

July 30, 2015

Public Company Accounting Oversight Board  
Office of the Secretary  
1666 K Street NW  
Washington DC 2006-2803

Via email to: [comments@pcaobus.org](mailto:comments@pcaobus.org)

Dear PCAOB Staff:

The Auditing Standards Committee of the Auditing Section of the American Accounting Association is pleased to provide comments on Staff Consultation Paper No. 2015-01 *The Auditors' Use of the Work of Specialist*.

The views expressed in this letter are those of the members of the Auditing Standards Committee and do not reflect an official position of the American Accounting Association. In addition, the comments reflect the overall consensus view of the Committee, not necessarily the views of every individual member.

We hope that our attached comments and suggestions are helpful and will assist your office. If you have any questions about our input, please feel free to contact our committee chair for any follow-up.

Respectfully submitted,

Auditing Standards Committee  
Auditing Section – American Accounting Association

Contributors:

Co-Chair – Jennifer Joe, University of Delaware, phone (302) 831 6002, email [jjoe@udel.edu](mailto:jjoe@udel.edu)

Co-Chair – Diane Janvrin, Iowa State University, phone (515) 294 9450, email [djanvrin@iastate.edu](mailto:djanvrin@iastate.edu)

Dereck Barr-Pulliam, University of Wisconsin

Stephani Mason, DePaul University

Marshall Pitman, University of Texas at San Antonio

Zabi Rezaee, University of Memphis

Kerri-Ann Sanderson, Bentley University

Yi-Jing Wu, Texas Tech University

In our response we first address some of the specific questions posed in Staff Consultation Paper No. 2015-01 (hereafter, the Staff Consultation Paper). Our response to the selected questions are focused primarily on auditors' use of valuation specialists. We close with general comments to the PCAOB (hereafter, the Board) related to the use of the work of specialists (focused primarily on IT specialists) in auditing. Our comments are largely based on findings from the related literature and our knowledge of best practices.

## **Responses to Specific Questions**

**Question 1:** Does the information presented in Section III accurately characterize current practice? Are other aspects of current practice – at larger and smaller accounting firms – relevant to the staff's consideration of potential standard setting in this area?

*In PCAOB Staff Consultation Paper No. 2015-01 (hereafter, the Staff Consultation Paper), the Board references the findings of recent interview-based academic studies regarding auditors' use of specialists. We wish to make the Board aware of the following concurrent studies that can provide additional insights regarding current practice and potential areas in which auditors could use more clarification and guidance. This list is not intended to be all-inclusive, but the Committee believes the Board would find the following qualitative studies focused on highly experienced auditors' use of specialists to be informative: Bauer and Estep (2015a); Bauer and Estep (2015b); Cannon and Bedard (2015); and Glover, Taylor, and Wu (2015a). In addition, the Board might find that Griffith (2015a), an experimental study on auditors' use the work of specialists, can yield insights about current practice. In the remainder of this comment letter, where relevant, the Committee cites findings from these studies in our response to specific questions.*

**Question 2:** Are there any challenges associated with current practice, especially for those accounting firms that have incorporated the standards of the IAASB or of the ASB into their audit methodologies?

*Following the implementation of ISA 620, the IAASB completed a post-implementation review (see IFAC 2009). The Staff Consultation Paper page 17 lists the IAASB's findings on the challenges auditors encounter when using the work of specialists. The Committee does not believe these issues noted by the IAASB are unique to accounting firms that have incorporated the standards of either the IAASB or the ASB. Recent field-based survey and interview studies, (e.g., Bauer and Estep 2015a; Glover et al. 2015a; Griffith 2015b) suggest that the same issues are present on audits that are conducted in accordance with PCAOB auditing standards.*

*As the Committee discusses in more detail in Question 9 below, some of the challenges auditors encounter when using the work of specialists might be mitigated with additional clarification to existing auditing standards. We recognize, however, that clarification alone is unlikely to mitigate all of the issues noted in The Staff Consultation Paper, as several experimental studies have documented that training and other practice interventions are also necessary to improve auditors' execution of complex tasks.*

**Question 3a:** For accounting firms that use the work of an auditor's specialist: Does the firm employ or engage those specialists? How does the firm decide to employ versus engage a specialist? For larger firms that employ specialists, are there circumstances when the firm uses engaged specialists? If the firm employs and engages specialists, describe the relevant ways in which each may be used in an audit.

*Recent academic research based on interviews and surveys of experienced auditors find that accounting firms employ and engage valuation specialists to assist in the audits of fair value measurements (hereafter FVMs) (e.g., Cannon and Bedard 2015; Glover et al. 2015a; Griffith 2015b). Both Cannon and Bedard (2015) and Griffith (2015b) find that audit teams largely use specialists employed by the accounting firms as opposed to engaging third-party specialists to assist with audits of FVMs. Further, Glover et al. (2015a) find that there is an even greater tendency to use the accounting firm's employed specialists when the focus of the audit is a nonfinancial fair value (hereafter FV) asset compared to when the focus of the audit is a financial instrument. In terms of the decision to employ vs. engage a valuation specialist, research suggests that this decision is made at both the firm level and engagement team level. Audit partners in the Glover et al. (2015a) study indicated the factors impacting the employed vs. engaged specialist decision include: (1) the firm's available resources, cost, expertise, and efficiency, (2) the nature of the FVMs being audited, and (3) firm policies.*

*Current studies examining auditors' use of specialists are focused primarily on employed specialists (e.g., Boritz, Robinson, Wong, and Kochetova-Kozloski 2015; Cannon and Bedard 2015; Glover et al. 2015a; Griffith 2015b). Consistent with current audit standards allowing for accounting firm and/or engagement team discretion on whether and when to involve specialists on audit engagements, these studies find that specialists are involved at various stages of the audit (e.g., planning, risk assessment, fieldwork, and/or wrap-up). Further, the studies report that how the audit teams use specialists differ significantly depending on the engagement, and/or type of specialist (i.e., IT, valuation, tax, etc.) in question (See Bauer and Estep 2015a; Boritz et al. 2015). The existing research observes that there is inadequate authoritative guidance for auditors regarding the extent and timing of the use of specialists during the audit. As a result, accounting firms compensate for the lack of clarity in authoritative guidance by developing and relying on their own internal guidance on the nature, timing, and extent of the use of specialists (e.g., Glover et al. 2015a; Griffith 2015b). In its role as inspector, the Board has access to observe and evaluate the various approaches being adopted by the regulated accounting firms. The Committee encourages the Board to use this access to evaluate the various approaches being used by the firms, the extent to which there is commonality in accounting firm guidance/approach, and the effectiveness of firm guidance currently being utilized by the regulated firms. The Board can then to assess whether revisions or enhancements to current standards are warranted.*

**Question 7:** This section provides the staff's views about the need to improve the standards based on issues related to the standards, inspections observations, and the views of the SAG. Do commenters agree with the staff's analysis of the need to improve standards? Are there other issues the staff should consider with respect to this need?

