

Field Evidence about Auditors' Experiences in Consulting with Forensic Specialists

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ABSTRACT: We propose and test a model that links the antecedents of consultation between auditors and forensic specialists to the work performed and the overall effectiveness of the consultation. The antecedents are auditee, auditor, and forensic specialist related, while the work is related to risk assessment, risk responsiveness, and teamwork. A path model, based on a field survey of 57 experienced auditors, shows that forensic specialists' understanding of the client's business and engagement objectives is positively associated with risk assessments and effective teamwork, which, in turn, are positively associated with overall consultation effectiveness. Further, involving forensic specialists early in the engagement is associated with improved teamwork and risk responsiveness. Qualitative responses identify other factors, such as investment in joint extra-collaboration enterprises, which may moderate the association among the antecedents, work, and outcomes. A second survey clarifies the circumstances under which consultation enhances risk assessments, provides examples of unique procedures performed by the forensic specialists, and clarifies the effect of the consultation on cost and delays. Taken together, our findings provide important insights and implications for firm policy, regulatory standards, and future research.

Keywords: consultation effectiveness; forensic specialists; fraud detection; auditors' experiences.

Data Availability: Contact the authors for data availability.

INTRODUCTION

Auditing standards direct auditors to consider consulting with forensic specialists on certain audit engagements to enhance the detection of material fraudulent financial reporting (fraud) (e.g., [AICPA 2002](#), ¶ 50; [AICPA 2012a](#), ¶ 29a; [AICPA 2012b](#); [IAASB 2009](#); [PCAOB 2010a](#), [2010b](#), [2010c](#)).¹ Such consultations are important because PCAOB inspections continue to identify audits that are deficient with respect to fraud detection, and prior research shows that auditors rarely detect fraud ([PCAOB 2004](#), [2012](#), [2015](#), [2016](#); [Dyck, Morse, and Zingales 2010](#); [KPMG 2009](#)). Further, several

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¹ Similarly, auditors may consult with their firms' forensic specialists if information or other conditions indicate that a material fraud might have occurred ([PCAOB 2010a](#), ¶ 53; [PCAOB 2010b](#); [AICPA 2012a](#); [IAASB 2009](#), ¶ 29(a)). Forensic specialists typically possess both accounting and investigative skills that allow them to systematically gather evidence to address specific issues related to possible wrongdoing, including fraud, in a level of depth suitable for use in various legal arenas, including court proceedings ([Wells 2003](#)). Our focus in this paper is consultation with fraud specialists, but we use the broader term forensic specialists to be consistent with the academic literature (e.g., [Hammersley 2011](#); [Trompeter, Carpenter, Desai, Jones, and Riley 2013](#)).

researchers have suggested that consultation is a potentially important means for improving fraud detection (e.g., [Asare and Wright 2004](#); [Brazel, Carpenter, and Jenkins 2010](#); [Gold, Knechel, and Wallage 2012](#)).

Although it is generally assumed that auditors' consultation with forensic specialists is likely to improve fraud detection, there is limited empirical evidence about auditors' experiences in consulting with forensic specialists, leading some researchers to note that "additional research that investigates forensic specialists' judgments or how auditors would interact effectively and benefit from the work of forensic specialists would be a valuable addition to the literature" ([Trompeter et al. 2013](#), 307). This study responds to this call by developing a framework that incorporates the antecedents, process (i.e., the work done), and outcomes of consultation and employing two related field surveys to obtain insights about the association among them.

Drawing on the auditing and teamwork literatures, we identify three broad antecedents of consultation with forensic specialists: (1) auditee-related factors, (2) auditor-related factors, and (3) forensic specialist-related factors (see, e.g., [Hollenbeck et al. 1995](#); [Mathieu, Maynard, Rapp, and Gilson 2008](#); [Bonner 2008](#); [Nelson and Tan 2005](#)). These antecedents are hypothesized to be associated with the forensic specialists' work on the engagement. We categorize the work as either related to the task (risk assessment and risk responsiveness) or the team (communication and team dynamics).² We also hypothesize that the forensic specialists' work affects cost/delays and evaluative outcomes, which relate to the extent to which the auditor considers the consultation to be effective.

To test the model, we examine the following antecedents: (1) timing and trigger of the consultation (auditee related), (2) the auditor's reluctance to consult (auditor related), and (3) the forensic specialist's understanding of the client's business and commitment to the engagement objectives and team (forensic specialist related). While the auditor decides the when (timing) and why (trigger) of consultation, auditing standards and prior research suggest that the decision hinges on auditee-related conditions ([PCAOB 2010a](#); [AICPA 2012a](#); [IAASB 2009](#); [Gold et al. 2012](#)). We chose these antecedents because they relate to basic issues identified in the literature regarding the "when," "why," "what," and "who" of the consultation, which is an appropriate starting point given the limited evidence on the topic ([Hogan, Rezaee, Riley, and Velury 2008](#); [Trompeter et al. 2013](#)). With respect to the work done by the forensic specialists, we examine risk assessments and risk responsiveness as they are central to the fraud detection task ([PCAOB 2010a, 2010c](#)). We also examine teamwork, which entails communication, trust, and commitment within the team, as prior psychology research highlights its importance in the team setting ([Hollenbeck et al. 1995](#)).

We conduct two related field surveys to obtain insights about auditors' experiences with the elements of our framework. The primary focus of the first survey is to evaluate the associations among the antecedents, work done, and outcomes. We also obtain and analyze qualitative data on factors that can enhance communication (a critical aspect of teamwork) and collaboration effectiveness. Fifty-seven experienced auditors from three of the Big 4 firms participated in this survey. The second field survey is designed to complement the first by gathering additional qualitative data on the circumstances that enhance the taskwork (risk assessment and risk responsiveness) and affect cost. The participants in this survey are 29 experienced auditors from three of the Big 4 firms.³

The results of a path analysis, based on data from the first field survey, show that the forensic auditors' understanding of the clients' business and audit engagement objectives are positively associated with effective teamwork and risk assessments, which, in turn, are positively associated with overall consultation effectiveness. While risk assessment is positively associated with risk responsiveness, the latter is not associated with overall consultation effectiveness. We also find that involving forensic specialists early in the engagement is associated with improved teamwork and risk responsiveness.

Qualitative responses from the second survey show that consultation enhances risk assessments when it is targeted to specific circumstances, clarifies fraud schemes, identifies idiosyncratic risk, and brings in a different perspective. Forensic specialists also perform unique procedures such as document authentication, conducting entity verification, and defining attributes of data. Auditors note that the cost impact of consultation is limited, apparently, because even though forensic

² Risk responsiveness refers to the design and implementation of appropriate responses to the risk of material fraud and includes making changes to the planned nature, timing, and extent of procedures, reassigning of engagement responsibilities, and incorporating elements of unpredictability in the selection of procedures (see, [PCAOB 2010c](#)). Arguably, risk responsiveness could be characterized as an outcome since it represents how the audit process changed in response to identified fraud risks. However, in our model, we use outcome to refer to the auditor's assessment of the effectiveness of the whole consultation process rather than the end product of different tasks performed during the process.

³ The second field survey is conducted after analyzing the data from the first survey and is designed primarily to shed light on taskwork and cost-related findings from the first survey. However, the surveys were not designed to address the circumstances under which auditors may over-consume or under-consume consultation. Thus, the focus is on auditors' experiences subsequent to a decision being made to consult. That is, we focus on only those audits where there was consultation with forensic specialists. In this vein, our study differs from others that focus on whether and how auditors involve or exclude forensic specialists (e.g., [Asare and Wright 2004](#); [Jenkins, Negangard, and Oler 2016](#)). IRB approval was obtained for the use of human subjects for both field surveys.

specialists charge higher rates, they tend to help auditors focus their effort, leading to efficiency gains that largely compensate for their rates. Finally, we present excerpts of auditors' qualitative responses to illuminate our findings and to identify testable research questions.

This study provides unique insights about forensic specialists' role in fraud investigation from the perspective of the auditors who worked with them. Our findings have implications for firm policy, regulatory standards, and future research. For instance, we identify circumstances under which consultation is not likely to be effective. We also identify and categorize research questions, which are anchored in auditors' work realities (Gibbins 2001; Power and Gendron 2015). Finally, the study adds to the limited empirical evidence about auditors' experiences in consulting with forensic specialists (Hogan et al. 2008).

We provide theoretical perspectives, the research framework, and develop the hypotheses in the next section. We then describe our data-collection procedures for the first field survey and discuss the results. The next section is a description of the second field survey, its findings, and questions for future research. In the final section, we summarize and integrate the major results of the two surveys, discuss their implications for audit practice and future research, and acknowledge limitations.

THEORETICAL PERSPECTIVE, RESEARCH FRAMEWORK, AND HYPOTHESES DEVELOPMENT

Theoretical Perspective

Prior research shows that auditors have difficulties designing effective fraud tests (Zimbelman 1997; Houston, Peters, and Pratt 1999; Asare and Wright 2004; Mock and Turner 2005; Hammersley, Johnstone, and Kadous 2011; Beasley, Carcello, Hermanson, and Neal 2010, 2013) and detect relatively few frauds (Dyck et al. 2010, KPMG 2009).⁴ Detecting fraud requires investigative expertise, which comes with experience and exposure to various fraud schemes and methods of detection (Hammersley 2011; Trompeter et al. 2013). Thus, involving forensic specialists, who presumably have more investigative expertise, on audit engagements is one vehicle available to auditors to potentially improve the fraud detection deficit (Wells 2003; Hogan et al. 2008; Brazel et al. 2010).⁵

Yet, there is limited evidence on whether such consultations improve fraud detection and even less evidence about auditors' experiences with such consultations. Prior experimental research indicates that forensic specialists design marginally more effective (but not more efficient) fraud tests than auditors (Boritz, Kochetova-Kozloski, and Robinson 2015a; Verwey 2014). Brazel et al. (2010), using a field survey, report that a partner or forensic specialist leads the majority of brainstorming sessions, resulting in higher-quality brainstorming. Nevertheless, prior research suggests that auditors are generally reluctant to seek consultation with forensic specialists (Boritz, Kochetova-Kozloski, Robinson, and Wong 2015b; Asare and Wright 2004), although this propensity can be increased with a strict firm consultation requirement (Gold et al. 2012) or when fraud risk is elevated (Hammersley et al. 2011; Asare and Wright 2004).

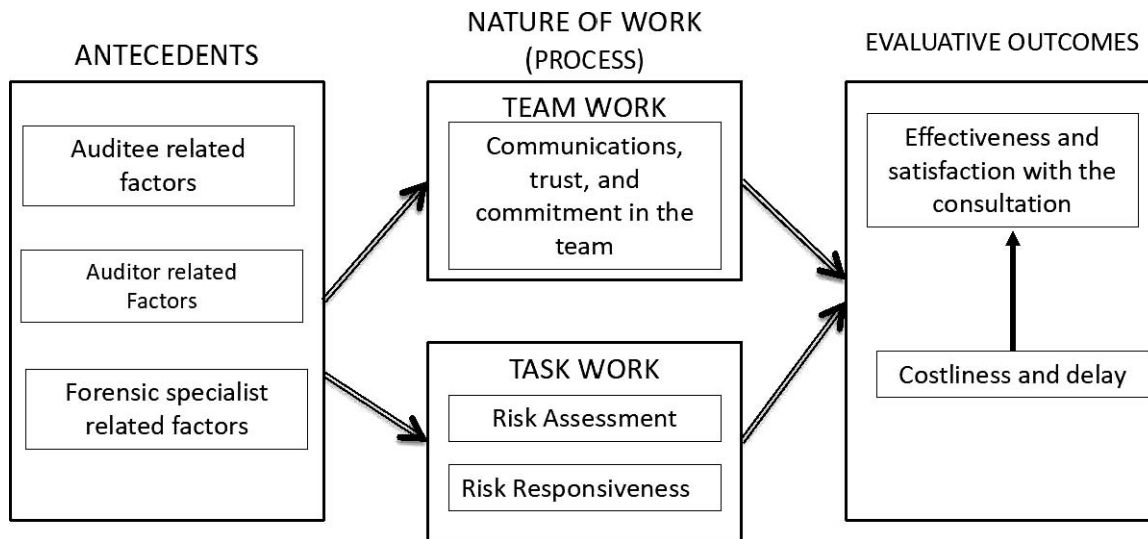
In a recent study that examines auditors' and forensic specialists' consultation experiences at large auditing firms, Jenkins et al. (2016) report that forensic specialists offer a broad range of services, including assisting in fraud brainstorming and designing of audit tests. Participants also indicate that forensic specialists generally enhance audit quality, with the benefits exceeding the costs. This finding is consistent with the literature on teams, which suggests that collaborations can enhance performance. However, the literature on teams also suggests that collaborations can lead to a performance decrement under some circumstances, such as when there is increased tension between "in-group" and "out-group" members (Gray and Wood 1991; Hollenbeck et al. 1995; Fay, Borrill, Amir, Haward, and West 2006; Gratton and Erickson 2007; Mathieu et al. 2008). Thus, a framework is needed to examine the consultation between auditors and forensic specialists (Hogan et al. 2008; Hammersley 2011; Trompeter et al. 2013).

