BEYOND “EVIDENCE-BASED STANDARD-SETTING”: AN EXAMINATION OF ACADEMIC CITATIONS IN THE PCAOB AS 2501 DUE PROCESS

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Abstract

A recent study (Harris & Williams, 2019) is among the first to empirically examine the role of academic research in audit standard-setting. Harris and Williams studied changes over time in the number of academic citations included in the forty-four standard-setting projects undertaken by the Public Company Accounting Oversight Board (PCAOB) since its inception, concluding that the PCAOB is increasingly following an evidence-based approach to standard setting. This study extends Harris

and Williams' study through a detailed examination of academic citations in the due process documents related to a single new PCAOB auditing standard: AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (PCAOB, 2018). Academic research does appear to have played an evidence-based role in the development of AS 2501, consistent with the findings of Harris and Williams. However, academic citations also appear to have been deployed for other purposes in the due process documents, as well, including to connect the framings of both the problem and solution to a more abstract and legitimate body of knowledge outside of the accounting and auditing literatures. This suggests a much more complex role for academic research in the PCAOB standard-setting process than was originally indicated by Harris and Williams.

Keywords: Auditing, Accounting Estimates, PCAOB, Standard Setting, Due Process

Data Availability: The data used in this study are from publicly available sources.

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INTRODUCTION

There has long been an interest in understanding the relationship between academic work and auditing practice, including standard-setting (see, e.g., Bell and Wright, 1995; AAA Research Impact Task Force, 2009; Bedard, et al., 2016). This interest isn't surprising given the amount of time devoted by academics to their research, and the fact that auditing is ultimately a practiced phenomena. The literature in this area has generally asserted a positive relationship between academic research and accounting and auditing practice. However, perhaps ironically, this work has been largely anecdotal.

Harris and Williams (2019) sought to close this lacuna in the auditing literature with their examination of academic citations in the stan-

dard-setting process of the Public Company Accounting Oversight Board (PCAOB). Specifically, Harris and Williams compiled counts of “unique academic citations” in 44 PCAOB standard-setting projects from March 2003 through November 2018, revealing a significant increase in academic citations beginning in 2013. Based on this finding, Harris and Williams conclude that “the PCAOB does examine academic research in its standard-setting practice” (2019, p. 247) and cite this as evidence that the PCAOB has adopted an “evidence-based policymaking approach” in its standard-setting process (2019, p. 244). Harris and Williams note, however, that “*how* the PCAOB utilizes academic research in its standard-setting practices is still largely unexplored in the extant literature” (2019, p. 247; emphasis in original).

The purpose of the study reported here is to further the understanding of *how* the PCAOB is using academic research in its standard-setting processes by examining in greater detail the academic citations in a single, recent PCAOB-issued standard: PCAOB AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (PCAOB, 2018). All of the academic citations in the publicly-available due process documents related to the development and issuance of PCAOB AS 2501 were examined in this study, with a focus on answering two primary research questions:

1. Does academic research appear to be used by the PCAOB for purposes of evidence-based standard-setting in AS 2501?
2. Does academic research appear to serve any other purpose(s) in the PCAOB AS 2501 standard-setting process?

The conclusion reached based on the examination of all of the academic citations in the publicly-available due process documents related to the development and issuance of PCAOB AS 2501 is that the answer to both of the above questions is “Yes.”

Recent, relevant research related to both complex accounting estimates and the auditing thereof was cited early and often throughout the process of developing AS 2501. Following the same interpretations as Harris and

Williams (2019), this is seen to consistent with a process of evidence-based standard-setting by the PCAOB.

However, the detailed examination of citations undertaken in this study—in contrast to the more simplistic counts undertaken by Harris and Williams—revealed that there were also a relatively large number of older publications, outside of the accounting and auditing literatures, cited by the PCAOB staff in formal documents related to the formulation and issuance of the final new standard. This is seen to be consistent with the assertions of Abbott (1988), Power (1995) and others that professional groups will invoke “more legitimate and abstract” bodies of knowledge outside of their own when attempting to establish and extend their own legitimacy. More generally, this finding suggests that academic research may be used in multiple ways, rather than just as a basis for evidence-based decision-making, in the PCAOB standard-setting process.

The discussion begun here regarding the influence that academic research has played in shaping audit practice is expanded upon in the following section. The next section of the paper then explores the auditing of complex accounting estimates, and particularly the PCAOB’s new AS 2501. This is followed by a description of the data gathering undertaken in the paper and the associated analyses. Finally, a discussion of the results, including potential areas for future research, is provided.

