

**Executive Summary: State of the Art Research Related to  
Auditor Professional Skepticism (2013 – 2015)**

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## **Section 1 – Introduction**

In September of 2015, representatives of the International Federation of Accountants (IFAC), the International Auditing and Assurance Standards Board (IAASB) and this research team agreed to conduct a project that involved summarizing academic research in the area of auditor professional skepticism (hereafter, PS) from the 2013 to 2015 time period. The work was intended as an update of the auditor PS literature since the syntheses performed by Nelson (2009) and Hurtt et al. (2013). Commissioned academic research that occurred prior to 2013 could also be included in the summary and the regional scope was not to be limited to ensure international diversity. Appendix A provides a summary of commissioned research. The summary was to include both published and unpublished papers (i.e., working papers), and the research was to be categorized under significant themes based on the PS diagram proposed by the PS Joint Working Group. Appendix B provides the method used to perform the review.

The project entailed the provision of three specific deliverables: (1) a template listing and summarizing relevant research related to PS (see Appendix C),<sup>1</sup> (2) a presentation of significant observations to the International Auditing and Assurance Standards Board (IAASB) during their December 2015 meeting, and (3) an executive summary of the project (this document).

This executive summary is organized as follows. Section 2 reviews state of the art research related to PS, provides practical takeaways for regulators and / or practice, and suggests avenues for future research. Section 3 concludes and discusses additional future research possibilities related to auditor PS.

## **Section 2 - Review of State of the Art Research Related to Auditor Professional Skepticism**

### **Incentives**

Given the substantial role that incentives play in affecting behavior, two recent studies have investigated the link between auditor evaluations and PS. Brazel et al. (2015) illustrate that evaluators (superiors on the audit team) evaluate their staff based on the outcome of their skeptical behavior. If the skeptical auditor finds a misstatement, the auditor is rewarded. If there is a reasonable explanation for an evidence inconsistency and no misstatement is identified, the skeptical auditor is penalized (evaluated significantly lower). The paper finds this "outcome effect" to be present even under conditions where the skeptical auditor keeps the superior "in the loop" during the course of exercising PS, and even when evaluators give their approval to engage in the skeptical behavior.

Via a survey of auditors, Westermann et al. (2015) attempt to identify the sources of pressure that increase or decrease auditor PS in practice. The study finds that sources that hold auditors accountable for quality (PCAOB inspections and workpaper reviews) increase PS and sources that promote defensibility or profitability (time budget pressure and excessive documentation) reduce PS. In short, the study's results indicate that the effect of accountability on PS depends on the source of pressure.

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<sup>1</sup> Appendix C does not form part of IAASB December 2015 meeting agenda materials.

***Key Observations:***

- The evaluation of PS may depend more on the outcome than the process. This insight into the evaluation of PS should inform inspections of firms' evaluation systems / quality controls.
- The accountability or pressures associated with a potential inspection can enhance auditor PS, unless excessive documentation to appease inspectors becomes the auditor's overriding concern.

***Future Research Questions:***

- Can this focus on outcomes erode the PS of subordinates over time?
- How do you effectively evaluate and nurture PS in your subordinates?
- Who are the supervisors that reward PS based on process? How do their experiences differ from those that focus on outcomes?
- Do the incentives for PS change as you progress in your career at the firm?

**Time**

Given that the appropriate application of PS is a cognitively demanding and time consuming process, two current studies examine how the auditor's workload can affect their application of PS. Brazel et al. (2015) find time pressure and workload impact PS. Their study reports that if the SEC's 10-K filing accelerations in the 2000s required an acceleration of the audit report date, earnings quality suffered. Audit partners, who experienced the 10-K accelerations, reported in a survey that more time pressure, induced by the need to meet shorter 10-K filing deadlines, may have limited the extent to which auditors on their engagements exercised PS. Auditors responding to a survey in Persellin et al. (2015) indicate that their workload (in hours) often exceeds the point at which they believe audit quality starts to suffer (due mainly to deadlines and staffing shortages), with 40% indicating that their judgments begin to be impaired (including reduced PS).

***Key Observations:***

- Substantial time pressure, particularly at year-end, can impair PS.
- If a future acceleration of reporting or other regulation curtails year-end audit time, PS may become impaired and audit quality could suffer.
- Solutions to year-end time pressure appear to be moving testing at final to interim, rescheduling other work, and working more hours.