*Prior PCAOB Inspection reports suggest that auditors inappropriately rely on employed specialists' recommendations (PCAOB 2012a, 2012b 2014b). These perceived audit deficiencies have prompted firms to improve quality control procedures related to the use of specialists. In the absence of specific authoritative guidance from regulators, however, firms appear to be relying on precedents such as prior Board Inspection Reports to develop corrective action plans. In addition, while prior archival research suggests that regulatory discipline helps to mitigate aggressive reporting of complex estimates by preparers (e.g., Van de Poel, Maijoor, and Vanstraelen 2009; Vyas 2011), there is a paucity of research related to the effect of regulatory discipline on auditors' incentives when evaluating those estimates (Bratten, Gaynor, McDaniel, Montague, and Sierra 2013).*

*The Committee concurs with the view that the existing PCAOB standards related to the use of specialists should be improved. One area that we believe requires consideration is auditors' use of other third-party sources such as pricing services but the Staff Consultation Paper specifically excludes third-party pricing services in its definition of an "auditor's specialists." The Staff Consultation Paper (page 34) notes that the primary factor determining whether a third-party is considered a specialist is "whether the third-party is performing work to assist the auditor in obtaining sufficient, appropriate audit evidence, as opposed to providing information that is routinely and commercially available for a fee." However, we believe this thinking is too narrow. As the Board itself has observed, pricing services provide FV estimates that are both widely-applicable and that are customized (e.g., based on their internal proprietary valuation methodology) (PCAOB 2014a, 45).*

*In situations where a pricing service uses its own valuation methodology to assist auditors in evaluating the client's FV estimate, auditors essentially obtain similar audit evidence as when they use valuation specialists that are currently covered by AU 336. Thus, we believe that when a pricing service provides customized services using proprietary models, auditors should obtain an understanding of the methods and assumptions used by the pricing service as they would when using any other engaged valuation specialist (AU 336, ¶12). The Committee also notes that auditors' use of pricing services is frequently cited as a source of deficiencies in PCAOB inspection reports. These Inspection Reports tend to indirectly reference the audit requirements described in AU 336 in their justification for these observed deficiencies (see e.g., PCAOB 2011 4-7, 10, 15; PCAOB 2012a, 17-19)<sup>1</sup>.*

*On the one hand, positive implications for audit efficiency arise from reliance on pricing services professionals who, like auditors, accumulate broad experience through exposures to various industries, financial instruments, and financial statement preparers. On the other hand, potential negative implications arise when preparers and auditors depend on either the same pricing service or when two independent pricing services have similar methodologies.*

---

<sup>1</sup> While the inspection reports do not explicitly cite AU 336 as support for the noted deficiencies, the language on various pages of the reports is similar to the requirements of auditors set forth in this standard.

*This likely creates a situation where there is a high correlation between both party's estimates, and auditors end up providing effectively a "rubber stamping" of the preparer's estimate (King 2006; PCAOB 2011; Bratten et al. 2013). Based on the above observations, the Committee recommends that the Board consider including third-party pricing services when revising standards related to use of the work of specialists. Alternatively, the Board can offer additional guidance related to use of pricing services in its revisions to the Estimates and Fair Value standards. The Committee also recommends that the Board consider clarifying when the use of pricing services requires auditors to conform with AU 336 and the recommended audit procedures in other circumstances when AU 336 does not apply.*

**Question 8:** When an auditor obtains an understanding of the methods used by the company's specialist:

- a. If the auditor has access to the specialist's methods (or models), is that access at a sufficiently detailed level (as opposed to a general level, such as a website description) to allow the auditor to obtain sufficient appropriate audit evidence?
- b. If the auditor does not have such access, how does the auditor obtain sufficient appropriate audit evidence regarding the relevant assertion?

*According to AU-C Section 540, the objective of the auditor is to obtain sufficient appropriate audit evidence about whether, in the context of the applicable financial reporting framework a) accounting estimates, including fair value accounting estimates, in the financial statements, whether recognized or disclosed, are reasonable and b) related disclosures in the financial statements are adequate.*

*Management's use of third-party valuation specialists, especially those that utilize proprietary models, can make the audit process more difficult, given the lack of an audit trail, the underlying task complexity, and the estimation uncertainty factors related to the FVMs. PCAOB inspection reports identify a number of deficiencies related to the auditors' reliance on evidence from valuation specialists, including failure to understand the methods, the models, and the assumptions used (PCAOB, 2010b; PCAOB 2011; PCAOB 2012a; PCAOB 2012b).*

*Consistent with the Board's inspection findings, Cannon and Bedard (2015) report that FVMs are difficult to audit because of the "number of significant and/or complex assumptions associated with the process and the high degree of subjectivity associated with the assumptions and factors used in the process." In their survey, participants responded frequently that lack of available data to independently evaluate the client's FVM was a concern, and described company engaged specialists who did provide sufficient detail for the inputs and assumptions used in the valuation measure. Griffith, Hammersley, and Kadous (2014) report that auditors evaluate the reasonableness of estimates by testing related internal controls, testing and evaluating the underlying data, and re-performing management's calculations. The Committee, however, does not believe such an audit approach would provide "sufficient appropriate audit evidence." We believe that lack of access to the specialist's methods (or models) inhibits the auditor's ability to obtain sufficient appropriate audit evidence. For example, because the ultimate FV estimate is entirely dependent on the valuation model selected, and the subjective inputs and assumptions underlying the model, when auditors do not have access to these*

*measurement inputs they cannot appropriately evaluate the reasonableness of the balance reported in the financial statements.*

*Christensen, Glover, and Wood (2012) find that FV estimates reported by public companies that are based on subjective models and inputs can contain estimation uncertainty or imprecision that can be many times greater than materiality. Their findings underscore the importance of auditors' having access to the models and methods used by specialists to determine FV estimates. However, access is not sufficient because recent research finds that many in-charge level auditors lack understanding of the measurement assumptions and inputs that underlie valuation models and methods (e.g., Griffith et al. 2014; Glover et al. 2015a; Brown et al. 2015). Similarly, Glover et al. (2015b) indicate that audit partners also question the audibility of estimates with extreme measurement uncertainty and Christensen et al (2012) argue that "no amount of auditing can remove the extreme uncertainty inherent in reported values derived from management's valuation models based on unobservable inputs subject to estimation uncertainty" (page 143).*

*The Committee believes that conveying to financial statement users that there is a high level of measurement uncertainty and lack of auditor and management access to the methods used to calculate the FV estimate might be the best approach. The Board might want to consider providing guidance to auditors on how to convey to financial statement users that they have relied on specialists but were unable to evaluate certain aspects of the specialists' work when the balance under consideration is material. Further, the Board might want to consider cooperation with the Securities and Exchange Commission to provide guidelines to filers on how to report the high level of uncertainty surrounding FVMs and the filers' reliance on models for which they do not have access.*

**Question 9:** Are revisions to PCAOB standards the most appropriate way to address the issues as discussed in this staff consultation paper? Are there other alternatives that should be considered?