We extend the literature on consultation between auditors and forensic specialists by proposing and testing a framework that explicitly considers how the antecedents of consultation affect the forensic specialists' work within an engagement and how such work then affects auditors' evaluation of the effectiveness of the consultation.

⁴ Prior research has identified the absence of learning opportunities due to the rarity of fraud, evidential gathering and evaluation difficulties, insufficient skepticism, lack of appropriate fraud detection training, and misjudging managers' incentives and opportunities as some of the major underlying reasons for auditors' failure to detect fraud (Nieschwietz, Schultz, and Zimbelman 2000; Beasley et al. 2013; Asare, Wright, and Zimbelman 2015).

⁵ Prior research has considered other vehicles to enhance fraud detection, including the use of brainstorming (Hoffman and Zimbelman 2009; Hammersley, Bamber, and Carpenter 2010), the use of strategic reasoning (Hoffman and Zimbelman 2009), and the explicit consideration of fraud schemes (Hammersley et al. 2010; Hammersley et al. 2011).

FIGURE 1
A Framework of Consultation Effectiveness when Financial Statement Auditors Collaborate with Forensic Specialists



Research Framework

Consultation between auditors and forensic specialists is ultimately a team activity. Basic research to evaluate the effectiveness of team processes stipulates and examines the linkages among antecedents, processes, and outcomes (e.g., Gray and Wood 1991; Hollenbeck et al. 1995). We adapt this approach and propose a framework regarding antecedents and consequences of auditors' consultation with forensic specialists, shown in Figure 1, to guide hypotheses development, the identification of relevant variables, and the selection of our field survey questions (Gibbins 2001; Gibbins and Qu 2005; Gibbins, Salterio, and Webb 2001).

The framework identifies three antecedents to consultation: (1) auditee-related factors, (2) auditor-related factors, and (3) forensic specialist-related factors. Professional standards suggest that auditee-related factors (e.g., the presence of significant unusual transactions or complex related-party transactions) undergird both the rationale for and timing of consultation (PCAOB 2010a; AICPA 2012a; Gold et al. 2012). Thus, we focus on when the forensic specialist is brought on the engagement (timing of the consultation) and the reason for the consultation (trigger of the consultation) to reflect our auditee-related antecedents.

Prior research suggests that auditors might be reluctant to engage a forensic specialist (Asare and Wright 2004), which might affect teamwork and taskwork (Hollenbeck, Colquitt, Ilgen, LePine, and Hedlund 1998; Clarin 2007). Prior research also suggests that the forensic specialist's level of understanding of the client's business and the engagement objectives likely have consequences for the consultation (Trompeter et al. 2013; Asare et al. 2015). Accordingly, we examine the auditor's reluctance to consult and the forensic specialist's understanding of the client's business and audit engagement objectives as auditor-related and forensic specialist-related antecedents, respectively.

The forensic specialists' contribution to the work is manifested in their role in enhancing risk assessment and risk responsiveness (PCAOB 2010c). There must be an exchange of information between the engagement team and the forensic specialists to facilitate the completion of the task. As such, we propose that "taskwork" (the functions that the forensic auditor and the engagement team must perform to accomplish the task) and "teamwork" (the interaction between team members, which can engender emergent states such as trust, cohesion, and confidence) are important processes in the consultation (Mathieu et al. 2008; McGrath 1964; Gray and Wood 1991; Cohen and Bailey 1997; Chen 2005; Ilgen, Hollenbeck, Johnson, and Jundt 2005; Mathieu, Heffner, Goodwin, Cannon-Bowers, and Salas 2005).

Figure 1 also highlights the importance of outcomes in the audit setting. Outcomes are the results and byproducts that are valued by one or more constituencies and include performance and team members' affective reactions (e.g., satisfaction). In general, improved taskwork and teamwork are expected to be associated with successful outcomes (Cohen and Bailey 1997; Ilgen et al. 2005; Mathieu et al. 2008). The outcome represents the auditors' overall assessment of the effectiveness of the consultation. Figure 1 also shows that the forensic specialists' work has the potential to affect costs or delays in completing the engagement, which, in turn, may affect the overall assessment.

HYPOTHESES DEVELOPMENT

Effects of Antecedents on Taskwork and Teamwork

Auditee-Related Antecedent: Timing of Consultation

An audit team normally has discretion over when to consult forensic specialists (PCAOB 2010a; AICPA 2012a, 2012b). The audit team can consult the forensic specialists at the beginning of the audit (to work with the audit team throughout the engagement) or during the planning, substantive, or review phase(s). Auditee characteristics, such as riskiness, complexity of transactions, and management's responses to audit inquiries, are expected to drive this decision (PCAOB 2010c).

The timing of the consultation is important because prior psychology research shows that working together for longer periods makes it easier for group members to recognize one another's strengths and weaknesses, coordinate activities, and develop a shared understanding of the knowledge and processes required to perform the group's task (Chen 2005). At the same time, however, early and continuous engagement may lead to groupthink, as the forensic specialists may feel cast in the role of coproducing the audit, thereby impairing their ability to bring a fresh perspective to the task (Glover and Prawitt 2014). However, it is unlikely that self-appointed mind guards and self-censorship, both of which are conditions precedent to groupthink, will arise in an audit team that has seen the need to involve a forensic specialist (Janis and Mann 1977; Nemeth and Goncalo 2004).

There is no prior literature on the effects of timing of forensic consultation on the work performed. While there is potential for groupthink, we posit that early and continuous involvement in the forensic consultation setting is more likely to be associated with improved taskwork and teamwork. Thus, our survey gathers information on when forensic specialists are consulted and provides data to test the following hypothesis:

H1: Early consultation with forensic specialists is associated with enhanced taskwork and teamwork.

Auditee-Related Antecedent: Trigger for Consultation

Consultation with forensic specialists can be mandated when engagements meet some conditions (e.g., based on a risk score) or can be at the discretion of the engagement team (Gold et al. 2012). The former approach promotes consistency while the latter approach results in tailored consultations. Auditors may view a mandatory requirement as unnecessary, especially if they are confident in their ability to detect fraud or to know when to initiate fraud consultation (e.g., Tan and Jamal 2006; Messier, Owhoso, and Rakovski 2008). This confidence may lead to lower motivation to consult, which would exacerbate mistrust and negatively impact taskwork and teamwork (Clarín 2007).

A study that compared voluntary to mandated consultation in radiology found that about 85 percent of the mandatory cases were viewed as unnecessary (Kangaroo et al. 2000). The only study that examined the effect of mandated consultation in auditing found that auditors respond positively to the strictness of the standard, but only when underlying fraud risk is high and deadline pressure is tight (Gold et al. 2012).⁶ Thus, we provide evidence on the effect of mandatory consultation on the consultation process and test the following hypothesis:

H2: Mandating consultation is negatively associated with taskwork and teamwork.

Auditor-Related Antecedent: Auditors' Reluctance to Consult

Research on collaborative teams suggests that auditors' reluctance to consult is important because it can undermine team processes and consultation outcomes, thereby reinforcing existing views about consultation (Clarín 2007; Gratton and Erickson 2007). Several individual, organizational, and environmental forces likely determine auditors' reluctance to consult, either pushing them to or pulling them away from consultation (Trompeter et al. 2013). The push forces include perceived need for consultation, perceived expertise of the forensic auditor, firm quality control, avoidance of negative comments by PCAOB inspectors, and complexity in the business environment (Asare and Wright 2004; Hogan et al. 2008; Trompeter et al. 2013). On the other hand, auditors' reluctance to consult may be driven by pull forces such as cost, deadlines, delays, confidence in the auditors' own forensic skills, lack of appreciation of what forensic specialists can add, the low base rate of fraud, incentives, and apprehensions about out-group members (Asare and Wright 2004; Hogan et al. 2008; Trompeter et al. 2013).

We propose that auditors who are reluctant to consult are likely to view the consultation with skepticism, be less open in their communications, and view the forensic specialists as externally imposed rather than as valuable team members (Clarín

⁶ Gold et al. (2012) do not obtain data regarding why auditors seek consultation when deadline pressures are tight. We explore the impact of consultation on delays in completing the audit in our surveys and, as reported in the next sections, find that consultation can save time because the forensic expert can focus on the work, which potentially explains why auditors may seek consultation when facing a deadline.

2007; Gratton and Erickson 2007). Further, reluctance can result in a potential self-fulfilling prophecy (i.e., an expectation that consultation does not add value impairs communication and trust, which then leads to unsuccessful outcomes). On the other hand, auditors may be reluctant to consult but once consultation commences, they may leverage the knowledge of the specialists leading to identification of risks, program effectiveness, and positive affective reactions. Our next hypothesis provides evidence on the effect of reluctance to consult:

H3: Auditors' reluctance to consult is negatively associated with taskwork and teamwork.

Forensic Specialist-Related Antecedent: Forensic Specialists' Understanding of the Clients' Business and Engagement Objectives

Forensic specialists have varied backgrounds, which can affect the extent to which they understand the client's business and engagement objectives (Asare et al. 2015). Some specialists may have audit backgrounds and acquire forensic expertise through firm training and education. Others may have a pure forensic background (e.g., prior education in criminology and work experience with the FBI or other investigative agencies) and have limited interest in and understanding of client considerations and engagement budgets (Bell, Peecher, and Thomas 2005; Public Oversight Board [POB] 2000, 76). An absence of a shared mental model of the task can create a social identity crisis (i.e., tension between auditors ["in-group"] and forensic specialists ["out-group"]). Research has shown that teams are more effective if they have shared mental models (Levesque, Wilson, and Wholey 2001; Mathieu et al. 2005) and strategic consensus (Ensley and Pearce 2001; Kellermanns, Walter, Lechner, and Floyd 2005), where the former refers to a common understanding or mental representation of knowledge (Mathieu et al. 2008), and the latter is defined as a shared understanding of strategic priorities (Kellermanns et al. 2005).

We anticipate that forensic specialists who also understand the client and engagement objectives (i.e., shared mental model) will best leverage their forensic skills and improve the value of the overall consultation experience. It is also likely that the forensic experts' understanding of the clients' business and engagement objectives will facilitate teamwork, since the auditor and forensic expert will be sharing a common base level of knowledge. Thus, the following hypothesis examines the effect of the forensic specialists' understanding of the clients' business and engagement objectives on the work to be performed:

H4: There is a positive association between forensic specialists' understanding of the clients' business and engagement objectives and taskwork and teamwork.

Effects of Taskwork and Teamwork on Consultation Outcomes

The most important taskwork in the forensic consultation setting likely includes fraud risk assessments and program planning decisions (e.g., Zimbelman 1997; Glover, Prawitt, Schultz, and Zimbelman 2003; Asare and Wright 2004; Hammersley et al. 2011; Boritz et al. 2015a). To the extent that the forensic specialists can bring unique risk assessments and risk responsiveness strategies to the engagement, it is expected they will add value and increase overall consultation effectiveness. This discussion leads to the following hypothesis:

H5: Improved taskwork is positively associated with consultation outcomes.

Achieving a high level of taskwork requires teamwork between the audit team and the forensic specialists. In this context, Hollenbeck et al. (1995) suggest that team information sharing is critical, leading us to focus on auditors' experiences with communications with the forensic expert. We expect better communications to engender trust and enhance team commitment, and thereby enhance perceived consultation effectiveness, as posited in the following hypothesis:

H6: Improved teamwork is positively associated with consultation outcomes.

DATA COLLECTION

Research Approach

We use two independent field surveys, which required auditors to respond to tailored questions designed to elicit their experiences in consulting with forensic specialists on actual audit engagements.⁷ The primary focus of the first survey is to provide quantitative data on the antecedents, work, and outcomes of the consultation in order to allow us to test research

⁷ Field surveys have the advantages of providing externally valid data and have been used in a number of auditing studies that investigate, for instance, accountability (e.g., Gibbins and Newton 1994), auditor-client negotiations (e.g., Gibbins et al. 2001; Gibbins, McCracken, and Salterio 2005, 2007, 2010), and brainstorming (e.g., Brazel et al. 2010). A field survey is well suited for examining complex issues characterized by the interplay of several variables (Gibbins 2001; Gibbins and Qu 2005).

hypotheses and the model proposed in Figure 1. In addition, we gathered qualitative data on factors that enhance communication and collaboration. The second field survey, conducted after the first, is designed to gather qualitative data to augment the findings of the first study. We first describe the participants, administration, and results of the first survey.