ACADEMIC INFLUENCE ON AUDIT PRACTICE

According to Bell and Wright, there has long been a “symbiotic relationship” between auditing academics and practitioners (1995, p. 7). Their monograph, *Auditing Practice, Research, and Education: A Productive Collaboration*, describes the influence of academic research on such audit practice innovations as audit sampling, including applications of statistical sampling; the risk-based audit approach; analytical review procedures; and, the application of regression analysis to auditing. Further, Bell and Wright describe the associations between academic auditing

research and the establishment of such auditing standards as SAS 39, *Audit Sampling* (AICPA, 1981); SAS 47, *Audit Risk and Materiality in Conducting an Audit* (AICPA, 1983); and, SAS 55, *Consideration of the Internal Control Structure in Conducting an Audit* (AICPA, 1988).

Scholars have continued in more recent years to explore the relationships between academic research and audit practice, both broadly (e.g., AAA Research Impact Task Force, 2009) and through examination of individual new audit standards (e.g., Bedard, et al., 2016). Scholars have also been directly involved in analyzing the audit research literature for use by the PCAOB through the “Synthesis Projects” (Cohen & Knechel, 2013). As stated by the AAA Research Impact Task Force, there continues to be a belief that “auditing researchers have played, and continue to play, an important role in the development of auditing practice and auditing standards” (2009, p. 425).

These studies of the association between auditing research and practice, however, have been largely anecdotal. In contrast, Harris and Williams published in 2019 one of the only empirical examinations of this connection, reporting on an historical analysis of academic citations in the PCAOB standard-setting process. Specifically, Harris and Williams sought to determine whether the PCAOB uses an “evidence-based policymaking approach” in its standard-setting processes. The counts of “unique academic citations” in 44 PCAOB rule-making projects from March 2003 through November 2018 were compiled. Harris and Williams noted a significant increase in academic citations beginning in 2013—from an average of 2 unique citations¹ per rule-making docket from 2003 through 2012, to an average of 49 unique citations per rule-making docket from 2013 through 2018--and cite this as “evidence indicating that the PCAOB does examine academic research in its standard-setting practices” (2019, p. 247). However, they indicate that “*how the PCAOB utilizes academic research in its standard-setting practices is still largely unexplored in the extant literature*” (2019, p. 247; emphasis in original).

Kaplan has lamented the growing gulf between accounting scholars and practitioners, citing in particular the increasing tendency for researchers to employ a “narrow set of generally accepted research methods,” relying on increasingly-sophisticated statistical techniques, to both define and engage with the phenomena being examined (2011, p. 368). In response, Kaplan calls for researchers to better engage with and understand the complexities and nuances by entering its “interior” (2011, p. 370). In this vein, this paper can be seen as taking a next step into the “interior” of the PCAOB due process to better understand the social construction (Berger & Luckmann, 1966; Weick, 1979) of auditing standards.

Specifically, the purpose of the study reported here is to further the understanding of *how* the PCAOB is using academic research in its standard-setting processes by examining in greater detail the academic citations in a single, recent PCAOB-issued standard: PCAOB AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (PCAOB, 2018). The following section provides an overview of challenges in auditing complex accounting estimates and of the PCAOB’s response to these challenges in the form of AS 2501.

AUDITING COMPLEX ACCOUNTING ESTIMATES

Increasingly Complex Accounting Estimates Challenge Auditors

Accounting estimates have been prevalent in financial statements for a very long time; collectability of accounts receivable, and useful lives of depreciable assets are just two common examples. There have also been long-established approaches to auditing the estimates inherent in financial statements. Statement on Auditing Standards (SAS) No. 57, for example, provided the guidance for auditing accounting estimates beginning in 1989 (AICPA, 1989). The auditing of accounting estimates under SAS 57, it is important to note, was grounded in the traditional

accounting model in which financial statement recognition was based on historical transactions.