*The Staff Consultation Paper lists possible alternatives that include: (1) practice alerts that provide additional staff guidance and (2) devote additional resources to inspections and enforcement of existing standards. The Committee is in agreement with the Board that "these alternatives would not solve the underlying issues with the standards" (p. 26). Importantly, the Committee notes that research suggests that these alternatives might not be the most effective way to address the challenges auditors encounter when using the work of specialists. With respect to the first alternative (using practice alerts), Joe, Vandervelde, and Wu (2015) examine the effectiveness of a regulatory alert on (1) auditors' tendency to inappropriately allow the degree of quantification in the company specialist's report to influence auditors' planned substantive testing, and (2) overall audit effort designated to test the company's FVMs. They find that while the practice alert increased auditors' overall planned audit hours allocated to testing the FV estimate, it did not mitigate the underlying issue they had identified - auditors' tendency to allow the degree of quantification in the specialist's report to influence the nature of planned substantive testing. Joe et al.'s (2015) results suggest that while practice alerts can have a "work harder effect," they are not an efficient or effective way to mitigate audit deficiencies that are rooted in cognitive tendencies or have other systematic root causes. Instead, prior research*

*suggests that restructuring the audit task can be a more effective alternative to influence how auditors perform on an audit task (e.g., Earley, Hoffman, and Joe 2008).*

*Regarding the second alternative (increased inspection activity), recent commentary and academic research also suggests that this alternative might not be effective because the level of scrutiny associated with the regulatory inspection environment can have unintended consequences for audit quality (e.g., Peecher, Solomon, and Trottman 2013; Glover, Taylor, and Wu 2015b). Using a survey of practicing audit partners and national-level partners, Glover et al. (2015b) find that audit partners report instances where audit strategies are driven by “inspection risk” instead of by audit risk. Such a strategy is problematic in instances where inspection risk and audit risk are not sufficiently correlated because focus on inspection risk is likely lead auditors to devote less attention to areas that have a truly higher audit risk. Both Glover et al. (2015b) and Griffith et al. (2014) find that experienced auditors expressed concerns that changes in practice are often being driven by the inspection process instead of appropriately through changes to existing auditing standards.*

*The Committee believes that revision to PCAOB standards is the more fruitful avenue to address challenges auditors encounter when using the work of specialists, and, in part, addresses practitioners’ concerns. The Committee, however, would like the Board to pay close attention to how it revises the standards because Maksymov, Nelson, and Kinney (2014) provide evidence that how audit procedures are framed (positive or negative) in auditing standards or firm guidance can unknowingly influence auditors’ planning judgments. Specifically, when audit procedures are presented in the negative frame, auditors budgeted more hours than when presented in the positive frame, particularly so for the audit procedures which auditors perceived to be less verifiable.*

*Lastly, authoritative guidance is unlikely to cover all possible situations that auditors encounter in practice, particularly in areas of greater complexity and uncertainty (e.g., Salterio 1996). Results of recent studies suggest that firms have developed internal guidance regarding use of specialists when clear authoritative guidance is not available (e.g., Glover et al. 2015a; Griffith 2015b). Moreover, prior research suggests that firm guidance, including precedents (i.e., prior examples of similar situations) provided by the national office, can affect auditors’ judgments in the absence of authoritative guidance (Salterio 1996; Salterio and Koonce 1997). Therefore, the Board might want to consider ways that it can encourage and support improved firm guidance and effective consultation processes as another alternative to mitigate some of the issues auditors encounter when using the work of specialists.*

**Question 10:** Should the auditor perform the same procedures when using the work of an auditor's engaged specialist as those required for an auditor's employed specialist?

*Academic research finds that auditors typically use valuation specialists employed by their firm as opposed to engaging the services of third-party specialists (Canon and Bedard 2015; Griffith 2015b). The Staff Consultation Paper (page 29) highlights a concern that an engaged specialist is different from an employed specialist (e.g., an engaged specialist would not be subject to the “accounting firm’s training, resources, and QC system”). However, even though employed specialists might be subject to similar quality control training and resources as auditors,*

research finds that specialists are unfamiliar with auditing requirements and documentation standards (Griffith 2015b). This finding suggests that valuation specialists employed by accounting firms might not be significantly different from engaged specialists. Further, in contrast to auditors, valuation specialists are specifically trained to view fair values in a market and economic context (Griffith 2015b), which can lead employed and engaged specialists to be more similar than different in their approach to valuations.

While employed specialists might face different incentives from engaged specialists, which, might motivate increased effort in order to establish reputational capital within the firm, the Committee recommends that auditors perform similar supervisory procedures as outlined in Auditing Standard No. 10 (PCAOB 2010a) when using the work of an engaged specialist as when using the work of an employed specialist. Ensuring that specialists are aware of their responsibilities and the scope of the work to be performed, and reviewing specialists' work to ensure it was adequately performed and documented should be aspects of the audit that are consistently applied regardless of whether the specialist is employed or engaged.

**Question 13:** Are there any limitations on an auditor's ability to treat the work of an engaged specialist the same way as that of an employed specialist?

The specialist's independence with regard to the client can be a factor that limits the auditor's ability to treat the work of an engaged specialist the same way as that of an employed specialist. PCAOB Release 2007-010 highlights instances where auditors used the services of specialists who had a relationship with the issuer that might have had an effect on the specialist's objectivity (PCAOB 2007b). Whereas the PCAOB has outlined general independence guidance for the use of employed specialists on the audit (AU Section 336), there is a paucity of such guidelines as it pertains to engaged specialists. In AU Section 336, footnote 2 suggests that auditors should consider the "effect...that using the work of a specialist employed by the auditor's firm has on independence." Auditors are likely to have greater access to information about employed specialists' relationships with the client to make an independence determination. However, such information related to engaged specialists might not be as accessible by the auditor and might be based more on self-reports with varying degrees of verifiability.

**Question 14:** Is it appropriate for an auditor to consider the knowledge, skill, and objectivity of a company's specialist when evaluating the reliability of information provided by that specialist? If so, how might the company's use of the work of a competent and objective specialist under the potential alternatives affect the nature, timing, and extent of the auditor's procedures?