***Future Research Questions:***

- Would setting a budget for PS insulate PS behavior from time pressures?
- Use of IT auditors, computer assisted audit techniques, use of internal audit, and outsourcing were not seen as effective strategies for dealing with year-end time pressure. Why is this the case? What other strategies could be employed?

**Mindset / Prompts (Independence of Mind / Objectivity)**

Several recent studies have investigated altering the auditor's mindset as a potential mechanism to increase PS. Bauer (2015) finds that increasing the salience of auditors' professional identity by having them think about professional norms and values increases PS. Kadous and Zhou (2015) explore auditors' intrinsic motivations for their job. The authors find prompting auditors' intrinsic motivation increases PS, improves judgment on complex audit tasks, and reduces over-reliance on specialists. Wolfe et al. (2015) examine intuitive versus analytical thinking and find that auditors thinking intuitively were more skeptical. They conclude that when auditors crowd out intuition in their cognition, they have the propensity to become less skeptical. Parlee et al. (2015) consider a metaphor prompt to change auditors' mindsets. They find that having auditors read a story that includes a metaphor that focuses on the potential deceit of those that provide information makes auditors more skeptical when completing an audit task.

***Key Observations:***

- Certain prompts may induce greater PS in auditors.
- The effectiveness of prompts could be further tested in audit training sessions with real client evidence and audit documentation.
- Effective prompts could be incorporated into audit software (or be an optional procedure considered during planning). Field experiments (with some audits using the prompts and others not) could be performed to further determine the effects of the prompts on auditor PS mindsets.

***Future Research Questions:***

- With the off-shoring of less complex audit areas and more complex areas being pushed downward onto staff, does this induce an “understanding mindset” instead of “questioning mindset” in staff?
- While we are seeing more international research in the area of auditor PS, few studies examine the role of “culture” on PS. What role does culture play in relation to auditor PS?

**Environmental and Contextual Factors**

Recent research has explored the impact of several environmental factors on exercising PS. The majority of these studies relate to the characteristics of the client, the environment in the firm, or current standards / firm guidance. For example, Bennett and Hatfield (2013) conduct an experiment where staff-level auditors interact with an actor playing the role of client management and find that less PS is exercised (reduced evidence collection) to avoid interactions with management when the client is intimidating. Similarly, Olsen and Stuart (2015) find in high risk settings, client personality / behavior is irrelevant to the application of PS, but in low risk settings, an overtly nice / available client induces greater PS in the auditor. Regarding the impact of the environment within the firm, Westermann et al. (2015) conducted interviews with practicing audit partners and note that partners expressed concerns that the use of IT may lead to reduced PS as staff don't learn how to "read people," think critically, and probe for answers. With regards to standards / firm guidance, Cohen et al. (2015) experimentally test the impact of word choice in guidance. In the study, auditors are provided with audit guidance that requires them to either obtain evidence to “support,” “oppose,” or “support and oppose” management's

assertions about a fair value measurement. The authors find that auditors asked to both support and oppose (balanced frame) were more skeptical (i.e., offered a lower fair value estimate).

***Key Observations:***

- The characteristics and actions of management may impact PS.
- Audit partners are concerned that the current environment may create some PS-related competency deficiencies in young staff.
- The framing / word choice of tasks alters the mindset or approach auditors take, leading to more / less PS.

***Future Research Questions:***

- Are different management tactics more / less successful depending on audit experience?
- As the use of IT continues to become more prevalent, what additional risks are introduced from a professional development standpoint?
- While we are seeing more research investigate the impact of framing / word choice, could field experiments be conducted to make specific recommendations as to what changes would be most effective in the current environment?

**Competence (Fraud Detection)**

Given the importance of exercising PS to detect fraud, recent studies have been conducted to examine auditors' competence in this area. Carpenter and Reimers (2013) consider the importance of tone at the top and find that the level of the audit partner's emphasis on skepticism (high vs. low) causes audit managers to more effectively and efficiently identify fraud risk factors and choose relevant audit testing procedures. Brazel et al. (2014) demonstrate that auditors are, in general, not sensitive to the presence of a fraud red flag (a substantial inconsistency between a client's reported revenue growth and growth in related non-financial measures (e.g., square footage of facilities, number of customers)). A prompt that assisted the auditors in identifying the red flag was only effective when the initial fraud risk assessment for the engagement was high (versus low or medium). Cohen et al. (2015) examine corporate fraud cases and note the difficulty auditors have in assessing subjective components of fraudulent behavior. They suggest that the ability to detect personality-driven fraudulent tendencies is a "soft skill" that is part of appropriately applying PS.