The issuance of SFAS 157, *Fair Value Measurements* (FASB, 2006), certainly increased the prominence of fair value measurements in financial statements. The AICPA Auditing Standards Board had recognized even before the issuance of SFAS 157, however, the unique challenges of auditing fair value estimates. As Menelaides, et al. explained:

Fair value estimates differ from other accounting estimates because when market prices are not available management must estimate fair value using an “appropriate” approach and assumptions that reflect those that individuals in the marketplace would make. This unique aspect, combined with an increase in the number of accounting standards that require fair value measurements and disclosures, the complexity of some of those measurements and their significance to the financial statements, requires auditing guidance that is specific to such measurements. (2003, p. 73)

In response to this need for more specific guidance, the AICPA issued SAS 101, *Auditing Fair Value Measurements and Disclosures* (AICPA, 2003). As with most standards (Gradison & Boster, 2010), the PCAOB essentially adopted SAS 57 verbatim when it assumed authority for establishing auditing standards for US public companies in 2002, establishing the original PCAOB AS 2501: *Auditing Accounting Estimates* (PCAOB, 2003a). Likewise, the PCAOB’s AS 2502: *Auditing Fair Value Measurements and Disclosures* (AICPA, 2003b), was essentially identical to SAS 101.

This new and more specific guidance did not, however, completely resolve problems in the auditing of complex accounting estimates. Rather, for example, the PCAOB expressed concerns in 2012 about recurring audit deficiencies in such areas as the valuation of Level 2 financial instruments, assumptions related to inventory valuation, and impairments of property, plant and equipment (PCAOB, 2012, pp. 4-5). Similarly, Church and Shefchik reported in 2012 that the *total* number of audit deficiencies disclosed in PCAOB inspection reports had declined from

2004 to 2009, and that the number of deficiencies involving revenues and other accounting estimates had decreased at a similar rate (2012, p. 53); however, they also reported that the percentage of overall deficiencies that involve fair value measurements had *increased* substantially over the time of their study, indicating that:

The increase corresponds to a recent increase in the number and significance of accounting standards that deal with fair value accounting. The movement toward fair value accounting has likely introduced new challenges for the auditor. The details of the PCAOB's inspection reports included the following involving fair value measurements: failures to obtain an understanding of the methods used by management; failures to test the significant assumptions and underlying data that the issuers used; relying on issuer-supplied or third-party information without corroborating that information; and failures to challenge management's conclusions, despite indicators that are contradictory. (Church & Shefchik, 2012, pp. 54-55)

Church and Shefchik concluded that “auditing firms may continue to face difficulties auditing fair value measurements, as the accounting profession moves steadily toward fair value accounting” (2012, p. 55). This prediction of continuing challenges with auditing complex accounting estimates, including fair value measures, has certainly been borne out by others who have examined the area more recently (e.g., Martin, et al., 2006; Bell and Griffin, 2012; Christensen, et al., 2012; Bratten, et al., 2013; Griffith, et al., 2015a, b; Glover, et al., 2017; Cannon and Bedard, 2017). The PCAOB's response to these continuing concerns about the auditing of complex accounting estimates, a substantial revision to AS 2501, is described in the next section.

THE NEW PCAOB AS 2501

The PCAOB issued the revised AS 2501—*Auditing Accounting Estimates, Including Fair Value Measurements*—in December 2018. The SEC approved

this new auditing standard in July 2019, effective for audits of financial statements for fiscal years ending on or after December 15, 2020 (SEC, 2019). The new standard effectively replaces three previous auditing standards that were primarily related to accounting estimates, including fair value measurements (PCAOB, 2018, p. 4)². An excerpt of the PCAOB's summary of its approach to enhancing the auditing of complex accounting estimates in its new AS 2501 is provided in Figure 1.

The PCAOB followed a lengthy due process, which formally began in 2014, in developing AS 2501. As indicated in Figure 2, the formal due process began with the issuance of a Staff Consultation Paper—essentially a concept paper, which included a request for public comment—in 2014. Auditing accounting estimates was the topic of discussion for all, or a significant portion of, three meetings of the PCAOB's Standing Advisory Group (SAG). The PCAOB issued a draft proposed rule in 2017, which was followed by another period for public comment. Finally, the PCAOB unanimously approved and issued the new standard in December 2018.

All of the documents related to the due process—including, for example, transcripts and videos of the SAG meetings—are archived on the PCAOB's web site. These documents served as the data for this study. The data and analysis are described further in the next section.

DATA AND ANALYSIS

Harris and Williams employed in their study a measure of “unique academic citations,” which treats repeating citations across all of the due process documents as a single observation (2019, p. 240); i.e., this is a measure of the number of unique academic works cited across all of the due process documents for a single standard. Harris and Williams identified a “structural break” in the PCAOB's use of academic references in its standard-setting processes in 2013, with an average of 2 unique citations per rule-making docket from 2002 through 2012 increasing to an average of 49 unique citations per rule-making docket from 2013 through

2018 (2019, p. 241), and interpret this finding to suggest that “the regulator has embraced an evidence-based policymaking approach” (2019, p. 244).