Field Survey 1

Participants

The director of the Center for Audit Quality (CAQ) contacted representatives of three of the Big 4 firms who had previously agreed to participate in the study and asked the representative to randomly identify a sample of recent financial statement engagements that involved consultation with forensic specialists. The firms agreed to select 60 engagements. The representative was asked to identify a senior member of the audit team on each engagement to complete the research instrument. A secured electronic survey link was then sent to each of the identified participants, providing assurance that each response represented experiences with a different client. A total of 57 completed responses were received, representing a 95 percent response rate. Due to confidentiality concerns, the responses do not identify the firms or the participating auditors.

Respondents had a mean (standard deviation) of 9.45 (2.76) years of audit experience, had worked with forensic specialists a mean (standard deviation) of 5.46 (2.61) times, and had participated in audits that had resulted in material errors or fraud, respectively, a mean (standard deviation) of 2.25 (2.55) and 0.44 (1.423) times.⁸ The demographic profile of our participants indicates that they have strong domain and task experience as well as a good familiarity in consulting with forensic auditors.

Research Instrument

By opening the survey link each auditor accessed a research instrument that contained five parts. The first part was an introductory screen that explained the objectives of the study (gathering and analyzing data on the collaboration between auditors and forensic specialists), assured participants of anonymity and confidentiality, and provided them with the contact information of the director of the CAQ if they had any questions. In the second part, they were reminded that they had been selected because they recently consulted a forensic specialist on an audit engagement. They were asked to select the engagement on which they had consulted and to respond to questions regarding their consulting experience.⁹

Participants were also told to feel free at any time during the survey to refer to the audit working papers or other documentation related to the selected engagement. In this part, they responded to general questions about the consultation (recency, timing, and the primary reason for the consultation) and about the client (annual revenue, ownership, industry, and audit tenure).¹⁰ In the third part, participants responded to questions on the consultation process that correspond to elements of the framework in Figure 1. Thus, they answered questions about the following antecedents: timing and trigger of the consultation (auditee related), reluctance of the auditor to consult (auditor related), and the forensic specialists' understanding of the clients' business and engagement objectives (forensic specialists related). In addition, the questions addressed a number of factors related to taskwork (risk assessment and risk responsiveness) and teamwork (level of communications, commitment, and trust). Last, they were asked about the outcomes of the consultation (i.e., overall effectiveness, satisfaction, and the cost of the engagement and any related delays.) The specific questions posed, and the related descriptive statistics (discussed below), are presented in Table 1. Other than the questions on timing and trigger, the response scale for these questions is 0–100 (0 = low; 50 = moderate; 100 = high).

In the fourth part, we asked participants two exploratory open-ended questions aimed at obtaining additional insights on factors enhancing communication and collaboration: (1) What are some ways or factors that can enhance the communications between financial statement auditors and forensic specialists? And (2) What do you think are the most important factors that enhance the collaboration between financial statement auditors and forensic specialists on audit engagements? Finally, participants responded to demographic questions.

⁸ Participants included 39 senior managers, 11 managers, 3 partners, and 4 seniors. We requested that each engagement team select a senior member of the engagement team to complete the instrument. While we have no *a priori* theoretical expectation of how audit experience might affect responses, the results presented in the next section are qualitatively similar when the seniors are excluded from the analyses.

⁹ Forty-seven (82.5 percent) participants selected an engagement on which the consultation occurred less than a year earlier, and the remaining consultations occurred between one to three years (10.5 percent) and over three years (7 percent) earlier. Thus, participants predominantly recalled recent consultation experiences.

¹⁰ The purpose of gathering the client demographic data was to gain some insights on the type of client for which the consultation occurred. We provide descriptive statistics in the next section.

TABLE 1

Field Survey 1 Questions Mapped to Model of Consultation Effectiveness and Related Descriptive Statistics

	Mean (σ)
Auditee Related:	
Timing of Consultation: When was the forensic auditor (fraud expert) consulted on this engagement? (1) at the beginning and stayed throughout; (2) planning phase only; (3) substantive testing phase only; (4) review phase only; (5) other.	
Trigger of Consultation: What was the primary reason for consulting with the forensic auditors? (1) required by firm policy; (2) high fraud risk; (3) other.	
Auditor Related: (Reluctance to Consult)	
To what extent were you reluctant to seek consultation on this engagement?	11.61 (21.62)
Forensic Specialist Related: (Shared Mental Model)	
To what extent did the fraud expert understand the client's business?	75.32 (19.59)
To what extent did the fraud expert understand the objectives and nature of the financial statement audit?	86.07 (15.77)
To what extent was the forensic auditor committed to the attainment of the overall engagement objectives?	86.25 (16.27)
Taskwork: (Risk Assessment)	
To what extent did the consultation lead to the identification of additional fraud risks not identified by the engagement team?	34.20 (28.30)
To what extent did the consultation lead to change in the assessed fraud risk?	18.75 (24.70)
Taskwork: (Risk Responsiveness)	
To what extent did the consultation lead to a change in the procedures on the planned audit program?	28.39 (22.69)
To what extent were the procedures suggested by the forensic auditor unique (non-standard audit procedures)?	31.48 (23.52)
To what extent were the procedures suggested by the forensic auditor effective?	51.52 (30.84)
To what extent did the consultation lead to a change in the scope (e.g., increasing or targeting individual tests) of the engagement?	21.25 (26.30)
To what extent did the consultation lead to a change in the timing of the audit procedures?	12.29 (19.29)
To what extent did the consultation lead to a change in the allocation of hours to various staff levels (e.g., a greater proportion of hours for experienced staff)?	12.64 (21.85)
Teamwork (Team Dynamics)	
How effective was your communication with the forensic auditor (fraud expert) on this consultation?	78.95 (21.54)
What was the level of trust between the audit team members and the forensic auditor?	85.23 (17.46)
To what extent was the forensic auditor committed to the members of the audit team?	84.43 (18.94)
Cost and Delays	
To what extent did the consultation increase the cost of the engagement?	19.50 (21.30)
To what extent did the consultation lead to delays in completing the engagement?	6.00 (12.98)
Effectiveness of and Satisfaction with the Consultation	
Overall how would you rate the effectiveness of the consultation process in leading to a higher-quality audit?	62.16 (23.32)
Overall how would you rate your satisfaction with the consultation process?	69.75 (23.75)

(continued on next page)

TABLE 1 (continued)

Other than Timing of Consultation and Trigger of Consultation, all responses were elicited on a 100-point scale where 0 = Low, 50 = moderate, and 100 = high.

Qualitative Questions:

1. What are some ways or factors that can enhance the communications between financial statement auditors and forensic specialists?
2. What do you think are the most important factors that enhance the collaboration between financial statement auditors and forensic specialists on audit engagements?

Client Demographic Profile

About 37 percent (21) of the clients' revenues exceed \$5 billion; 35 percent (20) are between \$1 billion to \$5 billion; 14 percent (8) are between \$500 million and \$1 billion; 8 percent (5) are between \$100 and \$500M; and 5 percent (3) have less than \$100 million in revenues. With respect to ownership structure, about 91 percent of the clients are public companies. The engagements represent a broad range of industries (eight industry categories) with the highest frequencies in manufacturing (28 percent) and in financial services (15.8 percent). Last, a substantial majority (73 percent) of the consultations were recurring audit engagements with tenure of more than five years.

Descriptive Statistics

With respect to when the forensic specialists are brought in on an audit engagement (timing), approximately 44 percent of the forensic specialists are consulted at the beginning of the engagement and remain on the engagement, about 49 percent are brought in for the planning phase, and about 7 percent are brought in during the substantive testing and review phases. These results suggest that a substantial majority of forensic consultation is occurring early enough for the forensic specialist to, if needed, participate in planning and brainstorming.

With respect to why auditors consult with forensic specialists (trigger), the primary reason was a firm mandate (47 percent of the responses). In contrast, only about 11 percent of the consultations were triggered by a high fraud risk assessment. Other reasons triggered consultation in about 42 percent of the sample. Analysis of the qualitative responses indicated that approximately 17 (71 percent) of the participants in the "other category" indicated that the consultation occurred as a result of "participation in firm's forensic program." Because there was an option to choose "required by firm policy," which these participants did not select, we interpret their choice as a voluntary participation in the firm's program in contrast to a mandated requirement. However, we cannot validate this assumption. Other participants indicated that "it was a prior year restatement"; "the expert was brought in to revamp the fraud and COSO procedures"; and "I am not sure if it was required." Thus, firm mandates or special programs triggered the majority of consultations.

As reported in Table 1, the mean extent of reluctance to consult is only 11.61. While the level of reluctance appears low, it is not directly comparable to prior studies (see footnote 3). Table 1 also shows that auditors assessed the forensic specialists as having a good understanding of the client's business (mean of 75.32), as well as the engagement objectives (mean of 86.07), and they were highly committed to the attainment of the engagement objectives (mean of 86.25).

With respect to taskwork, consultation was found to lead to a less than moderate increase in the identification of additional fraud risks (mean of 34.20) and the identification of unique procedures (mean of 31.48). It also led to a moderate increase (mean of 51.52) in the use of effective procedures. Thus, consultation with forensic auditors generally, albeit moderately, is evaluated as improving program effectiveness. However, consultation had a more limited effect on the change in assessed fraud risk (mean of 18.75), change in the allocation of hours to various staff levels (mean of 12.64), and change to the timing of audit procedures (mean of 12.29).

The descriptive results also show that auditors experienced a high and positive level of teamwork. For instance, the mean level of trust between the forensic specialist and the audit team is 85.23, and mean inter-role communication effectiveness is 78.95. Further, the consultation was found to have only a minimal impact on increasing cost (mean of 19.50) and on delays (mean of 6.0). Finally, the overall level of effectiveness of the consultation process and the overall level of audit team satisfaction with the consultation process are relatively high (mean of 69.75 and 62.16, respectively).

Effect of Clients' Demographic Profile

We examine the effect of the clients' demographic profile (tenure and client size) on teamwork and taskwork and discuss only the significant effects.¹¹ Consultation on engagements with tenure of more than five years leads to a significantly lower

¹¹ There were not enough private companies to do a meaningful comparison with public companies. Similarly, the distribution of firms by the eight industries led to sample sizes that were too small for a meaningful comparison.

change in the allocation of hours to various staff levels (9.12 versus 23.2, $t_{54} = 2.159$; two-tailed $p = 0.035$); lower cost (15.88 versus 30.36, $t_{54} = 2.285$; two-tailed $p = 0.026$); less delay (3.60 versus 13.21, $t_{54} = 2.516$; two-tailed $p = 0.015$); and engenders less commitment of the forensic specialist to the team (81.62 versus 92.86, $t_{54} = 1.972$; two-tailed $p = 0.054$). Consultation on larger-size clients (revenue in excess of \$5 billion) leads to the identification of more additional fraud risk (42.62 versus 29.14, $t_{54} = 1.758$; two-tailed $p = 0.084$).

Bivariate Associations between Variables

We also examine the association between the variables in our framework with Pearson correlations and discuss below only the significant correlations ($p < 0.05$). As expected, the correlation between timing and effective communication is -0.36 , suggesting that early consultation is associated with more effective communication.¹² There is a positive association between the trigger of the consultation and the identification of additional fraud risks (0.25) and change in the assessed fraud risk (0.24).¹³ This finding suggests that consultations are more likely to be associated with improved risk assessments when they are not mandated. We found a positive association between forensic specialists' understanding of the clients' business and effective procedures (0.35), change in scope (0.28), trust (0.41), communication effectiveness (0.57), affective reactions (perceived performance [0.54], and satisfaction [0.67]). Further, understanding the clients' business has a negative association with reluctance to consult (-0.48). Thus, forensic specialists' understanding of the clients' business seems important to collaborative success on multiple dimensions.

Regarding reluctance to consult, there is a statistically significant negative relationship between reluctance to consult and effective procedures (-0.35), trust (-0.32), communication effectiveness (-0.45), and affective reactions (perceived effectiveness [-0.40], and satisfaction [-0.50]). Thus, although reluctance to consult with forensic experts is on average low, the more reluctant an auditor is to consult, the less positive is the consultation experience on multiple dimensions.¹⁴

Hypotheses Testing

We test our framework and hypotheses with a path analysis of variables representing the constructs in Figure 1.¹⁵ The path analysis results show that this model has a good fit with the data ($\chi^2 = 6.624$, $df = 4$; $p = 0.157$; RMSEA of 0.105, PCLOSE = 0.215; CFI = 0.969; IFI = 0.979).¹⁶ Table 2 presents all the path coefficients. All p -values to test the path coefficients are one-tailed to reflect our directional hypotheses.