***Key Observations:***

- The focus of most competency-related studies is on the extent auditors can detect and respond to fraud red flags / risks.
- Auditors do not generally respond appropriately to personality-driven fraud tendencies in management.
- Tone at the top matters, suggesting the importance of firm culture on PS.

***Future Research Questions:***

- With the focus of most accounting courses on technical material (especially financial accounting), do entry-level auditors have a proper understanding of non-financial data and soft skills such as effective interview, communications, etc.?
- How can audit partners / managers effectively establish a tone that promotes PS?

### **Traits (Integrity, Fortitude, and Experience)**

Many studies are beginning to examine auditor characteristics and study PS as a trait. Hurtt et al. (2015) explore whether viewing PS as a trait rather than strictly as a response to audit circumstances provides a clearer link between PS and auditors' behaviors. The study finds that auditors that rate higher on trait PS (e.g., a questioning mind) exhibit higher PS behavior (detect inconsistencies when reviewing audit documentation related to the audits of debt and inventory). Robinson et al. (2015) examine both the state and trait components of PS and find that as state PS increases (inherent risk increases), auditors with low trait PS exhibit a greater increase in skeptical behavior than auditors with high trait PS. Brown-Liburd et al. (2013) conduct an experiment involving a simulated negotiation between the auditor and client. A composite PS measure (based on the actions of the participant in the negotiation, such as mentioning insufficient evidence and considering fraud / management incentives) was used to classify participants into high / low PS groups. The authors find that when auditors exhibit heightened PS, they are more conservative and stand more resolute during negotiations over the financial statements with management.

Quadackers et al. (2014) conduct an experiment to evaluate two dimensions of PS – presumptive doubt and neutrality. They find that where auditors fall on a scale measuring presumptive doubt is more predictive of their skeptical judgments (e.g., assessment of management's explanation, perceived likelihood of fraud, explanations for an error) than what level of neutrality auditors' exhibit. Cohen et al. (2015) surveyed audit professionals with varying levels of experience and find that neutral PS is positively associated with both perception of job fit and professional identification, which, in turn, lead to lower turnover intentions. In contrast, presumptive doubt PS is negatively associated with job fit and organizational trust, which, in turn, lead to higher turnover intentions.

Sargent (2015) examines the impact of trait PS and experience and finds that more experience generally leads to more PS (measured by reactions to client explanations). However, skeptical traits interact with experience across career spans, leading to swings in skeptical responses. Participants with lower to average skeptical traits initially exhibit high skepticism, but this dips during the intermediate years and then rises back to novice / high levels by the time they become experienced managers. For those with higher skeptical traits, the career skepticism trajectory takes a different shape, starting lower and then continually increasing with experience.

#### ***Key Observations:***

- Auditor characteristics (such as the auditor's tendency to have a questioning mind or have presumptive doubt) predict auditors' PS judgments.
- Auditors with greater integrity / fortitude stand more resolute when disagreeing with management.
- Experience generally leads to greater PS.

***Future Research Questions:***

- Auditors that rate high on presumptive doubt measures are more skeptical, but also have the highest turnover intentions. Does this mean the audit profession is failing to retain the “best” auditors?
- Could an effective screening tool be developed for hiring or promotion purposes based on the traits and characteristics found to be important determinants of PS?

**Conclusion and Future Research**

Overall, our review of the auditor PS literature from 2013 – 2015 yielded many current studies tackling this crucial issue. The PS literature has grown extensively since Nelson (2009) and will continue to grow as new researchers with recent practice experience enter academia. As such, as part of our project we also attempted to identify questions for future research. While space constraints limit the extent to which we can list and discuss future research in this document, below we list some additional questions for future research:

The application of PS in the “real world” often occurs in an unobservable black box. Can researchers study actual PS failures and PS successes to determine if a common set of features determine the difference (e.g., are the levels of budget pressure or auditor competence typically determinants)? Even if research access is permitted only for PS successes, identifying the common environmental factors that foster appropriate PS would be useful.

We found few studies considering the important role training can play in the development of PS. Given the wealth of literature that identifies the impediments and potential solutions related to PS, more research needs to be performed to determine how these findings can be put into action with respect to more effective training in the area of PS.

Last, while PS is a global issue, the vast majority of studies we reviewed were performed via experiments and surveys of US auditors or examinations of US public company data. Are some of the PS issues identified in US studies not relevant to non-US auditors? Outside of the US, qualitative methods of research are used more extensively. Performing such in-depth studies (e.g., unstructured interviews of auditors in the field) would surely enhance our understanding of PS. In addition, considering research recent skepticism from other fields (e.g., political science, marketing, etc.) may provide insights into the current PS issues facing the audit profession.