Employing the same methodology as Harris and Williams, a total of 86 unique academic citations were identified in the due process documents related to AS 2501 summarized in Figure 2. Thus, following the same inferential approach as Harris and Williams, it could be concluded that the PCAOB followed a process of evidence-based standard setting in its due process for the development and issuance of its new standard for *Auditing Accounting Estimates, Including Fair Value Measurements*. However, as indicated earlier, the main purpose of the study reported here is to examine the use of academic references in the development of PCAOB AS 2501 in greater detail, including to begin developing an understanding of *how* the PCAOB utilizes academic research in its standard-setting process. Among the analytical questions to be answered is whether there are explanations beyond “evidence-based policymaking” for the observed patterns in the use of academic citations.

Leuz describes “evidence-based policymaking” as “...a rigorous attempt to base policy decisions (e.g., new regulation) on scientific and empirical evidence, including impact studies, cost-benefit analyses, programme (sic) evaluation and academic research in general” (2018, p. 582). Again following the approach of Harris and Williams, the study reported here was limited to examining the use of “academic research in general” in the PCAOB standard-setting process; examining the uses of other components of evidence-based decision making, such as impact studies and cost-benefit analyses, is left for future research.

Several propositions were developed to guide the analysis of academic citations within the PCAOB AS 2501 due process to determine whether they are consistent with evidence-based policy making; specifically, it is posited for purposes of this study that, everything else equal, academic research used as part of an evidence-based policymaking process will:

1. be closely related to the problem being examined;

2. be more recent; and
3. enter the process at an early stage.

This third point is consistent with the Harris and Williams' observation that "the PCAOB now considers accounting research at the onset of its standard-setting projects" consistent with a shift to evidence-based policymaking (2019, p. 244).

This study also adopted two new measures, in addition to Harris and Williams' "unique citations," to enable more detailed examination of the nature and pattern of academic citations throughout the due process steps; these additional measures are defined as follows:

Total citations—a count of the total number of academic citations across all of the due process documents; i.e., each academic citation is defined as a single observation, regardless of whether the cited work has already appeared in the same due process step or in a different due process step.

(Intra-step) Unduplicated citations—a count of the number of unique citations in each due process step; i.e., each academic work is counted as a single observation if it appears one or more times in a single due process step. For brevity, this measure is referred to simply as "Unduplicated citations" in the analyses.

A summary of the academic citation counts by due process step, using each of the three measures described above, is provided in Table 1. A publication is counted as an "unique citation" the first time that it appears in any of the due process documents; as an "unduplicated citation" once (and only once) when it appears in each due process document; and, within "total citations" each time it appears in any due process document. Therefore, unduplicated citations can be thought of as a sub-set of total citations, and unique citations as a sub-set of unduplicated citations. This analysis shows that academic citations appear in the documents related to each step in the due process, other than in the transcript for the 2015 Standing Advisory Group (SAG) meeting³; that the greatest numbers of

total citations appear in the 2017 proposed rule and 2018 final standard documents prepared by the PCAOB staff; and, that the greatest single introduction of new citations (unique citations) was by the PCAOB staff in the 2017 proposed rule.

It was posited earlier that academic references used in “evidence-based policy making” will be relatively closely related to the problem being examined, in this case the auditing of complex accounting estimates, including fair value measurements. Five topical categories of publications were formed to enable the analysis on this point, as follows:

1. Auditing, Accounting Estimates
2. Accounting Estimates
3. Auditing, Other
4. Accounting, Other
5. Other

Publications in the first two categories, those closest to the problem of interest in this particular standard, are considered to be “Core” sources for purposes of this analysis.

The cited references were judgmentally sorted by the researcher into these five topical categories based on examination of the title of each work, the outlet in which it was published, and the content of the publication⁴. An overall summary of the eighty-six unique publications cited in the AS 2501 due process, sorted by topical category, is provided in Table 2. Not surprisingly, research related to the auditing of accounting estimates is among the most-highly cited categories. However, the lowest number of citations is of research related to accounting estimates themselves, including fair value measurements. Further, it is interesting to note that the greatest single number of referenced works is in the “Other” category, comprising research that is not directly related to either auditing or accounting.