H1 states that early consultation with forensic specialists is associated with enhanced taskwork and teamwork. That is, H1 posits that timing is negatively associated with taskwork and teamwork (see footnote 12). The path model shows that early consultation is significantly associated with more effective risk responsiveness ($\beta = -0.26$; $p = 0.022$) but not with risk assessment ($\beta = 0.09$; $p = 0.252$). Further, early consultation is significantly associated with teamwork, albeit marginally ($\beta = -0.16$; $p = 0.062$). Thus, H1 is supported, but only as it relates to risk responsiveness.

H2 states that mandating consultation is negatively associated with taskwork and teamwork. That is, H2 posits that voluntary consultations are associated with enhanced taskwork and teamwork (see footnote 13). Table 2 shows that voluntarily triggered consultations are associated with improved risk assessments, albeit marginally ($\beta = 0.21$; $p = 0.060$), but not with risk responsiveness ($\beta = 0.03$; $p = 0.420$) or teamwork ($\beta = -0.03$; $p = 0.393$). Thus, H2 is not supported.

H3 states that auditors' reluctance to consult is negatively associated with taskwork and teamwork. The path results show insignificant associations between auditors' reluctance to consult and both risk assessment ($\beta = -0.10$; $p = 0.237$) and risk

¹² We coded bringing in the consultant early as 0, else 1. Thus, if bringing in the consultant early is associated with effectiveness and satisfaction, then the point bi-serial correlation is expected to be negative.

¹³ For this analysis, explicitly required by firm policy is coded as 0, else 1. Thus, we expect the point bi-serial correlation to be positive when the consultation is not mandated.

¹⁴ We also examined the associations between the task processes and outcomes. In this vein, we found that identification of additional fraud risks was positively associated with perceived effectiveness (0.40) and satisfaction (0.40). With respect to risk responsiveness, the identification of effective procedures is positively associated with perceived effectiveness (0.39) and satisfaction (0.33). Thus, auditors' affective reactions and perceived effectiveness are, in part, based on program effectiveness. Finally, the teamwork variables (expert's commitment to the team, level of trust, and communication effectiveness) are positively associated with perceived effectiveness and satisfaction.

¹⁵ Specifically, for risk assessment, we used the mean of the responses to the two questions under "Risk Assessment" in Table 1. For risk responsiveness, we used the mean of the responses to the first three questions under "Risk Responsiveness" in Table 1. For the forensic specialist antecedent, we used the mean of responses to the three questions under "Forensic Specialist Related" in Table 1. We label this mean as the shared mental model. For teamwork, we use the mean of the responses to the three questions under "Teamwork" in Table 1. For cost/delay, we used the mean of responses to the two questions under "Cost and Delays" in Table 1. Cronbach's alphas for the composite scores are 0.757, 0.805, 0.724, 0.789, and 0.721, respectively.

¹⁶ Nonsignificant χ^2 is indicia of model fit. The traditional cutoff of goodness for the comparative fitness index (CFI) and the incremental fit index (IFI) is 0.90, while that of the RMSEA is 0.10. The RMSEA should be evaluated in light of the small sample size and small degrees of freedom (Kenny, Kaniskan, and McCoach 2015).

TABLE 2
Path Analysis for the Full Model with Standardized Path Coefficients

<u>Independent Variable</u>	<u>Hypothesis</u>	<u>Dependent Variable</u>	<u>Beta</u>	<u>p-value (one-tailed)</u>
Auditee Related: Timing ^a	H1	Risk Assessment ^b	0.09	0.252
Auditee Related: Timing	H1	Risk Responsiveness ^c	-0.26	0.022
Auditee Related: Timing	H1	Teamwork ^d	-0.16	0.062
Auditee Related: Trigger ^e	H2	Risk Assessment	0.21	0.060
Auditee Related: Trigger	H2	Risk Responsiveness	0.03	0.420
Auditee Related: Trigger	H2	Teamwork	-0.03	0.393
Auditor Related: Reluctance ^f	H3	Risk Assessment	-0.10	0.237
Auditor Related: Reluctance	H3	Risk Responsiveness	-0.13	0.316
Auditor Related: Reluctance	H3	Teamwork	-0.16	0.060
Forensic Specialist Related ^g	H4	Risk Assessment	0.40	0.007
Forensic Specialist Related	H4	Risk Responsiveness	0.20	0.281
Forensic Specialist Related	H4	Teamwork	0.59	0.001
Risk Assessment	H5	Overall Effectiveness	0.34	0.003
Risk Responsiveness	H5	Overall Effectiveness	0.05	0.359
Risk Assessment	H5*	Risk Responsiveness	0.40	0.001
Risk Assessment	H5	Cost and Delay ^h	-0.16	0.126
Risk Responsiveness	H5	Cost and Delay	0.44	0.001
Teamwork	H6	Overall Effectiveness ⁱ	0.48	0.001
Teamwork	H6*	Risk Assessment	-0.27	0.059
Teamwork	H6*	Risk Responsiveness	-0.20	0.113
Teamwork	H6	Cost and Delay	-0.16	0.176
Auditee Related: Timing	NH	Cost and Delay	-0.15	0.135
Auditee Related: Trigger	NH	Cost and Delay	0.03	0.417
Auditor Related	NH	Cost and Delay	0.15	0.129
Forensic Specialist Related	NH	Cost and Delay	0.14	0.208
Cost and Delay ^h	NH	Overall Effectiveness	0.21	0.036

* Association between work variables.

NH = no hypothesis.

($\chi^2 = 6.624$, $df = 4$; $p = 0.157$)

^a Timing = a 0, 1 variable (0 = brought in early; 1 = brought in post planning).

^b Risk Assessment = the mean of the extent to which consultation led to the identification of additional fraud risks and the extent to which the consultation led to change in the assessed fraud risk.

^c Risk Responsiveness = the mean of change in the planned procedures, the extent to which the procedures were unique and the extent to which the procedures were effective.

^d Teamwork = the mean of the extent to which the specialist is committed to members of the audit team, the level of trust between the expert and the audit team, and the effectiveness of the communication between the specialist and the audit team.

^e Trigger = a 0, 1 variable (0 = required; 1 = not required).

^f Auditor Related = the extent to which the auditor is reluctant to seek consultation.

^g Forensic Specialist Related = the mean of the forensic specialist's understanding of the client, the engagement, and commitment to the engagement objective.

^h Cost and Delay = the mean of the extent to which the consultation increased cost and led to delays in completing the engagement.

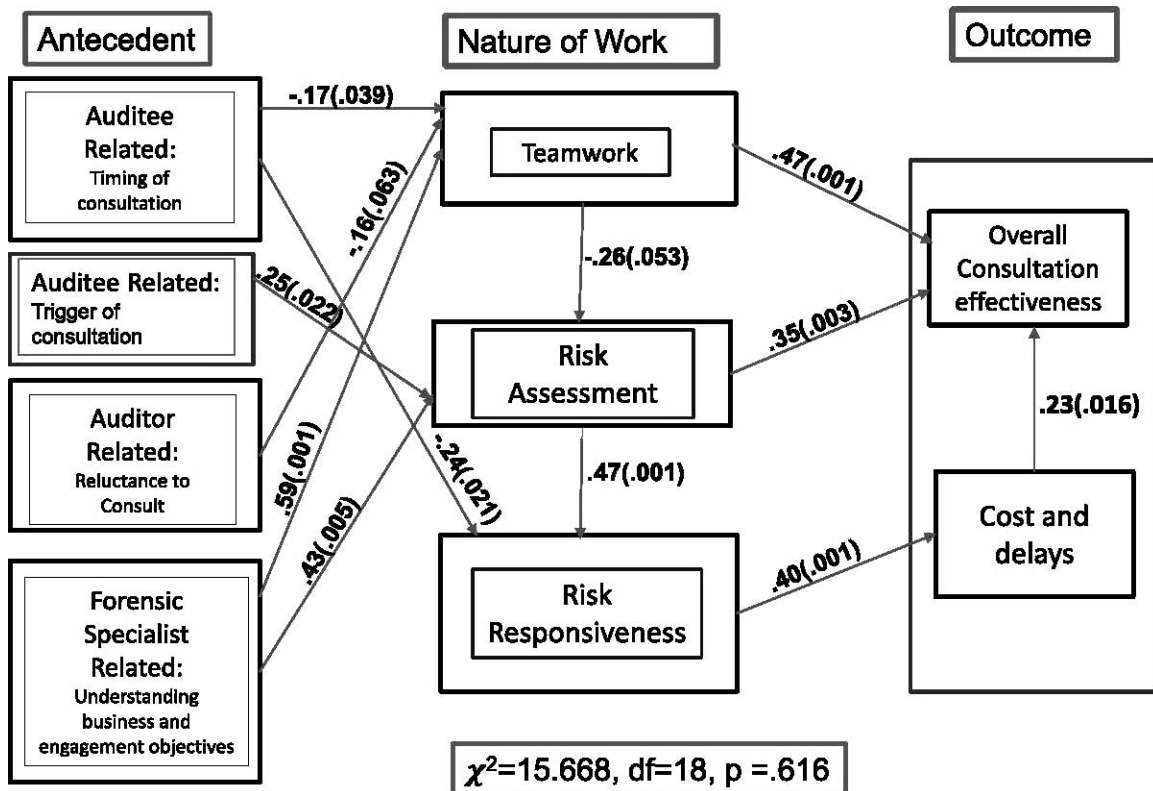
ⁱ Overall Effectiveness of the consultation process in leading to a higher-quality audit.

responsiveness ($\beta = -0.13$; $p = 0.316$). However, auditors' reluctance to consult is associated with teamwork, albeit marginally, consistent with the notion that the more reluctant an auditor is to consult, the less positive is teamwork ($\beta = -0.16$; $p = 0.060$). Taken together, H3 is not supported.

H4 states there is a positive association between forensic specialists' understanding of the clients' business and engagement objectives (shared mental model) and taskwork and teamwork. The path model indicates that a shared mental model is positively associated with risk assessment ($\beta = 0.40$; $p = 0.007$) and teamwork ($\beta = 0.59$; $p = 0.001$), but not with risk responsiveness ($\beta = 0.20$; $p = 0.281$). Thus, H4 is supported for risk assessment and teamwork.

H5 states that improved taskwork is associated with consultation outcomes. Consistent with H5, the path model shows that risk assessment is positively associated with overall effectiveness ($\beta = 0.34$; $p = 0.003$). Further, risk assessment is also positively associated with risk responsiveness ($\beta = 0.40$; $p = 0.001$). However, while risk responsiveness is not associated with overall effectiveness ($\beta = 0.05$; $p = 0.359$), it is positively associated with cost and delay ($\beta = 0.44$; $p = 0.001$). This suggests

FIGURE 2
Reduced Path Model of Consultation Effectiveness
Standard Path Coefficients
(p-values)



that more effective procedures have a tendency to increase costs and delays. In turn, there is an unexpected positive association between cost and delay and overall effectiveness ($\beta = 0.21$; $p = 0.036$).¹⁷

H6 states that improved teamwork is positively associated with consultation outcomes. Consistent with H6, there is a positive association between teamwork and overall effectiveness ($\beta = 0.48$; $p = 0.001$). However, unexpectedly, albeit marginally, effective teamwork is negatively associated with risk assessment ($\beta = -0.27$; $p = 0.059$), and is not associated with either risk responsiveness ($\beta = -0.20$; $p = 0.113$) or cost and delay ($\beta = -0.16$; $p = 0.176$).

Table 2 also shows that none of the antecedents had a direct effect on cost and delay.

Final Path Model

We used only predictors that are at least marginally significant (one-tailed $p \leq 0.06$) to run a new path model, whose results are presented in Figure 2. As expected, the reduced model fits the data, providing support for our framework ($\chi^2 = 15.668$, $df = 18$, $p = 0.616$; RMSEA of 0.000, PCLOSE = 0.748; CFI = 1.00; IFI = 1.021).¹⁸

¹⁷ We obtain similar results if we run the path model using a composite of the six items under "Risk Responsiveness" in Table 1 to measure risk responsiveness. The only exceptions are that this model shows a positive association between the forensic specialist antecedent and risk response ($\beta = 0.40$; $p = 0.007$) and no association between cost and delay and overall effectiveness ($\beta = 0.18$; $p = 0.099$). The model fit metrics for this model are ($\chi^2 = 6.315$, $df = 4$; $p = 0.177$; RMSEA of 0.102, PCLOSE = 0.236; CFI = 0.977; IFI = 0.984).