Similar to a company's specialist, a company's internal audit function is employed by the company to perform services that typically have an impact on the company's financial statements. Company specialists, whether employed or engaged by the company, use discretion and judgment to interpret and develop complex and subjective estimates that can have a material impact on the company's financial statements (Canon and Bedard 2015; Griffith 2015b). PCAOB auditing guidelines in AU 322 (The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements) require auditors to evaluate the competence and objectivity (quality) of the company's internal audit function before auditors rely on the work of or coordinate work with the internal auditors. Therefore, in the same way that it is appropriate



*for auditors to consider the competence and objectivity of a company's internal audit function when determining the quality of the internal auditor's work product for reliance decisions, so too would it be appropriate for auditors to consider these factors when evaluating the reliability of information provided by a company specialist.*

*Auditing regulations permit auditors to "use the work of others to a greater extent when the work is performed by sufficiently competent and objective persons" (PCAOB 2007a). Using the work of others has benefits to the financial statement audit process. Academic research finds that when auditors are able to use the work of internal auditors, there are audit efficiencies and reduced audit delays (e.g., Pizzini, Lin, and Ziegenfuss 2014), improved financial reporting and audit quality (Asare, Davidson, and Gramling 2008), and greater identification of internal control deficiencies (Lin, Pizzini, Vargus, and Bardhan 2011). The proposed alternative No. 1 for revising AU sec 336 in The Staff Consultation Paper (30; Amend the Requirements of AU sec. 336 for Evaluating the Work of a Company's Specialist), would remove provisions that "may be considered to limit the auditor's responsibilities to evaluate the work of a company specialist." For example, removing language that states that the "appropriateness and reasonableness of methods and assumptions and their application are the responsibility of the [company] specialist..."*

*By adopting this alternative, the Committee believes that the standard would allow for a more consistent evaluation of information produced by the company and its agents (e.g., internal auditors, company specialists). Therefore, similar to auditors' evaluation of the company's internal auditors, auditors should perform an evaluation of the company's specialist and the specialist's work. Performing such an evaluation would allow auditors to evaluate the reasonableness of significant assumptions and methods used by the company's specialist in a manner that is consistent with how auditors evaluate the work of others in the company. In this way, the proposed alternative can provide a more effective and streamlined process for the auditor's evaluation of the work produced by company specialists and others in the company.*

**Question 15:** How do auditors currently obtain an understanding of the assumptions and methods used by a specialist under AU sec. 336?

*Recent academic research provides important insights on current practice (Glover et al. 2015a; Griffith 2015b). Glover et al. (2015a) survey audit partners with significant experience auditing FVMs and find that the three most frequently mentioned approaches reported by audit partners are (1) to obtain audit evidence for the data used in the model from internal and external sources, (2) to involve specialists employed by the accounting firm to evaluate the appropriateness of assumptions, and (3) to gain an understanding of key assumptions with assistance from specialists employed by the accounting firm. One observation is that auditors' evaluation of significant assumptions can vary, for example the audit team evaluates some assumptions while others require assistance from the accounting firm's specialist. For instance, the reasonableness of assumptions related to the company's activities and or operations are typically tested by the audit team, while assistance from the accounting firm's employed specialists are needed for other assumptions, such as WACC (weighted average cost of capital), discount rates and other direct valuation inputs. Similarly, Griffith (2015b) reports that audit*

partners and managers generally permit specialists to evaluate assumptions that require more valuation knowledge and expertise (e.g., discount rate, risk premiums, and industry conditions).

AU sec. 336 states that “the appropriateness and reasonableness of methods and assumptions used and their application are the responsibility of the specialist” (PCAOB 2003, ¶12), which would seem to suggest that all assumptions are the responsibility of the specialist (Griffith 2015b). However, research suggests that, in practice, the audit teams often assume the responsibility of evaluating the reasonableness of some assumptions (Glover et al. 2015a; Griffith 2015b). The Committee recommends that the new standard provide additional guidance regarding the division of responsibility between audit team and its specialists when evaluating the appropriateness and reasonableness of assumptions and methods used by a specialist under AU sec 336. Further, the new standard could clarify auditors’ responsibility to test assumptions that have already been evaluated by specialists employed by the accounting firm.

**Question 16:** Should the work of a company's specialist be treated as audit evidence the same way as other information provided by the company? Are there concerns associated with more rigorous testing of the work of a company's specialist that may result from this approach? For example, would auditors increasingly need to employ or engage specialists to perform work to assist the auditor with such testing?

Extant research suggests that management can “opinion shop” for specialist reports in order to obtain management’s preferred estimate (Salzsieder 2015). Under such circumstances, estimates prepared by the company’s employed or engaged specialist can be susceptible to management bias, consequently such audit evidence from a company’s specialist should not be treated any differently than information provided by company management. In addition, research finds that in some cases, accounting professionals are likely to side with management preferences when making subjective accounting evaluations (Hackenbrack and Nelson 1996), and can be more lenient when making subjective judgments (Bamber and Iyer 2007). Moreover, Joe et al. (2015) find that the degree of quantification in the company’s specialist report, particularly in a high client risk scenario, unknowingly and inappropriately influenced auditors’ planned substantive testing in terms of the nature and extent of audit procedures to test the subjective inputs of management’s estimate. Their results suggest that auditors might not be considering the client’s or the company engaged specialist’s motivation/incentives when they decide, which, and how much information to provide to the auditor in the specialist’s report.

Further, the PCAOB inspection reports note numerous instances where auditors placed too much reliance on the work of the company’s specialists when auditing FVMs (e.g., PCAOB 2010b; PCAOB 2012b; PCAOB 2014b). One potential source of over reliance on companies’ specialists might be due to auditors’ lack of the requisite knowledge and expertise to understand complex business processes, transactions, and valuation methods (e.g., Boritz et al. 2015; Bratten et al. 2013; Martin, Rich, and Wilks 2006; Smith-Lacroix, Durocher, and Gendron 2012). Pyzoha, Taylor, and Wu’s (2015) recent experimental study suggest that the tendency to over rely on a company’s specialist can exacerbate confirmatory bias in auditors’ thinking, which makes the auditors less likely to incorporate contradictory evidence that is readily available. They find that it is more difficult to mitigate the auditors’ tendency to engage in confirmatory thinking when the client engages a third-party specialist. Based on the extant

*academic research, the Committee believes that audit evidence provided by a company's specialist should be treated the same as other information provided by the company and be subjected to the same standard of testing.*

**Question 19:** Are the potential definitions of an auditor's specialist and a company's specialist appropriate? If not, what would be alternative definitions for those terms?

*We believe the use of the terms auditor's employed, auditor's engaged, company's employed, and company's engaged specialist are appropriate ways to distinguish the various types of specialists, the work they performed, and their affiliation. The Board should also note that many accounting firms and some academic studies (e.g., Joe et al. 2015; Glover et al 2015a) use the term in-house specialists as an alternative to auditor employed specialist and some academic studies (e.g. Brown-Liburd et al. 2015) use the term management-hired specialists as an alternative to client engaged specialist. Griffith 2015b uses the term internal valuation specialist to refer accounting firm specialists who have fair value expertise.*

**Question 20:** Is it appropriate to retain the definition of a specialist from AU sec. 336 or is there a need to update the definition to reflect the increased use of the work of persons with specialized knowledge or skill in accounting and auditing? For example, should that definition also include those with specialized knowledge or skill in income taxes or IT?