Table 3 then shows the distributions of citations by topical category and due process step; Panel A is based on total citations, and Panel B on

unduplicated citations. The distribution of unique citations, sorted by topical category and the due process step at which they first entered the process, is then presented in Table 4. As can be seen, research related to auditing estimates enters the process early; in fact, the majority of the unique citations on auditing estimates were identified before the proposed rule was issued in 2017. The relatively limited number of papers related to accounting estimates themselves also enter the process relatively early, but then appear to only a small degree in the later stages of the process. Conversely, the “Other” references, those directly involving neither auditing nor accounting, begin to appear fairly late in the process, with by far the largest single number first appearing in the 2017 proposed rule document.

The final set of initial analyses, analyzing the distribution of citations by the year of publication, separated into five-year increments, is presented in Table 5; specifically, Panel A shows the age of unduplicated citations by due process step, and Panel B presents the age of unique citations by topical category. As posited earlier, and consistent with a hypothesis of evidence-based standard-setting, the vast majority of referenced works are relatively recent, having been published in the fifteen years prior to the issuance of the AS 2501 final standard; and, notably, *all* of the references cited in due process steps other than the 2017 proposed rule and 2018 final standard were published in 2004 and after. It is also interesting to note that virtually all of the citations in the “core” categories of auditing estimates and accounting estimates were published in the ten years prior to the issuance of the final standard. This, again, appears consistent with the hypothesis of evidence-based standard-setting.

The older publications (1999 and prior) shown in Table 4, which are cited exclusively in the 2017 proposed rule and 2018 final standard, however, stand out in contrast to the observations in the preceding paragraph. Further, it appears particularly striking, as shown in Panel B of Table 5, that the majority of these older publications, and almost all of

the cited works published in 1998 and before, are in the “Other” category; and five of these “Other” publications were published in 1984 and before.

Additional analysis was undertaken to develop a further understanding of the role of these older, “Other” publications in the 2017 proposed rule and 2018 final standard. Specifically, the eight “Other” citations of works published in 1998 and before were identified, and the sections of the standard-setting documents in which they were referenced excerpted for further examination. A summary of these eight citations is provided in Figure 3.

As noted in Figure 2, the 2017 proposed rule is over 150 pages, and the 2018 final standard document is nearly as long⁵. Therefore, it was interesting to note that six of these eight “Older, Other” citations were all located within a relative few pages of each other in a sub-section of the document titled “Need for the Rulemaking”⁶. These citations are far from alone in that report sub-section; in fact, while that sub-section comprises only approximately nine of the 147 total pages in the 2018 document, it contains forty of the seventy-seven total academic citations in the report.

The “Need for the Rulemaking” sub-section of the 2018 final standard document begins with a summary of what the Board has identified as its “three main reasons to improve its standards for auditing accounting estimates” (PCAOB, 2018, p. 27). An excerpt from this portion of the report is provided in Figure 4⁷. The Board’s summary of its reasons for seeking changes in the auditing standard is then followed immediately by the statement that “Economic theory provides an analytical framework for the Board’s consideration of these potential needs” (2018, p. 26), which is then followed by a report sub-section titled “Principal-agent Problems and Bounded Rationality” (2018, p. 27). This section of the report describes such terms as “information asymmetry,” “moral hazard” and “adverse selection;” problems related to “management bias,” and auditors’ inherent “bounded rationality” and “cognitive biases” are discussed; and, the enhanced application of “professional skepticism” by auditors is advanced as a potential remedy for these limitations. It is within this

sub-section of the report, approximately nine pages in length, that six of the eight older “Older, Other” citations described above are deployed along with thirty-four other total academic citations.

SUMMARY AND DISCUSSION

It has long been believed that academic research positively influences audit practice. However, this relationship has not generally been subjected to systematic empirical examination. In a paper published in 2019, Harris and Williams took a significant step toward closing this lacuna in the literature. Specifically, they compiled counts of “unique academic citations” in 44 PCOAB rule-making projects from March 2003 through November 2018. Harris and Williams noted a significant increase in academic citations beginning in 2013, and interpreted this finding to suggest that “the regulator has embraced an evidence-based policymaking approach: (2019, p. 244). However, they indicated that “*how* the PCAOB utilizes academic research in its standard-setting practices is still largely unexplored in the extant literature” (2019, p. 247; emphasis in original).