¹⁸ The RMSEA is 0 and the CFI and IFI ≥ 1 when the degrees of freedom are larger than the χ^2 (Chen, Curran, Bollen, Kirby, and Paxton 2008; Kenny et al. 2015).

Qualitative Analysis of Collaboration and Communication Effectiveness

Our two open-ended questions focus on factors that enhance communication and collaboration effectiveness. Forty participants provided qualitative responses. One of the researchers and a research assistant with public accounting experience independently coded the responses into distinct idea units and classified the ideas according to the variables in our research framework. The overall level of initial agreement was 82 percent, indicating good inter-coder reliability. After the independent coding the two coders met and jointly resolved the differences. The coders also extracted several illustrative excerpts under each variable in the model. After several readings of the excerpts, we selected the most representative and meaningful ones, as presented below.

In response to the question about ways to enhance consultation effectiveness, approximately 40 percent of participants mentioned the forensic specialists' and auditors' attributes as important (forensic specialists' understanding of the client [17.5 percent], the forensic specialists' understanding of how their work relates to the audit objectives [12.5 percent], and the financial auditors' understanding of what the specialists have to offer [10 percent]). Timing of the consultation was mentioned by 20 percent of the participants and teamwork by about 28 percent. Firm policy was mentioned by 10 percent of the participants.

The dominant comment on timing is "upfront involvement of the forensic specialists in the planning phase." The comment from this participant sums this point and further clarifies the importance of communications:

Include forensic auditors in the planning process. In addition, constant open communication between the auditors will ensure the forensic auditors are focused on addressing the needs of the financial statement auditors in addressing relevant fraud risks.

But others felt the involvement must be continuous:

For our engagement, we interacted with the forensic auditor during the planning phase of the audit only. In future audits to enhance the benefit of the process we should continue to follow up with the forensic auditors to discuss the results of our testing and changes in account balances.

Two participants clarified how upfront involvement of the forensic specialists benefits the process. Specifically, early involvement puts the forensic specialists "on the same page" with respect to understanding the key planning parameters and understanding the engagement objectives:

An upfront explanation on the nature of the engagement, scope of audit work, and historical completion workpapers greatly enhance the forensic auditor's understanding of the entity. The consultation process goes better when forensic specialists are invited to a brainstorming session, without an agenda, because that is when the most relevant audit procedures are designed.

Other participants identified sharing information regarding engagement deadlines and shared goals:

The forensic specialist must be kept up to date on expectations from audit committee members and management. The timing of the consultation must be appropriate and forensic specialists must have an understanding of client-imposed deadlines and issues. We must work together to achieve a common goal—not looking for things that don't exist but truly providing value added insight to the team.

Regarding the forensic specialists' attributes, participants' experiences relate to the forensic specialists' skillset and the need for them to take ownership of their work. The following are illustrative comments:

It [collaboration] can be enhanced by having the forensic auditor own more of the audit area and its deliverable content in the same manner that other specialists would (i.e., IT control specialists, actuaries, valuation specialists, etc.). From my experience, the forensic auditor's participation has generally been geared more toward consultation and execution of specific procedures, with the auditor left to document their work versus receiving a specialist's report and accepting the findings as the auditor's responsibility.

Another participant highlighted that the forensic specialists should be part of the engagement team:

It is important for them to be part of the team, not just to bring them in for fraud discussion, as it makes it seem that the team is not educated enough to have these types of discussions.

Above all it seems imperative that the forensic specialist should know how to carry out an investigation as well as communicate effectively with the engagement team, as indicated in this response:

Effectiveness is going to be about their forensic skillset, but also about their communication approach given the sensitivity of such situations.

A participant mentioned the importance of the auditors' comfort with the forensic specialists' responses:

It is important that the forensic specialist's involvement increases our confidence level that the company has had an appropriate response to fraud and that we have a defensible audit response.

This remark is consistent with the suggestion that audit teams engage in interaction rituals to produce and distribute comfort (i.e., assurance) (Pentland 1993).

Finally, several comments provide insights on how firm-level activities can enhance collaboration effectiveness. For instance, a participant emphasized the use of relationships to build a consultation culture:

Long-standing relationships of trust are very helpful in building a consultation culture among senior team executives. For the senior team members, it is about building ongoing communication regarding fraud into the planning dialogue. For staff members, the key is to bring real-world fraud experiences into the audit to increase the awareness and sensitivity to fraud issues and an awareness of the possibility of forensic techniques in the audit. Most staff members can use help in identifying the key fraud risks and maintaining skepticism. For them, coaching and training communications are important.

This participant takes a long-term view and believes fostering a consultation culture that changes fraud mindsets at the managerial and staff level is the ultimate path to consultation effectiveness. A participant, who calls for closer relationships at the highest levels, expresses a similar thought:

I think that assurance partners should develop closer relationships with forensic auditors so that they feel comfortable approaching them for assistance.

One participant recommends shared training as a way of building relationships, increasing information sharing, improving learning, and ultimately reducing the cost of consultation:

Forensic auditors would be less costly and equally effective if they spent more time training and sharing experiences with financial auditors, and less time on audit engagements. Often forensic auditors' contribution to the audit does not justify the cost, but due to firm policy they must be invited to participate nonetheless.

Finally, a participant calls for "having consistency of forensic team members each year." Whether this familiarity will erode or possibly enhance some of the benefits of consultation is unknown.

The experiences raised the importance of firm commitment to the effectiveness of collaboration as explained by this participant:

Formalized approaches and policies help ensure that the two groups work together on a routine basis. The firm's overall commitment to doing so is a key factor. Also, it is helpful to have designated champions on both the forensic and auditing sides of the house to encourage collaboration.

Some participants' remarks, epitomized by the excerpt below, seem to address and suggest ways around the social identity conflict between in-group and out-group members (Ensley and Pearce 2001; Levesque et al. 2001; Mathieu et al. 2008; Kellemanns et al. 2005):

Each group could have a greater understanding of what the other does on a day-to-day basis. This can be done through joint trainings, work shadowing, etc. There is the need for formalized approaches and policies to help ensure that the two groups work together on a routine basis. The firm's overall commitment to doing so is a key factor. Also, it is helpful to have designated champions on both the forensic and auditing sides of the house to encourage collaboration.

In effect, this participant proposes that a firm's commitment to investing in joint extra-collaboration enterprises is needed to enhance shared mental models and strategic consensus (Ensley and Pearce 2001; Levesque et al. 2001). Although the

TABLE 3
Summary of Research Questions Suggested by Field Surveys

1. Enhancing Collaboration Effectiveness
 - a. What screens do auditors use in deciding whether to involve forensic specialists when such consultation is not mandatory? How effective are these screens?
 - b. Does upfront involvement of the forensic specialist in the planning phase improve collaboration effectiveness? Can it lead to groupthink?
 - c. Are consultations more effective when forensic specialists are utilized throughout the engagement relative to when they are utilized in targeted phases (e.g., only for planning or at completion)?
 - d. What is the effect of shared mental models (understanding the client's business and commitment to the engagement objectives and team) on collaboration effectiveness?
 - e. Under what circumstances can the use of an agenda impair the effectiveness of brainstorming sessions?
 - f. Can an emphasis on clients' expectations impair collaboration effectiveness?
 - g. How important is it for forensic specialists to identify their prior experiences with frauds and specific tactics for engagement team acceptance of their recommendations and enhancing consultation effectiveness?
 - h. Will a regime of allowing the forensic specialists to own their work and to produce a forensic report, as occurs with other specialists, enhance collaboration effectiveness?
 - i. Is collaboration a comfort-increasing ritual?
 - j. Will long-standing relationships of trust change the consultation mindset and ultimately enhance collaboration effectiveness?
 - k. Does familiarity with the forensic specialist enhance collaboration effectiveness?
 1. Will joint training and work shadowing reduce the social identity conflict?
2. Other Issues
 - a. What is the effect of involving a forensic specialist on the client's comfort (or discomfort) levels and the corresponding strategies adopted by the client?
 - b. Is the forensic specialist's ability to link fraud cues to more processes, accounts, and people the source of their expertise?
 - c. Do forensic specialists facilitate the risk assessment process if their involvement is triggered by a specific fraud risk?
 - d. Does the involvement of the forensic auditor in targeted areas reduce scope creep or impair their ability to unlock hidden links to other areas?
 - e. How receptive are auditors to customized fraud procedures proposed by the forensic specialist?
 - f. Does the involvement of forensic specialists on high fraud risk engagements lead to a more targeted investigation, thereby reducing the overall engagement costs?
 - g. Under what circumstances will the engagement team ignore the forensic specialists' advice?
3. Enhancing Communication Effectiveness
 - a. What is the effect of the timing of engaging the forensic specialists on their communications with the audit team?
 - b. How do regularly scheduled meetings compare with *ad hoc* meetings in enhancing communications?
 - c. Can an agenda be utilized to enhance communication effectiveness?
 - d. Which is more important in enhancing communications, regularly scheduled meetings or an agenda?
 - e. Is there an association between frequency of meetings and communication effectiveness?
 - f. What is the effect of shared mental models (understanding the client's business and commitment to the engagement objectives and team) on communications?
 - g. Should forensic specialists be provided planning materiality? If so, how should planning materiality be communicated to forensic specialists?
 - h. What is the effect of allowing the forensic specialists to participate in fraud interviews with the client?
 - i. How should forensic specialists' participation in an engagement be communicated to the client?
 - j. Is there an association between the channel (face-to-face versus virtual) used and communication effectiveness?
 - k. How does familiarity and geographical proximity of the forensic specialists affect communications?

participant clearly sees the forensic specialists as belonging to a different group, she also welcomes drawing them closer through these joint exercises outside the audit engagement (see [Gratton and Erickson 2007](#)).

The foregoing excerpts enrich our quantitative findings and suggest various testable propositions and research questions, which are enumerated in Parts 1 and 2 of Table 3. For instance, are the screens that auditors use in voluntarily deciding to seek consultation effective in identifying troubled audits? Can early involvement of the forensic specialist enable groupthink and, if so, how can it be curbed? Should consultations be targeted or should forensic specialists be made members of the audit team? How should long-standing relationships between the forensic specialists and the audit team be structured to avoid ritualizing the process? Under what circumstances do auditors not follow the forensic specialists' recommendations?

With respect to communication effectiveness, approximately half of the respondents identified the timing of including the forensic specialist on the engagement as a factor that can enhance communications between the auditors and the specialists. Of these respondents, 55 percent identified involving the specialist up front in the planning stage and 45 percent noted involving the specialist throughout the engagement. Analysis of the comments suggests that while timing of consultation is important, its effect is likely to be moderated by the scheduling and frequency of meetings, the use of an agenda, and the channels of communication (e.g., face-to-face versus virtual meeting). These observations, in turn, implicate several testable research questions that are summarized in Part 3 of Table 3. For instance, can the use of an agenda and regularly scheduled meetings overcome the communication limitations that are inherent in late consultations? Are regularly scheduled meetings more effective than *ad hoc* meetings in enhancing communications? To what extent does familiarity with the forensic specialists and geographical proximity affect teamwork? How do other sub-elements of teamwork (e.g., trust and commitment) develop over time and how do they interact with other elements (e.g., timing) to affect work and outcomes?

Field Survey 2

Overview

The second field survey was designed to allow auditors to provide reflexive responses of their consultation experiences regarding the specific nature of additional risks that were identified, unique procedures recommended, conditions under which risk assessments and procedures are enhanced, and the cost of consultation. Thus, we were interested in auditors' cumulative consultation experience on these matters across clients rather than their specific experiences on a particular engagement.¹⁹

Procedures and Participants

We sent a secured electronic survey link to four partners of the Big 4 firms who had agreed to recruit participants from their firms. A total of 29 completed responses from 22 partners and seven managers were received. Due to confidentiality concerns, the responses do not identify the firms or the participating auditors. Respondents had a mean (standard deviation) of 16.7 (7.91) years of audit experience and had worked with forensic specialists a mean (standard deviation) of 6.15 (3.5) times.

Research Instrument

The electronic survey had three parts. The introductory part explained the objectives of the study (gathering and analyzing data on the collaboration between auditors and forensic specialists) and assured participants of anonymity and confidentiality. In the second part, they were asked if they had ever consulted a forensic specialist. Only those responding affirmatively were allowed to continue the survey. They were asked to think about some of the engagements on which they consulted forensic specialists and answer questions on risk assessment, risk responsiveness, and cost, as excerpted in Table 4.