*The Committee agrees that there is a need to update the definition of a specialist from AU sec. 336 to reflect the increased use of the work of persons with specialized knowledge or skill in accounting and auditing. A recent release from the PCAOB, motivated by the number of audit deficiencies related to Internal Controls Over Financial Reporting (ICFR), specifically cited inappropriate reliance on IT due to lack of communication between financial and IT auditors as a root cause of these deficiencies (PCAOB 2012a).*

*Between 1990 and 2005, the number of computer assurance specialists (also referred to as IT specialists and IT auditors) employed by each Big 4 accounting firm increased from 100 to 5,000 (Brazel and Agoglia 2007). Janvrin, Bierstaker, and Lowe (2009) report that use of IT specialists by audit engagement teams varies greatly dependent on firm size and client complexity. Specifically, Big 4 firms use IT specialists at a higher frequency than national or regional firms (90.9 percent vs. 27.6 percent and 38.5 percent, respectively). Despite this growth in usage of IT specialists, IT auditors, while possessing sufficient technical and IT-focused education, often have an insufficient background in accounting. There is also a general lack of audit training or knowledge for IT specialists (Brazel and Agoglia 2007). Further, both financial and IT auditors have expressed concern over the current lack of mutual understanding when working together (Bauer and Estep, 2015a).*

*Financial auditors also likely lack sufficient knowledge and expertise in IT-related domains. For example, Brazel and Agoglia (2007) find that financial auditors with lower levels of self-perceived IT expertise rate client control risk lower than financial auditor who had higher levels of self-perceived IT expertise. Wolfe, Mauldin, and Diaz (2009) find that financial auditors are susceptible to management persuasion tactics for IT control deviations, but not manual control*

*deviations. It is reasonable to expect that because of their IT expertise, IT auditors are likely to be less susceptible to this effect (Shelton 1999; Selby 2010).*

*The Committee engaged in discussions with practitioners and observed that many auditors consider Tax and IT professionals to be specialists and that often they are not considered to be members of the audit team. Based on the literature and discussions with auditors the Committee believes that the definition of specialists should be expanded to include other professionals employed by the accounting firms to assist auditors in the evaluation of their client's balances and procedures.*

**Question 21:** Is it clear what constitutes a specialized area of accounting and auditing? For example, are persons with specialized knowledge or skill in regulatory compliance (e.g., related to audits of brokers and dealers) considered to be persons with specialized knowledge or skill in accounting and auditing? Should the staff provide clarification about what constitutes a specialized area of accounting and auditing? Does the discussion in this staff consultation paper appropriately describe when third parties may be inside or outside the scope of the potential definition of an auditor's specialist?

*A survey of the accounting literature suggests there is ambiguity about what constitutes a specialized area of accounting and auditing. Accounting firms mostly organize the audit practice according to industry lines and the benefits of such organization are well documented in recent academic literature (e.g., Gramling and Stone 2001, Reichelt and Wang 2010). Solomon et al. (1999) define industry specialists as auditors whose training and practice experience is mainly within a particular industry and find that industry-specialist auditors have greater specialized knowledge of financial statement errors for the industry of their specialization. In addition, there are accounting specialists in larger accounting firms who act as advisors and consultants to auditors and who focus on technical accounting and auditing issues (Griffith 2015b; Salterio 1996; Salterio and Denham 1997). More recent literature on specialists used in the audit process defines specialists as non-audit professionals who provide specialized consulting services to the audit team e.g., IT, tax, forensics, valuation (Boritz et al. 2015; Bauer and Estep 2015a; Griffith 2015b). These studies suggest that auditors consider these non-financial statement auditors to be subject matter experts.*

*In addition, these subject matter experts (e.g., forensics, valuation) often perform some auditing procedures when engaged by the financial statement audit team (e.g., Griffith 2015b) that further adds to the ambiguity of the definition and classification of "specialists" relative to the audit. This implied definition of "specialists" in practice, as portrayed by the literature, appears inconsistent with the way that specialists are defined in The Staff Consultation Paper. The Staff Consultation Paper (page 34) defines a specialist as "a person with specialized knowledge or skill in a field of expertise other than accounting or auditing" and further clarifies that since "income taxes and information technology, as they relate to the audit, are specialized areas of accounting and auditing, this definition does not apply to a person with specialized knowledge or skill in those areas." Based on the prior literature's report of current practice, it is not clear what constitutes a specialist, a specialized area of accounting and auditing, or when a third party falls within the scope of the definition of an auditor's specialist. Therefore, the Committee suggests that the Board consider providing clarification of these definitions.*

**Question 22:** Are the potential requirements to evaluate the knowledge and skill of an auditor's specialist clear and appropriate? Are there other alternatives to accomplish the objectives? Are there other factors that the auditor should consider?

*The Committee believes there should be more specific guidance for evaluating the knowledge and skill of an auditor's specialist (whether engaged or employed). Recent PCAOB Inspection reports claim that auditors inappropriately rely on to specialists' recommendations or accept them with limited or no testing (PCAOB 2012a, b). A recent study, Boritz et al. (2015), also reports that while almost all auditors assess the competence of engaged specialists few assess the competence of employed specialists. Boritz et al. (2015) also report that specialists believe auditors are not qualified to evaluate the specialist's competence beyond a low-level assessment of the specialist's academic training, years of experience, and professional certifications (Boritz et al. 2015).*

*The Committee, therefore, recommends enhancing the authoritative guidance to include minimum assessment and documentation guidelines to guide auditor's evaluation of the specialist's qualifications. Boritz et al (2015) reports that many firms believe they have improved their internal policies related to the use of specialists in response to the PCAOB inspection reports citing audit deficiencies in quality control procedures related to the use of specialists. However, absent specific authoritative guidance from regulators, firms must rely on subsequent Inspection Reports to intuit whether or not their improvements meet the standards as interpreted by the Board<sup>2</sup>.*

*The Committee further believes that AU 322, which regulates the use of the work of internal auditors, is a similar standard to AU336, and more clearly communicates 1) how the auditor should evaluate competence (including professional qualifications) (paragraph .09), objectivity (paragraph .10), prior experience with the Internal Audit Function (IAF; paragraphs .04, .05, .07), the effectiveness of the work provided by the IAF (paragraphs .24 - .26) and coordination of the audit work (paragraph .23). We also believe that the prior literature examining how auditors evaluate and rely on their client's in-house (i.e. employed) internal auditors versus out-sourced internal auditors can offer insights on how company employed vs. company engaged specialists might be evaluated and perceived. For example, Bame-Aldred, Brandon, Messier, Rittenberg, and Stefaniak (2013) find that the nature and extent of reliance on the IAF is influenced many factors such as account risk, inherent risk, and whether or not the IAF is outsourced, and other research finds that auditors rely more on outsourced internal auditors because they consider them to be more objective and independent (e.g., Ahlawat and Lowe 2004; Glover, Prawitt, and Wood 2008).*

---

<sup>2</sup> We also discuss changes in audit firm internal guidance related to the use of specialists in Question 3A and PCAOB Inspection related issues in Question 7 of this Comment Letter

**Question 23:** Are the matters described in the potential requirements on which the auditor and an auditor's specialist should reach an agreement sufficient and appropriate? If not, what other matters should be required to be specified in the agreement before the auditor's specialist performs work to assist the auditor?