The purpose of the study reported here is to further the understanding of *how* the PCAOB is using academic research in its standard-setting process by examining in greater detail the academic citations in a single, recent PCAOB standard: PCAOB AS 2501, *Auditing Accounting Estimates, Including Fair Value Measurements* (PCAOB, 2018). More specifically, the study was framed around answering two primary research questions:

1. Does academic research appear to be used by the PCAOB for purposes of evidence-based standard-setting in AS 2501?
2. Does academic research appear to serve any other purpose(s) in the PCAOB AS 2501 standard-setting process?

Starting with the first question: Yes, the evidence assembled through this study is consistent with academic research having been used as part of a process of evidence-based standard-setting by the PCAOB. Relatively recent publications directly related to auditing accounting estimates were

cited early and consistently throughout the standard-setting process. Further, many facets of the final standard appear to be consistent with the findings and recommendations of the cited research.

Turning now to the second research question: Yes, it also appears that academic citations were used by the PCAOB staff for at least one other purpose in the 2017 proposed rule and 2018 final standard documents. As indicated earlier in this section, Harris and Williams (2019) called for a deeper understanding of *how* the PCAOB utilizes academic research in its standard-setting process. They suggested that “it is particularly important [that this be understood] because regulators may reference academic research in an effort to support and defend their own self-interested choices regarding public policy stance” (2019, p. 247). Harris and Williams themselves cite Watts and Zimmerman’s classic “Market for Excuses” paper (1979) in raising this concern.

The detailed examination of documents related to the PCAOB’s development of AS 2501 undertaken in this study did not reveal evidence to suggest that the PCAOB staff were promoting their own, individual self-interest when they were citing the classic “Older, Other” publications in support of their previously stated “Need for the Proposal.” However, it does seem that the staff were citing this literature to bolster conclusions that had earlier been reached. Specifically, it appears that they were appealing to what might be described as a ‘more abstract and legitimate body of academic knowledge’ (Abbott, 1988; Power, 1995) outside of the accounting literature to support both their framing of the problem to be solved and the nature of the solution—which reside, the PCAOB explained, in overcoming “cognitive biases” in order to enhance “auditor judgement” in an environment characterized by “information asymmetry,” “moral hazard,” and auditors’ inherent “bounded rationality.”

None of this is to necessarily question the PCAOB’s own judgments regarding the existence of significant extant challenges in the auditing of complex accounting estimates, the nature of the solution advanced in the form of the new AS 2501, or the academic literature that it drew upon in

reaching its conclusions. However, the findings in this study do help to advance our understanding of the *multiple* ways, rather than solely for purposes of evidence-based policymaking, in which academic research appears to be utilized by the PCAOB in the audit standard-setting process.

In interpreting their results Harris and Williams (2019) implicitly assumed that the academic research being cited in PCAOB standard-setting processes was being utilized as a basis for evidence-based standard-setting, which is consistent with the PCAOB's own stated intent (e.g., PCAOB, 2013). The study reported here examined in more detail the specific academic works cited in the development of PCAOB AS 2501, and concluded that at least some of the employed publications—the “Older, Other” references, as they are labelled in this paper—were being used to legitimate the problem definition and solution being advanced by the PCAOB staff. However, the present study followed an inferential process similar to that of Harris and Williams in concluding that the more recent publications in the accounting and auditing research, and particularly those directly related to complex accounting estimates and the auditing thereof, were being used as part of a process of evidence-based decision-making in the development of AS 2501. It is important to recognize, though, that there is a stream of literature that would call into question the tacit assumption underlying such inferences. Specifically, such authors as Power (1995, 1996), and Gendron and Bedard (2001) maintain that much of the extant academic auditing literature, in general—and the “audit judgment and decision making” literature, in particular, which forms the foundation for many of the studies on the auditing of accounting estimates cited in the AS 2501 due process—is itself used as a tool for representing and legitimating the audit process as rational (Power, 1995, p. 329). It is not possible to differentiate between these competing explanations regarding the role of the “Core” publications cited in the development of AS 2501 from the data used in this study; and it would seem naïve to assume that they are mutually exclusive. However, it is important to note this limitation of both Harris and Williams (2019) and the present study; and, more importantly, to recognize that this

suggests the possibility of even greater complexity in the use of academic citations than has been revealed in this paper.