DATA ANALYSIS AND FINDINGS OF FIELD SURVEY 2

One of the researchers and a research assistant with public accounting experience coded the unique risks and procedures into discernible audit-related themes (e.g., scope of the fraud, type of procedure, corruption, embezzlement). An important observation is the commonality of themes raised by auditors on these issues, which facilitated coding. The overall level of initial agreement was 86 percent, indicating good inter-coder reliability. Subsequently, the two coders met to jointly resolve differences. The coders also identified representative quotes for each category and for circumstances under which the consultation enhanced risk assessment and procedures. Similarly, we excerpted the most representative themes on the effect of consultation on cost. Last, common themes that do not fit under the taskwork or cost are presented as additional findings. For brevity, we discuss comments related to risk assessment, audit procedures, and cost. Detailed quotes and additional findings are presented in Appendix A.

Forensic Specialists' Role in the Risk Assessment Process

On the question of the unique risks identified by the forensic specialists, we categorize auditors' responses into five themes: (1) scope of the fraud, (2) fictitious parties and documents, (3) corruption, (4) industry-wide issues, and (5) embezzlement.

¹⁹ Prior research suggests that asking such general questions is likely to lead auditors to engage in reconstructions based on normative beliefs about what auditors should have done rather than reporting of specific things they did or do in practice. While the questions that we asked are not of the genre where norms are likely to be critical, we nevertheless acknowledge that this manner of questions increases the likelihood of auditors engaging in sensemaking of their environment (see, e.g., Lukka and Kasanen 1995; Lillis 1999; Lillis and Mundy 2005).

TABLE 4
Excerpts of Questions from Survey 2

- I. Recall and describe up to five risks identified by the forensic auditors that had not been considered by the regular audit team (i.e., unique risks). Indicate “none” if the forensic auditors have not identified any unique risks or if you cannot recall any such unique risks.
- II. Explain circumstances, if any, under which the inclusion of the forensic auditor enhanced the risk assessment process. Indicate “none” if there are no such circumstances.
- III. Explain circumstances, if any, under which the inclusion of the forensic auditor did not enhance the risk assessment process. Indicate “none” if there are no such circumstances.
- IV. What roles, if any, do forensic auditors play in determining the audit procedures to be performed on an engagement? Indicate “none” if there are no such circumstances.
- V. Recall and list up to five procedures that were identified by the forensic auditors that had not been included in the standard audit program or considered by the regular audit team (i.e., unique procedures). Indicate “none” if the forensic auditors have not identified any unique procedures or if you cannot recall any such unique procedures.
- VI. Explain how the inclusion of forensic auditors on audit engagements enhanced the audit program. Indicate “none” if the inclusion of forensic auditors did not enhance the audit program.
- VII. Explain circumstances, if any, under which the inclusion of the forensic auditor did not enhance the development of the audit program. Indicate “none” if there are no such circumstances.
- VIII. Does consulting with forensic auditors significantly affect the cost of an audit engagement? If yes, explain how it affects the cost of an audit engagement.
- IX. Does consulting with forensic auditors affect the timeliness of the completion of an audit engagement? If yes, explain how it affects the timeliness of the completion of an audit engagement.
- X. Explain the circumstances, if any, under which the audit team is not likely to follow the forensic auditors' recommendations. Indicate “none” if there are no such circumstances.

Auditors mentioned the expansion of the “scope of the fraud” as the most common unique risk identified by the forensic specialists.

On the question of how consultation can enhance risk assessment, auditors highlighted the importance of a consultation that focuses on a specific issue and exposes auditors to various fraud schemes. Consultations that are unfocused or that do not lead to a way forward can result in an emphasis on “trivial risks,” “scope creep,” or “a wild goose chase.” In sum, the forensic specialists' role in risk assessment includes clarifying risk situations, identifying fraud schemes, providing a different perspective, and focusing the auditor on important issues. However, there must be a clear rationale for involving the forensic specialists in the risk assessment phase to avoid a wild goose chase, as suggested by some experts at a PCAOB's advisory group meeting (see [Garver 2007](#)).

Forensic Specialists' Role in Risk Responsiveness

Participants' comments suggest that the forensic specialist can enrich the auditors' risk response by customizing audit procedures, enhancing traditional procedures, ensuring the comprehensiveness of the audit program, participating in scope determination, taking part in brainstorming, and recommending and performing unique procedures. Regarding unique procedures, the responses fell into three categories: a detailed review of problem areas, definition of attributes of the data that match the fraud, and authentication and email searches. The detailed review covered areas such as payroll, sales terms, loan existence, corporate credit cards, vendor invoices, foreign payments, and employee reimbursements. Authentication (i.e., establishing validity) includes documents, vendors, entities, and customers. Defining attributes of the data included data analysis, data mining, Computer Assisted Audit Techniques (CAAT), and forensic analytics.

Cost Considerations and Timeliness of Engagement Completion

Participants' comments indicate that if the forensic expertise is matched to the task, then it can result in labor efficiencies and cost savings. Otherwise, the involvement may increase cost without a corresponding increase in benefit. That is, even though the forensic specialists' charging rate is high, their costs can likely be passed on to the client if their involvement is targeted to specific risks rather than generalized risks. In effect, cost goes up when a fraud is discovered because of additional

time and work. However, this is not because of the consultation but because the “engagement is now beyond the normal scope.”

On the question of whether consulting with the forensic specialists affects the timeliness of the completion of an audit engagement, participants’ comments clarify that engagements might be delayed but not because of involving the forensic specialist. Rather, it is the necessity of resolving the potential or actual management fraud that is causing the delay.

DISCUSSION

Prior research suggests that involving forensic specialists on an audit engagement may reduce auditors’ fraud detection deficit (e.g., [Abbott 1988](#); [Hollenbeck et al. 1995](#); [Hollenbeck, Colquitt, Ilgen, LePine, and Hedlund 1998](#); [Smith-Lacroix, Durocher, and Gendron 2012](#); [Trompeter et al. 2013](#); [Asare et al. 2015](#)). We develop and test a framework of the consultation process using two related field surveys. Our results show that the forensic auditors’ understanding of the clients’ business and audit engagement objectives is positively associated with effective teamwork and risk assessments, which, in turn, are positively associated with overall consultation effectiveness. While risk assessment is positively associated with risk responsiveness, the latter is not associated with overall consultation effectiveness. We also find that involving forensic specialists early in the engagement is associated with improved teamwork and risk responsiveness. We found marginally significant support that auditors’ reluctance to consult is negatively associated with effective teamwork, while early consultation is positively associated with risk responsiveness.

Auditors’ comments support the conclusion that consultation enhances risk assessments when it is targeted to specific circumstances, clarifies fraud schemes, identifies idiosyncratic risk, and brings in a different perspective. Auditors noted that the cost impact of consultation is limited, apparently, because even though forensic specialists charge higher rates, they tend to help auditors focus their effort, leading to efficiency gains that largely compensate for their rates.

Our findings have important research implications and suggest avenues for future research, several of which have been listed in Table 3. We highlight the effect of when the forensic specialists are deployed as an intriguing avenue for research. The participants appear to be in favor of early involvement. While this approach may ensure that all parties share a common initial understanding, it presents the risk of making the forensic specialists a co-producer of the audit plan, which can present later challenges, including groupthink ([Bamber, Watson, and Hill 1996](#)). Only carefully controlled and systematic studies can bring clarity to these issues.

Another avenue for research is to evaluate the screens that auditors use in deciding whether to involve forensic specialists when such consultation is not mandatory. The underlying presumption in using such screens is that auditors are good at identifying engagements that require the use of forensic specialists. Yet, the rationale for the assumption is unclear. For instance, if one were to review SEC enforcement releases that deal with fraud in the last five years, then what proportion of those engagements involved forensic specialists? While the level of disclosure in such releases is often limited and uneven, it can nevertheless provide some important insights on the efficacy of auditors’ screens and the forensic specialists’ effectiveness. Alternatively, carefully designed experiments can shed light on the screens that auditors employ in deciding when to consult with forensic specialists.

Although participants’ qualitative responses suggest that they generally follow the advice of forensic specialists, they also raise the possibility that they would allow their judgment of materiality or relevance to override the forensic specialists’ recommendation. This finding raises the question of the circumstances, including client pressure and transaction complexity, under which a forensic specialist’s recommendations are not followed. In this regard, the judge-advisor paradigm can be a particularly useful framework to address questions such as whether auditors have an appropriate level of, too much, or too little trust in forensic specialists (see, e.g., [Bonaccio and Dalal 2006](#); [Yaniv 2004](#)).

An important party that has been omitted from the discussion is the client. Not only do auditors attempt to pass forensic costs on to the client, but also client personnel have to deal with forensic specialists, sometimes unexpectedly. As an example, future research can examine the effect of involving a forensic specialist on an audit engagement on the client’s comfort (or discomfort) levels and the corresponding strategies adopted by the client.

Participants noted that forensic specialists sometimes indicate their prior experiences with frauds and the specific tactics that they employed to address the forensic situation. Are references to such tactics, compared to their omission, more persuasive to the engagement team? The effect of the background of the forensic specialists can also be an important area of inquiry.

From a practical perspective, regulators and firms may consider policies that ensure that auditors and the forensic specialists are in concurrence with respect to engagement goals and strategies to avoid the dysfunctional “wild goose chase” or “scope creep” phenomena. In a related vein, firm and regulatory policies that reduce auditors’ reluctance to consult and enhance forensic specialists’ shared mental model are important to improved consultation.

Our findings must be interpreted cognizant of the limitations of our research approach and choices. In particular, our research is not designed to address questions such as whether auditors are consulting in circumstances when they should or not

consulting when they should have. Our focus is limited to engagements for which there were consultations. Thus, an important avenue for future research is to explore whether and the circumstances under which audit teams over-consume or under-consume the forensic specialists' services. Also, although participants were free to refer to working papers in responding to questions, we did not gather data on how many actually did so. Thus, potential lack of accurate recall may be a limitation. However, of note, responses predominantly relate to recent consultations (82.5 percent of the consultations occurring less than a year earlier).

Further, the participating firms did not allow us to gather data on whether the engagement team discovered fraud, thus limiting our ability to draw inferences about actual accuracy. In the absence of these data, we asked auditors to assess the overall effectiveness of the consultation process in leading to a higher-quality audit. To the extent that auditors' evaluation of the effectiveness of the consultation does not reflect accuracy in detecting fraud, our conclusions about effectiveness are similarly limited.

We are also limited by the sample selection method. In particular, auditors may have identified engagements for which consultations worked better than usual. This potential sampling bias may affect the conclusions about how different factors impact consultation effectiveness. Our use of structured tailored questions, rather than interviews, limited our ability to ask tailored follow-up questions. However, the choice was driven by the protocol acceptable to the participating firms. Finally, the forensic specialist consults with the engagement team, not an individual auditor. Thus, ideally it is important to obtain the perspectives of multiple team members on an engagement to avoid the potential of a single-rater bias. However, given the difficulty of obtaining participants, obtaining multiple members from an engagement is very difficult.

In sum, our proposed model is descriptive, allowing us to uncover how auditors interact effectively and benefit from the forensic specialists' work and providing a platform for future research to address related and relevant questions that are rooted in auditors' work realities.