*Prior research reports that auditors and specialists often have conflicting views about the nature, extent, and timing of the work to be performed by the specialists (Boritz et. al 2015). Academic research cited in The Staff Consultation Paper (Griffith 2015a) and further discussed in Question 30 of this Comment Letter, and the audit deficiencies noted in prior PCAOB Inspection Reports (2012 a, b) support the PCAOB's recommendation that auditors sufficiently document the agreed upon procedures specialists will perform and the documentation they will provide. Whereas, AS No. 10 relates to engagement team members in general, we suggest that the PCAOB: 1) establish a separate standard that addresses the points in Section VII Paragraph A2 and other factors discussed in this comment letter and 2) ensure that specific guidance is provided for employed vs. engaged specialists. As we indicate in our responses to other questions in this Comment letter, enhancements to audit firm guidance is also another way to mitigate issues auditors encounter, which are beyond the scope of authoritative guidance (Salterio 1996; Salterio and Koonce 1997; Glover et al. 2015a; Griffith 2015b). The Committee believes these recommendations could also address perceived expectation gaps between PCAOB inspections and audit performance as it relates to audits of complex estimates (Glover et al. 2015b).*

**Question 25:** Could the potential requirements for informing the auditor's engaged specialist of his or her responsibilities and reviewing the specialist's work and conclusions result in unintended consequences (e.g., tax or employee benefit consequences)?

*There is no precedent in the literature to support the view that the potential requirements for informing the auditor's engaged specialist of his or her responsibilities and reviewing the specialist's work and conclusions would result in unintended consequences. We believe that establishing a written agreement of responsibilities such as those referred to on pages 37 and 38 of the Staff Consultation Paper will be helpful in mitigating the risks of such unintended consequences. Further, recent studies (e.g., Bauer and Estep 2015a; Boritz et al. 2015) indicate there is a lack of communication and shared understanding between auditors and specialists. Therefore, documenting the potential requirements might serve to improve understanding and communication between auditors and the engaged specialists.*

**Question 30:** Do the potential requirements provide appropriate direction for the auditor's consideration of any limitations, restrictions, and caveats in the report of an auditor's specialist?

*The Committee agrees with the need to improve Auditing Standard No. 10 (Para. 5.c). Specifically, page 41 of The Staff Consultation Paper provides "the potential requirements for evaluating the results and conclusions of the specialist are intended to address issues related to the failure of the auditor to consider contradictory evidence or to resolve discrepancies, differences, or other concerns that the specialist identified." This observation is consistent with prior PCAOB Inspection findings that auditors inappropriately rely on or accept unquestioningly the employed specialists' recommendations (PCAOB 2012a, b). A recent*

*experimental study, Griffith (2015a), finds that if specialists provide a caveat in their report auditors will be more likely to question management's biased estimate when management is perceived to have low source credibility. However, when auditors perceive management has higher source credibility they discount the caveat and judge a biased estimate to be more reasonable. These findings illustrate that while caveats or other features in specialist's reports can improve audit judgment on complex estimates, other trait and environmental factors in auditing must also be considered. The Committee recommends that revisions to the standard include additional guidance regarding not only how auditors evaluate the competence and independence of, and the appropriateness of, conclusions provided by specialists, but also consider how auditor's cognitive processing and auditor-client relationships can impact the way specialists reports are used and relied upon.*

**Question 31:** Are the potential requirements for evaluating the work of an auditor's specialist appropriate for all types of specialists used in audits (e.g., valuation specialist, actuary, geologist, lawyer, or engineer)? If not, how should the potential requirements be tailored?

*The Committee believes certain aspects of the potential requirements discussed in The Staff Consultation Paper apply broadly to all types of specialists used in audits. Current field-based accounting studies that examine the use of non-valuation specialists (e.g., tax and IT) suggest the ways audit teams use specialists can differ significantly by engagements and/or type of specialists (i.e., IT, tax) (Bauer and Estep 2015a; Boritz et al. 2015). These studies focus on non-valuation specialists and observe similar gaps in expectations between auditors and employed specialists as those observed in other field-based studies also focused on valuation specialists (e.g., Cannon and Bedard 2015; Glover et al. 2015a; Griffith 2015b). Consequently, we believe that Section VII A related to the evaluation of specialists' skills and knowledge (§1), informing specialists of their responsibilities (§2), and evaluating the work of specialists (§3) could apply to any type of specialist. Enhancements to internal firm guidance on an on-going basis, as previously described, is also another alternative to expanded regulatory intervention, and can also limit any unintended consequences that might arise from increased regulatory requirements (Salterio 1996; Salterio and Koonce 1997; Glover et al. 2015a; Griffith 2015b).*

**Question 34:** Should the auditor's engaged specialist (and his or her employer) be required to meet the independence criteria of Rule 2-01? Are there certain types of specialists that would not be able to satisfy these criteria? Could these criteria affect the availability of specialists?

*The Committee believes that the provisions of Rule 2-01 should apply only if the auditor's engaged specialist were to be considered a member of the audit team. Considering that engaged specialists are not audit team members, we believe that complying with the requirements of Rule 2-01 runs the risk of being too costly for the engaged specialist firms (and their employees) who might have a small direct financial interest in the auditor's client. In many instances auditors use engaged specialists for a finite amount of time (e.g., two weeks or less). Thus, it is likely that the engaged specialist's firm (and its employees) will perceive the requirement to divest of any direct financial interests in order to comply with Rule 2-01 to be too high a cost of business for such limited engagements. As a result, auditors' ability to obtain qualified and available engaged specialists might become constrained. Consequently, we believe that auditors should exercise professional judgment when retaining engagement specialists and only bear responsibility for*

*engaging specialists who can provide objective audit evidence. Auditors should also exercise professional skepticism when using the work of engaged specialists and determine audit procedures necessary to evaluate the objectivity and reliability of audit evidence obtained from these specialists.*

**Question 39a:** For accounting firms that use the work of an auditor's or a company's specialist for public company audits: In how many (e.g., what percentage) of those audits is the work of specialists used? Provide details within the following categories:

- i. Auditor's employed specialists;
- ii. Auditor's engaged specialists;
- iii. Company's employed specialists; and
- iv. Company's engaged specialists.