The study reported here was also deliberately designed as the detailed examination of the due process documents related to a *single* PCAOB auditing standard. While there are many advantages of this approach, including as a complement to the initial ‘broad, but more shallow’ study by Harris and Williams (2019), it is also important to recognize the inherent limitations of this approach, including the lack of broad generalizability beyond the single standard examined. Additionally, it should be recognized that the qualitative interpretations presented here are dependent on the judgment of the researcher; others examining the same data may reach different conclusions.

The inherent limitations of the current study notwithstanding, the results of this research contribute to extending our understanding of the ways in which academic research is used in the PCAOB’s standard-setting process—and, most importantly, the recognition that academic research is being used in *multiple* ways—as well as illustrating how these types of archived due process documents can be used in research. There are also a number of ways in which this research may be meaningfully extended, including by: continuing to dig further into the documents related to AS 2501; applying the same methodology to the due process documents generated in other, recent PCAOB standard-setting projects to see if the results found here are idiosyncratic or more generalizable; applying the same methodology to the examination of due process documents generated by other standard-setting bodies (e.g., AICPA ASB, FASB); and extending beyond just the examination of archival documents to include, for example, interviews with standard-setting due process participants to get their perspective on the role that academic research played in the development of AS 2501.

Harris and Williams (2019) found that more recent PCAOB due process documents include substantial academic citations. The more extensive examination of academic citations in the development and issuance of

AS 2501 undertaken in the study reported here again revealed the use of extensive academic citations. However, the results of the present study suggest that academic citations may have been used for multiple purposes in the due process, particularly by the PCAOB staff when writing reports for formal, external consumption. Whereas Harris and Williams interpret their results to indicate a single purpose for the use of academic citations—as part of a process of “evidence-based standard-setting;” which, incidentally, is consistent with the PCAOB’s own stated intent (PCAOB, 2013)—the results here suggest that the staff used citations of “Other, Older” academic works, from outside of the auditing and accounting literatures, to legitimate their chosen framing of the problem to be solved, as well as the nature of the advanced solution in the form of the new AS 2501. More than anything, these findings indicate that academic scholarship may play a much more complex role in audit standard setting than what has been previously documented, and hopefully will provide a foundation for further research into the role of auditing and other academics in the “sociology of audit technique” (Power, 1995, p. 317).

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CITATION INFORMATION

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WEB APPENDIX

A web appendix for this paper is available at: <https://dx.doi.org/10.15239/j.brcacadjb.2021.11.01.wa01>

NOTES

1. Harris and Williams operationalize “unique citations” as “a count variable that treats repeating citations as one observation” (2019, p. 240). Thus the same paper that is referenced multiple times in a single due process document, or in multiple due process documents, is treated by Harris and Williams as a single unique citation.
2. Specifically, the new standard replaces the former AS 2501—*Auditing Accounting Estimates*—and rescinds two other standards: AS 2502—*Auditing Fair Value Measurements and Disclosures*—and AS 2503—*Auditing Derivative Instruments, Hedging Activities, and Investments in Securities*. In addition, through this action AI 16--*Auditing Accounting Estimates: Auditing Interpretations of AS 2501*—was rescinded, and revisions were made to the following standards: AS 1015—*Due Professional Care in the Performance of Work*; AS 1105—*Audit Evidence*; AS 1205—*Part of the Audit Performed by Other Independent Auditors*; AS 2110—*Identifying and Assessing Risks of Material Misstatement*; AS 2301—*The Auditor’s Responses to the Risk of Material Misstatement*; AS 2401—*Consideration of Fraud in a Financial Statement Audit*; and, AS 2805—*Management Representations* (PCAOB, 2018,p. i).
3. Since no academic citations appear in the transcript of the 2015 SAG meeting, that meeting is omitted from the remaining analyses.
4. Figure 5 provides examples of the papers judgmentally included in each of the five topical categories.
5. The relevant sections of the 2017 and 2018 documents are virtually identical. The description and references from this point forward are restricted to the 2018 final standard document.
6. The Akerlof (1970), Bator (1958), Holmstrom (1979), Jensen & Meckling (1976), Nickerson (1998), and Simon (1955) papers are all cited in this section; the Brennan & Subramanyam (1995) and Chari, et al. (1988) papers are both cited closely together in a section devoted to “Special Considerations for Audits of Emerging Growth Companies.”
7. It is worth noting that the earlier section, II.C, of the 2017 proposed rule document, in which these reasons for improvement are first presented, contains *no* academic citations.