REFERENCES

- Abbott, A. 1988. *The System of Professions*. Chicago, IL: The University of Chicago Press.
- American Institute of Certified Public Accountants (AICPA). 2002. *Consideration of Fraud in a Financial Statement Audit. Statement on Auditing Standards No. 99 (Supersedes SAS No. 82)*. New York, NY: AICPA.
- American Institute of Certified Public Accountants (AICPA). 2012a. *Consideration of Fraud in a Financial Statement Audit. Statement on Auditing Standards No. 122, AU-C Section 240*. New York, NY: AICPA.
- American Institute of Certified Public Accountants (AICPA). 2012b. *Using the Work of a Specialist. Statement on Auditing Standards No. 122, AU-C Section 620*. New York, NY: AICPA.
- Asare, S., and A. Wright. 2004. The effectiveness of alternative risk assessment and program planning tools in a fraud setting. *Contemporary Accounting Research* 21 (2): 325–352. doi:10.1506/L20L-7FUM-FPCB-7BE2
- Asare, S., A. Wright, and M. Zimelman. 2015. Challenges facing auditors in detecting financial statement fraud: Insights from fraud examiners. *Journal of Forensic and Investigative Accounting* 7 (2).
- Bamber, M., R. Watson, and C. Hill. 1996. The effects of group support system technology on audit group decision making. *Auditing: A Journal of Practice & Theory* 15 (1): 122–134.
- Beasley, M., J. Carcello, D. Hermanson, and T. Neal. 2010. *Fraudulent Financial Reporting 1998–2007: An Analysis of U.S. Public Companies*. New York, NY: AICPA.
- Beasley, M., J. Carcello, D. Hermanson, and T. Neal. 2013. *An Analysis of Alleged Auditor Deficiencies in SEC Fraud Investigations: 1998–2010*. Available at: <http://www.theacq.org/analysis-alleged-auditor-deficiencies-sec-fraud-investigations-1998%E2%80%932010>
- Bell, T., M. Peecher, and H. Thomas. 2005. *The 21st Century Public Company Audit*. New York, NY: KPMG LLP.
- Bonaccio, S., and R. S. Dalal. 2006. Advice taking and decision-making: An integrative literature review, and implications for the organizational sciences. *Organizational Behavior and Human Decision Processes* 101 (2): 127–151. doi:10.1016/j.obhdp.2006.07.001
- Bonner, S. E. 2008. *Judgment and Decision Making in Accounting*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Boritz, E., N. Kochetova-Kozloski, and L. Robinson. 2015a. Are fraud specialists relatively more effective than auditors at modifying audit programs in the presence of fraud risk? *The Accounting Review* 90 (3): 881–915. doi:10.2308/accr-50911
- Boritz, E., N. Kochetova-Kozloski, L. Robinson, and C. Wong. 2015b. *Auditors' and Specialists' Views about the Use of Specialists during an Audit*. Working paper, University of Waterloo.
- Brazel, J., T. Carpenter, and G. Jenkins. 2010. Auditors' use of brainstorming in the consideration of fraud: Reports from the field. *The Accounting Review* 85 (4): 1273–1301. doi:10.2308/accr.2010.85.4.1273
- Chen, F., P. Curran, K. Bollen, J. Kirby, and P. Paxton. 2008. An empirical evaluation of the use of fixed cutoff points in RMSEA test statistics in structural equation models. *Sociological Methods and Research* 36 (4): 462–494.
- Chen, G. 2005. Newcomer adaptation in teams: Multilevel antecedents and outcomes. *Academy of Management Journal* 48 (1): 101–116. doi:10.5465/AMJ.2005.15993147

- Clarín, O. 2007. Strategies to overcome barriers to effective nurse practitioner and physician collaboration. *The Journal for Nurse Practitioners* 3 (8): 538–548. doi:10.1016/j.nurpra.2007.05.019
- Cohen, S., and D. Bailey. 1997. What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management* 23 (3): 239–290. doi:10.1177/014920639702300303
- Dyck, A., A. Morse, and L. Zingales. 2010. Who blows the whistle on corporate fraud? *The Journal of Finance* 65 (6): 2213–2253. doi:10.1111/j.1540-6261.2010.01614.x
- Ensley, M., and C. Pearce. 2001. Shared cognition in top management teams: Implications for new venture performance. *Journal of Organizational Behavior* 22 (2): 145–160. doi:10.1002/job.83
- Fay, D., C. Borrill, Z. Amir, R. Haward, and M. West. 2006. Getting the most out of multidisciplinary teams: A multi-sample study of team innovation in health care. *Journal of Occupational and Organizational Psychology* 79 (4): 553–567. doi:10.1348/096317905X72128
- Garver, R. 2007. *Forensic Audits: Got a Clue?* Available at: <http://ww2.cfo.com/accounting-tax/2007/02/forensic-audits-got-a-clue/>
- Gibbins, M. 2001. Incorporating context into the study of judgment and expertise in public accounting. *International Journal of Auditing* 5 (3): 225–236. doi:10.1111/1099-1123.00338
- Gibbins, M., and J. Newton. 1994. An empirical investigation of complex accountability in public accounting. *Journal of Accounting Research* 32 (2): 165–186. doi:10.2307/2491280
- Gibbins, M., and S. Q. Qu. 2005. Eliciting experts' context knowledge with theory-based experiential questionnaires. *Behavioral Research in Accounting* 17 (1): 71–88. doi:10.2308/bria.2005.17.1.71
- Gibbins, M., S. McCracken, and S. Salterio. 2005. Negotiations over accounting issues: The congruency of audit partner and chief financial officer recalls. *Auditing: A Journal of Practice & Theory* 24 (Supplement): 171–193. doi:10.2308/aud.2005.24. Supplement.171
- Gibbins, M., S. McCracken, and S. Salterio. 2007. The chief financial officer's perspective on auditor-client negotiations. *Contemporary Accounting Research* 24 (2): 387–422. doi:10.1506/9208-G324-1R15-4U3H
- Gibbins, M., S. McCracken, and S. Salterio. 2010. The auditor's strategy selection for negotiation with management: Flexibility of initial accounting position and nature of the relationship. *Accounting, Organizations and Society* 35 (6): 579–595. doi:10.1016/j.aos.2010.01.001
- Gibbins, M., S. Salterio, and A. Webb. 2001. Evidence about auditor-client management negotiation concerning the client's financial reporting. *Journal of Accounting Research* 39 (3): 535–563. doi:10.1111/1475-679X.00027
- Glover, S., and D. Prawitt. 2014. Enhancing auditor professional skepticism: The professional skepticism continuum. *Current Issues in Auditing* 8 (2): 1–10. doi:10.2308/ciia-50895
- Glover, S., D. Prawitt, J. Schultz, Jr., and M. Zimbelman. 2003. A test of changes in auditors' fraud-related planning judgments since the issuance of SAS No. 82. *Auditing: A Journal of Practice & Theory* 22 (2): 237–251. doi:10.2308/aud.2003.22.2.237
- Gold, A., R. Knechel, and P. Wallage. 2012. The effect of the strictness of consultation requirements on fraud consultation. *The Accounting Review* 87 (3): 925–949. doi:10.2308/accr-10213
- Gratton, L., and T. Erickson. 2007. Eight ways to build collaborative teams. *Harvard Business Review* 85 (11): 100–109, 153.
- Gray, B., and D. Wood. 1991. Collaborative alliances: Moving from practice to theory. *The Journal of Applied Behavioral Science* 27 (1): 3–22. doi:10.1177/0021886391271001
- Hammersley, J. 2011. A review and model of auditor judgments in fraud-related planning tasks. *Auditing: A Journal of Practice & Theory* 30 (4): 101–128. doi:10.2308/ajpt-10145
- Hammersley, J., M. Bamber, and T. Carpenter. 2010. The influence of documentation specificity and priming on auditors' fraud risk assessments and evidence evaluation decisions. *The Accounting Review* 85 (2): 547–571. doi:10.2308/accr.2010.85.2.547
- Hammersley, J., K. Johnstone, and K. Kadous. 2011. How do audit seniors respond to heightened fraud risk? *Auditing: A Journal of Practice & Theory* 30 (3): 81–101. doi:10.2308/ajpt-10110
- Hoffman, V., and M. Zimbelman. 2009. Do strategic reasoning and brainstorming help auditors change their standard audit procedures in response to fraud risk? *The Accounting Review* 84 (3): 811–837. doi:10.2308/accr.2009.84.3.811
- Hogan, C. E., Z. Rezaee, R. Riley, Jr., and U. Velury. 2008. Financial statement fraud: Insights from the academic literature. *Auditing: A Journal of Practice & Theory* 27 (2): 231–252. doi:10.2308/aud.2008.27.2.231
- Hollenbeck, J. R., J. A. Colquitt, D. R. Ilgen, J. A. LePine, and J. Hedlund. 1998. Accuracy decomposition and team decision making: Testing theoretical boundary conditions. *The Journal of Applied Psychology* 83 (3): 494–500. doi:10.1037/0021-9010.83.3.494
- Hollenbeck, J., D. Ilgen, D. Segoe, J. Hedlund, D. Major, and J. Phillips. 1995. Multilevel theory of team decision making: Decision performance in teams incorporating distributed expertise. *The Journal of Applied Psychology* 80 (2): 292–316. doi:10.1037/0021-9010.80.2.292
- Houston, R., M. Peters, and J. Pratt. 1999. The audit risk model, business risk, and audit planning decisions. *The Accounting Review* 74 (3): 281–298.
- Ilgen, D. R., J. R. Hollenbeck, M. J. Johnson, and D. Jundt. 2005. Teams in organizations: From input-process-out models to IMO models. *Annual Review of Psychology* 56 (1): 517–543. doi:10.1146/annurev.psych.56.091103.070250
- International Auditing and Assurance Standards Board (IAASB). 2009. *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements. International Standard on Auditing (ISA) 240*. New York, NY: IFAC.
- Janis, I. L., and L. Mann. 1977. *Decision-Making: A Psychological Analysis of Conflict, Choice and Commitment*. New York, NY: Free Press.

- Jenkins, J. G., E. M. Negangard, and M. Oler. 2016. *Usage of Forensic Professionals in the Audit Process: Evidence from the Field*. Working paper, Virginia Polytechnic and State University.
- Kangaroo, H., J. Valdez, L. Yao, S. Chen, J. Curran, D. Goldman, U. Sinha, J. Dionisio, R. Taira, J. Sayre, L. Seeger, R. Johnson, Z. Barbaric, and R. Steckel. 2000. Improving the quality of care through routine teleradiology consultation. *Academic Radiologist* 7 (March): 149–155.
- Kellermanns, F., J. Walter, C. Lechner, and S. Floyd. 2005. The lack of consensus about strategic consensus: Advancing theory and research. *Journal of Management* 31 (5): 719–737. doi:10.1177/0149206305279114
- Kenny, D. A., B. Kaniskan, and D. B. McCoach. 2015. The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research* 44 (3): 486–507. doi:10.1177/0049124114543236
- KPMG. 2009. *KPMG Fraud Survey 2009*. New York, NY: KPMG LLP.
- Levesque, L., J. Wilson, and D. Wholey. 2001. Cognitive divergence and shared mental models in software development project teams. *Journal of Organizational Behavior* 22 (2): 135–144. doi:10.1002/job.87
- Lillis, A. 1999. A framework for the analysis of interview data from multiple field research sites. *Accounting & Finance* 39 (1): 79–105. doi:10.1111/1467-629X.00018
- Lillis, A., and J. Mundy. 2005. Cross-sectional field studies in management accounting research—Closing the gaps between surveys and case studies. *Journal of Management Accounting Research* 17 (1): 119–141. doi:10.2308/jmar.2005.17.1.119
- Lukka, K., and E. Kasanen. 1995. The problem of generalizability: Anecdotes and evidence in accounting research. *Accounting, Auditing & Accountability Journal* 8 (5): 71–90. doi:10.1108/09513579510147733
- Mathieu, J., T. Maynard, T. Rapp, and L. Gilson. 2008. Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management* 34 (3): 410–476. doi:10.1177/0149206308316061
- Mathieu, J. E., T. Heffner, G. Goodwin, J. Cannon-Bowers, and E. Salas. 2005. Scaling the quality of teammates' mental models: Equifinality and normative comparisons. *Journal of Organizational Behavior* 26 (1): 37–56. doi:10.1002/job.296
- McGrath, J. E. 1964. *Social Psychology: A Brief Introduction*. New York, NY: Holt, Rinehart & Winston.
- Messier, W. F. Jr., V. Owhoso, and C. Rakovski. 2008. Can audit partners predict subordinates' ability to detect errors? *Journal of Accounting Research* 46 (5): 1241–1264.
- Mock, T., and J. Turner. 2005. Auditor identification of fraud risk factors and their impact on audit programs. *International Journal of Auditing* 9 (1): 59–77. doi:10.1111/j.1099-1123.2005.00102.x
- Nelson, M. W., and H.-T. Tan. 2005. Judgment and decision making research in auditing: A task, person, and interpersonal interaction perspective. *Auditing: A Journal of Practice & Theory* (24): 41–71.
- Nemeth, C., and J. Goncalo. 2004. *Influence and Persuasion in Small Groups*. Available at: <http://irle.berkeley.edu/files/2004/Influence-and-Persuasion-in-Small-Groups.pdf>
- Nieschwietz, R., J. Schultz, and M. Zimelman. 2000. Empirical research on external auditors' detection of financial statement fraud. *Journal of Accounting Literature* (19): 190–246.
- Pentland, B. 1993. Getting comfortable with the numbers: Auditing and the micro-production of macro-order. *Accounting, Organizations and Society* 18 (7/8): 605–620. doi:10.1016/0361-3682(93)90045-8
- Power, M. 1996. Making things auditable. *Accounting, Organizations and Society* 21 (2/3): 289–315. doi:10.1016/0361-3682(95)00004-6
- Power, M. K., and Y. Gendron. 2015. Broadening horizons: Engaging with qualitative research. *Auditing: A Journal of Practice & Theory* 34 (2): 147–165.
- Public Company Accounting Oversight Board (PCAOB). 2004. *Standard Advisory Group Meeting: Financial Fraud*. New York, NY: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2010a. *Identifying and Assessing Risks of Material Misstatements. Auditing Standard No. 12 (Recodified as AS 2110)*. New York, NY: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2010b. *Auditor Considerations Regarding Significant Unusual Transactions. Staff Audit Practice Alert No. 5*. New York, NY: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2010c. *The Auditor's Responses to the Risks of Material Misstatements. Auditing Standard No. 13 (Recodified as AS 2301)*. New York, NY: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2012. *Standing Advisory Group Meeting: Consideration of Outreach and Research Regarding the Auditor's Approach to Detecting Fraud*. Available at: https://pcaobus.org/News/Events/Pages/11152012_SAGMeeting.aspx.
- Public Company Accounting Oversight Board (PCAOB). 2015. *Inspection Observations Related to PCAOB "Risk Assessment" Auditing Standards (No. 8 through No. 15). PCAOB Release No. 2015-007*. Available at: <https://pcaobus.org/Inspections/Documents/Risk-Assessment-Standards-Inspections.pdf>
- Public Company Accounting Oversight Board (PCAOB). 2016. *Staff Inspection Brief: Preview of Observations from 2015 Inspections of Auditors of Issuers. Vol. 2016/1*. Available at: <https://pcaobus.org/Inspections/Documents/Inspection-Brief-2016-1-Auditors-Issuers.pdf>
- Public Oversight Board (POB). 2000. *The Panel on Audit Effectiveness: Report and Recommendations*. Available at: <https://www.iasplus.com/en/binary/resource/pobaudit.pdf>
- Smith-Lacroix, J., S. Durocher, and Y. Gendron. 2012. The erosion of jurisdiction: Auditing in a market value accounting regime. *Critical Perspectives on Accounting* 23 (1): 36–53. doi:10.1016/j.cpa.2011.09.002

