how ***your*** personal attributes, qualities, and values **align or overlap** with the attributes, qualities, and values of ***the IT specialist*** who provided the input to you.



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What was the overall quality of the input you received from the IT specialist?

Very low quality — Moderate quality — Very high quality

0 1 2 3 4 5 6 7 8 9 10

Assess the competence of the IT specialist who provided the input to you.

Very low competence — Moderate competence — Very high competence

0 1 2 3 4 5 6 7 8 9 10

How objective is the IT specialist who provided the input to you?

Not at all objective — Somewhat objective — Extremely objective

0 1 2 3 4 5 6 7 8 9 10

How trustworthy is the IT specialist who provided the input to you?

Not at all trustworthy — Somewhat trustworthy — Extremely trustworthy

0 1 2 3 4 5 6 7 8 9 10

Would you want to work with the IT specialist who provided the input again?

Definitely not — Indifferent — Definitely

-5 -4 -3 -2 -1 0 1 2 3 4 5

In terms of being a member of the team, you view the IT specialist who provided the input as:

More obligatory than core — Unsure — More core than obligatory

-5 -4 -3 -2 -1 0 1 2 3 4 5

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Please answer the following questions. These questions are not directly related to the client cases you completed; the goal is to capture your perspective and experience.

Are you more concerned about misclassifying a control deficiency (CD) as a significant deficiency (SD) or a significant deficiency (SD) as a control deficiency (CD)?

More concerned about misclassifying a CD as an SD					Equally concerned				More concerned about misclassifying an SD as a CD
-5	-4	-3	-2	-1	0	1	2	3	4	5

Are you more concerned about misclassifying a significant deficiency (SD) as a material weakness (MW) or a material weakness (MW) as a significant deficiency (SD)?

More concerned about misclassifying an SD as an MW					Equally concerned				More concerned about misclassifying an MW as an SD
-5	-4	-3	-2	-1	0	1	2	3	4	5

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How often do you interact with IT specialists on audit engagements?

Not at all — Sometimes — Very frequently

0 1 2 3 4 5 6 7 8 9 10

IT specialists are valuable members of an audit engagement team.

Never — Sometimes — Always

0 1 2 3 4 5 6 7 8 9 10

IT specialists increase efficiency on audit engagements.

Strongly disagree — Neither agree nor disagree — Strongly agree

-5 -4 -3 -2 -1 0 1 2 3 4 5

IT specialists increase effectiveness of audit engagements.

Strongly disagree — Neither agree nor disagree — Strongly agree

-5 -4 -3 -2 -1 0 1 2 3 4 5

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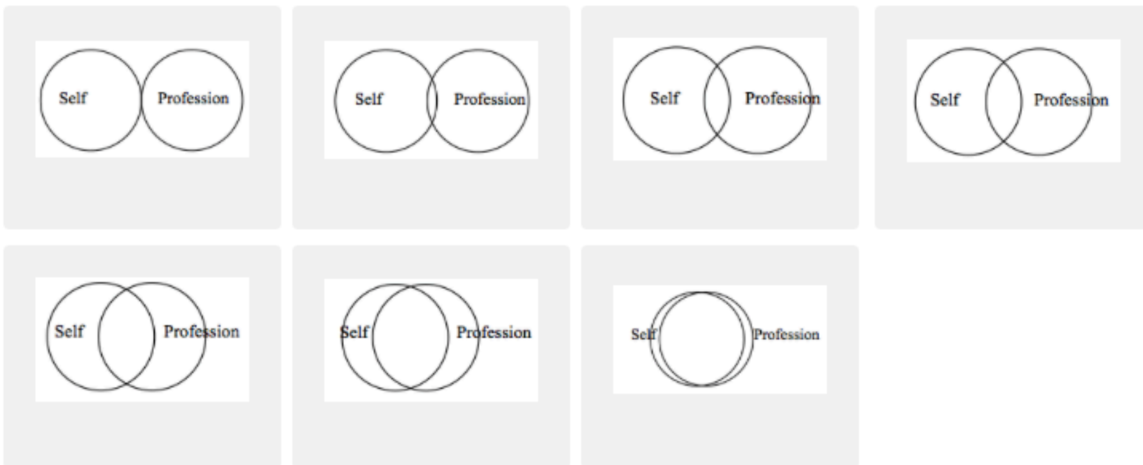
Select the picture below that best describes how ***your*** personal attributes, qualities, and values **align or overlap** with the attributes, qualities, and values of ***the auditing profession*** (e.g., code of professional conduct).



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Relative to other auditors at my level in my firm, I have more experience auditing complex and pervasive accounting information systems (e.g., ERP systems).

Strongly disagree -5 -4 -3 -2 Neither agree nor disagree -1 0 1 2 3 Strongly agree 4 5

Relative to other auditors at my level in my firm, a larger portion of my time is assigned to auditing complex and pervasive accounting information systems (e.g., ERP systems).

Strongly disagree -5 -4 -3 -2 Neither agree nor disagree -1 0 1 2 3 Strongly agree 4 5

Relative to other auditors at my level in my firm, I began auditing complex and pervasive accounting information systems (e.g., ERP systems) at an earlier point in my career.

Strongly disagree -5 -4 -3 -2 Neither agree nor disagree -1 0 1 2 3 Strongly agree 4 5

Relative to other auditors at my level in my firm, I have received more combined informal and formal training in relation to complex and pervasive accounting information systems (e.g., ERP systems) during my career.

Strongly disagree -5 -4 -3 -2 Neither agree nor disagree -1 0 1 2 3 Strongly agree 4 5

Relative to other auditors at my level in my firm, I have a higher level of complex and pervasive accounting information systems (e.g., ERP systems) expertise.

Strongly disagree -5 -4 -3 -2 Neither agree nor disagree -1 0 1 2 3 Strongly agree 4 5

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Please answer the following questions about your professional background. This is the last set of questions.

Number of months in public accounting:

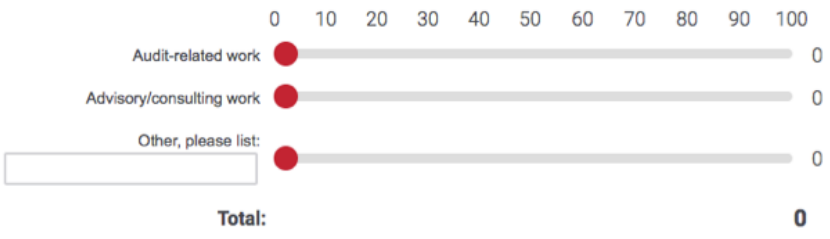
Number of months working for your current firm:

Current position/title with your firm:

Please list any industry specialization(s) you have:

What percentage of your time is spent working on SOX 404 compliance work?

What percentage of your time is spent on auditing versus advisory/consulting work? Note: Responses to the three categories should sum to 100.



Indicate any of the following degrees you have completed:

- Bachelor's degree in accounting
- Master's degree in accounting
- Other (e.g., bachelor's or master's in another field, etc.), please list:

Indicate whether you have any of the following certifications:

- CPA
- CISA
- Other, please list:

Do you have any experience as an IT specialist?

- Yes, please list the number of months:
- No

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[End of instrument]