*According to Cannon and Bedard (2014), auditors use valuation specialists more frequently than clients, and a key factor driving the auditor's use of a specialist is whether or not the client employs a specialist. Approximately 84% of audit teams consult with an employed valuation specialist. In contrast, about 60% of audit clients consult an engaged specialist. When the client has a specialist, the auditor also uses a specialist 96.6% of the time, versus only 65% of the time when the client does not employ a specialist. For audit engagements using valuation specialists, auditors use audit firm employed specialists 99% of the time and engage specialists only 5.1 percent of the time. This finding suggests auditors might be also using a combination of employed and engaged specialists. Clients predominately (91.5% of the time) use company-engaged specialists (e.g., third-party providers). Research also indicates (i.e., Griffith 2015a) that there are differences in whether auditors use employed vs. engaged specialists (or a combination of the two) between Big4 vs. non-Big4 firms because of differences in resource availability.*

*Current qualitative studies observe that auditors consider factors such as the features of the account being audited, client, specialist, and audit team when determining whether or not to use a specialist. Boritz et al.'s (2015) participants report that over 50% of audits require the use of at least one type of specialist while Griffith's (2015b) participants report that over 60% of audits require the use of valuation specialists. Specialists can be engaged at various stages of the audit (e.g., client acceptance, risk assessment) (Selley 1999). In addition, 1) both auditors and valuation specialists expect the use of specialists to continue due to expansion of assets and liabilities which require disclosure of fair value estimates (PCAOB 2009) and 2) auditors expect an increased focus on better integration of the specialists into the audit team (Boritz et al. 2015). Auditors primarily use employed specialists (e.g., Cannon and Bedard 2015; Glover et al. 2015a; Griffith et al. 2014).*

### **General Comment to the Board on the Need to Broaden the Definition of Specialists to Include IT Audit, Taxation, and Healthcare Specialists**

*Increasingly, businesses demand integration of digital technologies (e.g., social, mobile, analytics, cloud) into business models and evaluation of the impact digital business transactions on financial reporting and the integrated audit. While information technology (IT) paves the way toward digital businesses, it also creates complexity that can contribute to increased financial misstatement risk and audit risk. Considering this growth in digital technology in business*



*transactions and auditors' reliance on IT specialists, AU 336 (Footnote 1) appears out of step when it states: "because income taxes and information technology are specialized areas of accounting and auditing, this section does not apply to situations in which an income tax specialist or information technology specialist participates in the audit. Auditing Standard No. 10, Supervision of the Audit Engagement, applies in those situations."*

*Currently, cyber hacking and security breaches of critical information systems are a harsh reality for companies with highly computerized systems (e.g., Sony, Target, Morgan Chase, Home Depot, Quicken).<sup>3</sup> For such companies, auditors must assess IT risks and evaluate the IT controls in place at their client's to ensure the integrity, quality, and reliability of financial statements. These challenges make it increasingly essential for auditors to use the work of IT specialists and to incorporate IT expertise in order to effectively plan and conduct integrated audits. Further, these cyber-crime and enterprise-wide risks, which receive significant media coverage, can pose significant threats, not only to companies, but also to their auditors' reputation and business risks. The Committee recommends that the Board considers how auditors use and rely on the work of IT specialists to address these digital technology risks that can have both direct and indirect impact on companies' financial reporting and reports of internal controls over financial reporting. In particular, the Board should consider how IT specialists are used and whether increased guidance is warranted in the following areas:*

- 1. Assessing cyber security risks.*
- 2. Assisting their clients in establishing and maintaining proper internal controls to manage the IT risks.*
- 3. Incorporating IT and cyber security risks into the audit risk model.*
- 4. Performing tests of IT controls.*
- 5. Using IT tools when performing substantive tests of electronic/XBRL-related financial statements.*

*We believe that taxation and healthcare are specific areas that require significant expertise to assess companies' compliance on the integrated audit, and where auditors are likely to seek assistance from professionals with specialized knowledge. These areas can have direct and indirect effects on financial statements, and noncompliance with U.S. government regulations can lead to significant financial misstatements. The Committee believes that the Board should consider offering guidance on the use of taxation and healthcare specialists as regulatory compliance and financial reporting related to these transactions pose significant challenges for businesses large and small.*

---

<sup>3</sup> Last year, over 1,000,000,000 data records were stolen, and less than four percent of these were encrypted, giving hackers immediate access to personal information on millions of customers. (2014 Breach Level Index Annual Report)

## References

- Ahlawat, S. S. and D. J. Lowe. 2004. An examination of internal auditor objectivity: In-house versus outsourcing. *Auditing: A Journal of Practice & Theory* 23 (2):147-158.
- Asare, S., R. Davidson, and A. Gramling. 2008. Internal auditors' evaluation of fraud factors in planning an audit: The importance of audit committee quality and management incentives. *International Journal of Auditing* 12 (3): 181-203.
- American Institute of Public Accountants (AICPA). 1990. *AU 322: The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements*.
- Bamber, E. M., and V. M. Iyer. 2007. Auditors' identification with their clients and its effect on auditors' objectivity. *Auditing: A Journal of Practice and Theory* 26 (2): 1–24.
- Bame-Aldred, C. W., D. M. Brandon, W. F. Messier, L. E. Rittenberg, and C. M. Stefaniak. 2013. A summary of research on external auditor reliance on the internal audit function. *Auditing: A Journal of Practice & Theory* 32 (Supplement 1): 251-286.
- Bauer, T. and C. Estep. 2015a. The IT auditor function on financial statement and integrated audits: Description of practice and avenues for future research. Working Paper, University of Illinois at Urbana Champaign.
- Bauer, T. and C. Estep. 2015b. One team or two teams? Exploring the existence of a collective audit team identity between auditors and IT specialists and its implications on audit process and outcomes. Working Paper, University of Illinois at Urbana Champaign.
- Boritz, J., L. Robinson, C. Wong, and N. Kochetova-Kozloski. 2015. Use of specialists during an audit. Working paper, University of Waterloo and Saint Mary's University.
- Bratten, B., L. M. Gaynor, L. McDaniel, N. R. Montague, and G. E. Sierra. 2013. The audit of fair values and other estimates: The effects of underlying environmental, task, and auditor-specific factors. *Auditing: A Journal of Practice & Theory* 32 (Supplement 1): 7-44.
- Brazel, J. F., C. P. Agoglia. 2007. An examination of auditor planning judgments in a complex accounting information system environment. *Contemporary Accounting Research* 24 (4): 1059-1083.
- Breach Level Index Annual Report 2014. 2015. Retrieved July 28, 2015, from <http://breachlevelindex.com/pdf/Breach-Level-Index-Annual-Report-2014.pdf>
- Brown-Liburd, H., S. Mason, and S. Shelton. 2015. The effect of reliance on third-party specialists under varying levels of internal control effectiveness on the audit of fair value measurements. Working paper, DePaul University, and Rutgers, The State University of New Jersey.