- Tan, H., and K. Jamal. 2006. Managing perceptions of technical competence: How well do auditors know how others view them? *Contemporary Accounting Research* 23: 761–787.
- Trompeter, G., T. Carpenter, N. Desai, K. Jones, and R. Riley, Jr. 2013. A synthesis of fraud related research. *Auditing: A Journal of Practice & Theory* 32 (Supplement): 287–321. doi:10.2308/ajpt-50360
- Verwey, I. 2014. *Differences between Public Auditors and Forensic Accountants in Their Ability to Identify Fraud Risks and Plan Effective Procedures to Mitigate Fraud Risks*. Ph.D. dissertation, Nyenrode Business University.
- Wells, J. 2003. *Sherlock Holmes, CPA, Part 1*. Available at: <http://www.journalofaccountancy.com/Issues/2003/Aug/SherlockHolmesCpaPart1>
- Yaniv, I. 2004. Receiving other people's advice: Influence and benefit. *Organizational Behavior and Human Decision Processes* 93 (1): 1–13. doi:10.1016/j.obhdp.2003.08.002
- Zimbelman, M. 1997. The effects of SAS No. 82 on auditors' attention to fraud risk factors and audit planning decisions. *Journal of Accounting Research* 35 (Supplement): 75–97. doi:10.2307/2491454

APPENDIX A

Qualitative Analysis and Excerpts from Field Survey 2

The experiences of four participants are illustrative of how forensic specialists' involvement can expand the scope of issues considered for fraud risk assessment:

The forensic specialists expanded the risk map by explaining that the fraud goes beyond the people and situation identified.

They [forensic specialists] clarified the scope of the perpetration and concealment of the fraud.

Their [forensic specialists] participation in the fraud discussion helped to challenge the audit team to look at their work differently. Viewing the issues from a different viewpoint helps ensure quality.

They sometimes can provide insight into various areas that are susceptible to fraud. They then suggest procedures to address the problems.

These quotes suggest that the forensic specialists enhance fraud detection effectiveness by expanding the fraud risk space to cover more areas and people and bring new insights on how the fraud can be perpetrated or concealed, thus potentially increasing the team's use of strategic reasoning (Hoffman and Zimbelman 2009).

Several participants recalled instances when the forensic specialists questioned the validity of clients' documents or entities. As one participant puts it:

The forensic specialist alerted the engagement team to the possibility of fictitious customers, vendors, and documents, which was used to heighten fraud risk.

Forensic specialists also play a role in matters that involve the intersection between law and auditing. The most common example mentioned was the identification of possible foreign corrupt practice (FCPA) issues, as indicated in this excerpt:

The forensic specialists help clarify how FCPA transactions occur and how to identify them.

Nevertheless, there is evidence that sometimes the forensic specialists may fail to clarify the nature of the fraud risk as noted by this participant:

The forensic auditors need to be able to explain/articulate how the fraud/regulatory/compliance risk translates to the financial statements and how to assess a compliance program—what does a good program look like? This is hard, especially in highly regulated entities and often is identified when there is a regulatory audit versus a financial audit.

In some cases, auditors are unaware of industry-wide fraud. This knowledge was captured in this comment:

They [forensic specialists] share industry-wide fraud matters that were not necessarily known by the auditors. They make the audit team aware of how fraud can be concealed or perpetrated in specialized industries. They bring a different perspective and better procedures to address identified risks.

In some cases, the risk identified related to embezzlement:

The forensic specialists drew attention to risks that led to discovery of a \$2.0 million cash fraud over ten years by a controller—\$200k per year.

Illustrative comments of how consultation that focuses on a specific issue can enhance risk assessment are:

The forensic auditor is brought in based on an identified issue related to revenue recognition or FCPA allegations.

Another common theme on how forensic specialists can enhance risk assessment is through exposing auditors to various fraud schemes. One participant highlighted this point as follows:

They [forensic specialists] communicate fraud schemes based on actual instances by industry to the audit teams so that the team could hone their brainstorming sessions.

The following excerpts by participants reflect the scope creep:

Sometimes there is not much more to do than the risks that have been identified or the procedures that have been designed. A needless scope creep agenda from the forensic team is not welcome.

When the consultation is not targeted to specific circumstances (i.e., if there are no specific risks that need to be addressed), it can lead to a wild goose chase.

However, not all auditors share in the fear of "scope creep." Some auditors considered the involvement of forensic specialists as a part of the process to construct comfort (Power 1996), as reflected in this comment by this participant:

Involvement of the forensic specialists is always valuable since, at a minimum, it validates that the engagement team has considered the relevant factors.

Forensic Specialists' Role in Risk Responsiveness

One participant suggested that customization and comprehensiveness of procedures are key to the forensic specialists' role in risk responsiveness:

Forensic specialists help audit teams design custom audit procedures to address the risk or situation identified. The procedures tend to be more comprehensive than a traditional audit team will perform.

However, forensic specialists can also enhance traditional procedures, either by taking it to "a higher level," "bringing in a new perspective," or ensuring that the "audit program is comprehensive," as noted in the excerpts below from three participants:

Although there can never be 100 percent certainty that an issue is fully vetted, the inclusion of procedures performed by forensic specialists take the traditional approach to a higher level.

They [forensic specialists] introduced different perspectives and recommended better procedures to address identified risks.

It is a baked in quality step to ensure the program includes the right elements.

Nevertheless, as with risk assessment, sometimes the forensic specialists help the engagement team to construct comfort (Power 1996):

He did not suggest any additional fraud risk or procedures but it was nice to have a forensic specialist verify that we had correctly identified the appropriate fraud risk and audit responses.

One participant's response confirmed the importance of the forensic specialists' fraud experience in responding to risks:

They [forensic specialists] suggest based on their experience risks needing to be addressed and previously successful tactics for responding to those risks.

Thus, forensic specialists play critical risk responsiveness roles, including scope determination (reflected in comments such as "helps determine level of any incremental fraud work"), brainstorming (e.g., "they discuss previous tactics to address looming risks"), and comprehensiveness testing ("ensure procedures are more comprehensive than a traditional audit team will perform"). Nevertheless, the "wild goose chase" issue was also identified as a potential problem in the risk responsiveness stage, along with the "poor boundary" problem, when there is unintended communication between the forensic specialists and the client ("purveyors"), which may harm auditor-auditee relations or even tip off perpetrators.²⁰

²⁰ This harm arises if the client perceives that the forensic specialist is not using the proper channels of communication or if the client is questioned about a potential fraud concern that is subsequently found to be unwarranted.

Cost Considerations and Timeliness of Engagement Completion

The following excerpted responses shed additional light on the cost and timeliness effects of involving a forensic expert. It appears the effect of consultation on cost depends on the extent to which the consultation is targeted:

If there are AU 316 matters [suspected fraud], then costs are already up and the forensic specialists can help target what we do. If it is not an AU 316 situation, then it is likely just going to add costs because the involvement will not be focused.

In effect, participants are suggesting that if the forensic expertise is matched to the task, then it can result in labor efficiencies and cost savings. Otherwise, the involvement may increase cost without a corresponding increase in benefit. These experiences suggest that high fraud risk engagements may be less costly when forensic specialists are involved. Another participant is more emphatic in stating that involving forensic specialists does not normally significantly increase cost:

It does not normally significantly increase cost except when there is fraud. And then it becomes a question of what is found and who bears the cost.

This quote highlights that it is necessarily costlier to audit a fraud scenario, but that the cost of consultation can then be shifted to others depending on what the audit reveals. A participant makes this point more crisply:

When it is not billed to the audit client then it gets expensive.

Another participant takes the view that involving the forensic specialist is costly, but it is money well spent:

It is high-rate work if it is necessary, but obviously critical, and I have high regard for the forensic team responsible for such work.

Other comments were more unequivocal in asserting that consultation significantly affects the cost of the audit engagement, as evidenced by this excerpt:

Forensic specialists are typically more seasoned and are used to charging at a higher realization rate thereby increasing fees substantially relative to hours.

Finally, a participant shed some light on conditions under which the client is likely to pay:

Unless it is to uncover a known malfeasance it is a duplicative process, which clients would be unwilling to pay for.

This excerpt extends the point made about the wild goose chase and the comments made by experts at the PCAOB standing advisory meeting (Garver 2007). That is, clients are unlikely to pay for services that they do not need and have not asked for. In turn, this highlights the importance of targeting and tailoring the inclusion of forensic specialists on audit engagements.

On the question of whether consulting with the forensic specialists affects the timeliness of the completion of an audit engagement, a participant noted:

If there is a potential or already identified fraud by management, we need to get comfortable that the company has identified the full exposure and properly accounted for any related accounting and disclosure implications before we can issue our report.

The subtle point by this participant is that the engagement is delayed but not because of involving the forensic specialist. Rather, it is the necessity of resolving the potential or actual management fraud that is causing the delay. The point is made more directly by a participant as follows:

If it is an AU 316 [suspected fraud] issue then the engagement is already delayed but the forensic specialists can help get through faster. If it is not an AU 316 issue, then the time is not well spent.

It also came to light that involvement of the forensic specialist may put the engagement on hold, and has preplanning implications:

Possibly, it can delay the engagement, depending on the issue and when it was identified. Traditionally, an audit engagement is put on hold until the forensic specialists have completed their work. Unfortunately, a number of the issues that forensic specialists are involved with lead the audit engagement teams to reconsider client acceptance.

This comment suggests that forensic specialists' activities can inform the client acceptance and continuance decisions. In turn, this raises the possibility of involving the forensic specialists in such decisions when some conditions are met. This approach is proactive and preventive and can reduce engagement risk.

Additional Findings

Participants also identified suspected fraud by management, audit committee request, or periodically scheduled consultation (at least once every three years if high risk or publicly traded) as factors triggering consultation. We also sought evidence on whether the forensic specialist is retained in the year following the initial consultation. In general, participants indicated that there is no requirement and they do not reengage the forensic auditor in the following year. This is because “many of these issues tend to be one-year situations.” The exception to this general rule appears to be “when the prior issues persisted or new fraud issues crop up.”

Regarding when the engagement team will not follow the advice of the forensic specialists. The typical response is captured in this participant's comments:

The audit team would not follow the forensic team's suggestion in only very rare circumstances. It should not happen. The only instance I could see is if the forensic team did not fully understand the business or if the recommendations are for a low risk/materiality area or do not reduce fraud risk.

This is an intriguing response because it appropriately reflects that the auditor retains the ultimate decision rights for the engagement, reflecting the concept of hierarchical sensitivity (Hollenbeck et al. 1995). Nevertheless, it also demonstrates that the auditor can invoke notions of risk, materiality, or the forensic specialist's lack of understanding of the business to discount or ignore advice.