## **Appendix A - Commissioned Research**

Given the global interest in PS as one of the key determinants of audit quality, several commissioned research projects and white papers have been produced. The initial synthesis of academic research in the area of PS was performed by Nelson (2009). This paper reviews the auditor PS literature up to 2009 and develops a practical model related to PS. The model describes how evidential input (e.g., the presence of inconsistent evidence or a red flag), auditor experience and training, auditor traits (e.g., a questioning mind), and incentives may affect the skeptical judgments (identification of an evidence inconsistency) and skeptical actions (investigation of the inconsistency) of auditors. The paper notes that incentives favoring PS are provided by the potential for regulatory enforcement and subsequent reputation loss that reduces an audit firm's ability to attract clients and maintain higher fees.

Hurt et al. (2013) extended the Nelson (2009) synthesis of auditor PS research up to 2013. This synthesis paper advanced the Nelson (2009) model of PS (e.g., adding the role of client complexity, evidence sources), identified areas where research is lacking (e.g., how PS is evaluated/rewarded in practice), and provided several implications of PS research for regulators and the profession. For example, the paper notes that regulators/inspectors can effectively encourage more skeptical behavior among auditors by focusing on the personnel policies and reward structures in audit firms through their audit quality control reviews. Regulators might further encourage firms to reward skeptical judgment processes rather than simply outcomes by focusing on positive processes rather than negative outcomes during their inspections.

Glover and Prawitt (2014) focus on enhancing auditor PS by proposing a "professional skepticism continuum" that describes how the PS employed by the auditor (and, in turn, the extent of audit evidence/documentation) depends on the risk characteristics of the account and assertion (e.g., amount of judgment required). The authors also describe threats to PS (e.g., insufficient resources devoted to the audit) and provide some recommendations on how the application of PS might be enhanced (e.g., development of a formal judgment framework and process). The authors note that a pressing need is to include an accepted judgment framework and PS continuum in auditor and inspector training and practice. The lack of a common definition and shared understanding related to PS limits the ability to both apply and to evaluate the application of appropriate PS. A paper by the Auditing Practice Board (2010) also discusses raising the bar on auditor PS through: firms identifying, developing and retaining staff that can appropriately apply PS on audits (e.g., screening for trait PS when hiring), regulation (e.g., consider requirements that ensure some audit documentation reviews are undertaken in-person rather than remotely), and the actions of management and audit committees (e.g., when discussing proposed audit fees, audit committees may wish to challenge their auditor as to whether the fee includes an appropriate contingency for dealing with any unexpected developments).

## Appendix B – Method

Appendix B provides a listing of the research studies reviewed for this project. Based on discussions with IAASB personnel, our review of the auditor PS literature began with an examination of commissioned research/research syntheses that occurred prior to or during the 2013-2015 time period. For example, our review included the syntheses of PS research by Nelson (2009) and Hurtt et al. (2013), as well as several white papers on the topic (e.g., Glover and Prawitt (2014) and concept releases from the Auditing Practices Board). Our search for published papers between 2013 and 2015 included a review of the following journals: (1) relevant *Financial Times* 45 journals (e.g., *The Accounting Review*), (2) relevant top 25 accounting journals<sup>2</sup> (e.g., *Auditing: A Journal of Practice & Theory*), (3) relevant international journals (e.g., *International Journal of Auditing*), and (4) other audit-related publication outlets (e.g., *Current Issues in Auditing*).

We reviewed the following sources to obtain unpublished research related to PS (i.e., working papers): (1) the social science research network (ssrn.com) and (2) relevant research conferences (e.g., The International Symposium on Audit Research). Appendix D contains a full listing of sources accessed during the course of this project. Our review of the literature yielded 59 total studies, 27 of which were unpublished working papers. Along with providing relevant reference information for each paper (e.g., author information, journal, weblink), Appendix C also includes the abstract for the paper, our practice summary of the study's findings, and any guidance provided by the authors related to standard setting and/or regulation. Last, we categorized the research studies into specific themes based on the PS diagram proposed by the PS Joint Working Group, several of which we review in Section 2 of our Executive Summary.

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<sup>2</sup> See Glover, Prawitt, and Wood, "Publication Records of Faculty Promoted at the Top 75 Accounting Research Programs," *Issues in Accounting Education*, Vol. 21, No. 3, August 2006.