- Cannon, N., and J. C. Bedard. 2015. Auditing challenging fair value measurements: Evidence from the field. Working Paper, Texas State University and Bentley University.
- Christensen, B. E., S. M. Glover, and D. A. Wood. 2012. Extreme estimation uncertainty in fair value estimates: Implications for audit assurance. *Auditing: A Journal of Practice & Theory* 31 (1): 127-146.
- Earley, C. E., V. B. Hoffman, and J. R. Joe. 2008. Reducing management's influence on auditors' judgments: An experimental investigation of SOX 404 assessments. *The Accounting Review* 83(6): 1461-1485.
- Glover, S. M., D. F. Prawitt, and D. A. Wood. 2008. Internal audit sourcing arrangement and the external auditor's reliance decision. *Contemporary Auditing Research* 25 (1): 193-213.
- Glover, S. M., M. H. Taylor, and Y. Wu. 2015a. Learning more about auditing fair value measurements: Additional insights from audit partners. Working Paper, Brigham Young University, Case Western Reserve University, and Texas Tech University.
- Glover, S. M., M. Taylor, and Y. Wu. 2015b. Mind the gap: Factors contributing to purported deficiencies in auditing complex estimates beyond auditor performance. Working Paper, Brigham Young University and Texas Tech University.
- Gramling, A. A., and D. N. Stone. 2001. Audit firm industry expertise: A review and synthesis of the archival literature. *Journal of Accounting Literature* 20: 1-29.
- Griffith, E. E., J. S. Hammersley, and K. Kadous. 2014. Audits of complex estimates as verification of management numbers: How institutional pressures shape practice. *Contemporary Accounting Research* (forthcoming).
- Griffith, E. E. 2015a. Auditing complex estimates: The interaction of audit-team specialists' caveats and client source credibility. Working Paper, University of Wisconsin – Madison.
- Griffith, E. E. 2015b. How do auditors use valuation specialists when auditing fair values? Working Paper, University of Wisconsin – Madison.
- Hackenbrack, K., and M. Nelson. 1996. Auditors' incentives and their application of financial accounting standards. *The Accounting Review* 71 (1): 43-59.
- International Federation of Accountants (IFAC). 2009. International Standard on Auditing (ISA) 620: *Using the Work of an Auditor's Expert*. New York, NY: IFAC.
- Janvrin, D., J. Bierstaker, and D. J. Lowe. 2009. An investigation of factors influencing the use of computer-related audit procedures. *Journal of Information Systems* 23 (1): 97-118.

- Joe, J. R., S. D. Vandervelde, and Y. Wu. 2015. Use of third party specialists' reports when auditing fair value measurement: Do auditors stay in their comfort zone? Working Paper, The University of Delaware, University of South Carolina, and Texas Tech University.
- King, A. M. 2006. Auditing valuation reports. *Valuation Strategies* 9 (6): 18–25.
- Lin, S., M. Pizzini, M. Vargus, and I. Bardhan. 2011. The role of the internal audit function in the disclosure of material weaknesses. *The Accounting Review* 86 (1): 287-323.
- Maksymov, E., M. W. Nelson, and W. R. Kinney, Jr. 2014. Planning audits of fair values: Interactive effects of frame and perceived verifiability of audit procedures. Johnson School Research Paper Series No. 20-2012.
- Martin, R. D., J. S. Rich, and T. J. Wilks. 2006. Auditing fair value measurements: A synthesis of relevant research. *Accounting Horizons* 20 (3): 287–303.
- Peecher, M. E., I. Solomon, and K. T. Trotman. 2013. An accountability framework for financial statement auditors and related research questions. *Accounting, Organizations and Society* 38: (596-620).
- Pizzini, M., S. Lin, and D. Ziegenfuss. 2014. The impact of internal audit function quality and contribution on audit delay. *Auditing: A Journal of Practice & Theory* 34 (1): 25-58.
- Public Company Accounting Oversight Board (PCAOB). 2003. *Using the Work of a Specialist*. PCAOB Interim Auditing Standards AU Section 336. Washington, D.C.: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2007a. Auditing Standard No. 5: *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*. PCAOB Release No. 2007-005A. Washington, DC: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2007b. *Report on the PCAOB's 2004, 2005, and 2006 inspections of domestic triennially inspected firms*. PCAOB Release No. 2007-010. Available at [http://pcaobus.org/Inspections/Documents/2007\\_10-22\\_4010\\_Report.pdf](http://pcaobus.org/Inspections/Documents/2007_10-22_4010_Report.pdf)
- Public Company Accounting Oversight Board (PCAOB). 2009. *Auditing Fair Value Measurements and Using the Work of a Specialist*. Standing Advisory Group Meeting. October 14-15. Washington, D.C.: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2010a. Auditing Standard No. 10: *Supervision of the Audit Engagement*. PCAOB Release No. 2010-004. Washington, DC: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2010b. *Report on Observations of PCAOB Inspectors Related to the Audit Risk Areas Affected by the Economic Crisis*. Release No. 2010-006. September 29. Washington, DC: PCAOB.

- Public Company Accounting Oversight Board (PCAOB). 2011. *Report on 2010 Inspection of PricewaterhouseCoopers LLP*. November 8. Washington, DC: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2012a. *Report on 2011 Inspection of Ernst & Young, LLP*. December 6. Washington, DC: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2012b. *Report on 2011 Inspection of KPMG, LLP*. August 15. Washington, DC: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2014a. *Staff Consultation Paper on Auditing Accounting Estimates and Fair Value Measurements*. Washington, DC: PCAOB.
- Public Company Accounting Oversight Board (PCAOB). 2014b. *Report on 2013 Inspection of Ernst & Young, LLP*. August 14. Washington, DC: PCAOB.
- Pyzoha, J. S., M. H. Taylor, Y. Wu. 2015. Can an audit firm's tone at the top messaging attenuate confirmation bias in auditors' judgments? Working Paper, Miami University, Case Western Reserve University, and Texas Tech University.
- Reichelt, K.J. and D. Wang. 2010. National and office-specific measures of auditor industry expertise and effects on audit quality. *Journal of Accounting Research* 48 (3): 647-686.
- Salterio, S. 1996. The effects of precedents and client position on auditors' financial accounting policy judgment. *Accounting, Organization and Society* 21 (5): 467-486.
- Salterio, S., and R. Denham. 1997. Accounting consultation units: An organizational memory analysis. *Contemporary Accounting Research* 14 (4): 669-691.
- Salterio, S., and L. Koonce. 1997. The persuasiveness of audit evidence: The case of accounting policy decisions. *Accounting, Organization and Society* 22 (6): 573-587.
- Salzsieder, L. 2015. Fair value opinion shopping. Working paper, University of Missouri Kansas City.
- Selby, D. D. 2010. Do auditors adjust their audit plans accordingly when they encounter material automated control weaknesses? Working Paper, University of Richmond
- Selley, D. 1999. *Use of Specialists in Assurance Engagements*. Toronto, ON: Canadian Accounting and Assurance Reference Service.
- Shelton, S. W. 1999. The effect of experience on the use of irrelevant evidence in auditor judgment. *The Accounting Review* 74 (2): 217-224.
- 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: 36-53.

- Solomon, I., M. Shields, and O. Whittington. 1999. What do industry-specialist auditors know? *Journal of Accounting Research* 37 (1): 191-208.
- Van de Poel, K., S. Maijoor, and A. Vanstraelen. 2009. IFRS goodwill impairment test and earnings management: The influence of audit quality and the institutional environment. Working paper, University of Antwerp and Maastricht University.
- Vyas, D. 2011. The timeliness of accounting write-downs by U.S. financial institutions during the financial crisis of 2007–2008. *Journal of Accounting Research* 49 (3): 823–860.
- Wolfe, C. J., E. Mauldin, and M. Diaz. 2009. Concede or deny: Do management persuasion tactics affect auditor evaluation of internal control deviations? *The Accounting Review* 84 (6): 2013-2037.