
Group audits: Divided responsibility versus sole responsibility – insights from academic research

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April 24, 2018

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A separate Appendix package is prepared and delivered. The Appendix includes the following sections to document our work process related to the creation of synthesis: Inclusion Criteria; Search Strategy for identification of relevant studies; Study Selection; Data Extraction; Criteria for determination of independent findings; Critical Appraisal; and Scoping decision for the research question.

Executive Summary

The research team was charged to synthesize academic research for a specific problematic issue in the area of group audits:

Under what supervisory approach (sole versus divided responsibility) is a component audit likely to be carried out more effectively?

The research team believes that, from the perspective of the group auditor, a clear set of academic evidence would support group audits being done in a sole responsibility approach, rather than a divided responsibility approach. In a group audit, the component auditor is held responsible for the audit process to the group auditor and, thus, the component auditor is in a relationship where it is directly accountable to the group auditor. Whilst the component auditor has to carry out a GAAS compliant audit under either a sole or divided responsibility approach, evidence from research on accountability suggests that numerous benefits will accrue to the group auditor under a sole responsibility approach, which establishes conditions that lead the component auditor to employ:

- more effortful, systematic judgment strategies, including better evidence collection focused on group auditor needs;
- improved consistency of evidence utilization, consensus within groups, and consistency of judgment-strategy use across auditor actions;
- increased attentiveness to detailed evidence relevant to group auditor where required;
- vigilant processing, and, as a result, less reliance on the order in which evidence appears;
- attention to further relevant evidence and revising estimates rather than anchoring on initial evidence in areas of relevance to the group auditor; and
- complexity of thought and, as a result, greater predictive accuracy in areas requiring judgments and estimates of interest to the group auditor.

These conclusions are based on the assumption that in the group auditor's communications with the component auditor, the group auditor appropriately balances concerns over cost with concerns over conducting high-quality audit. To the extent that an appropriate balance is not achieved by the group auditor, whether component audit is carried out under sole or divided responsibility approach will make no difference to the quality of the overall group audit. Excessive emphasis on efficiency over effectiveness will not lead to good quality auditing under any approach.

Background

The IAASB's group audit project began in 2002 with the formation of a project task force (IAASB 2007). The reason for formation of the task force was that "several bodies have requested requirements and guidance on the audit of group financial statements ("group audits"), including the European Commission, the International Organization of Securities Commissions (IOSCO), the former Panel on Audit Effectiveness in the United States, and the International Forum on Accountancy Development" (IAASB 2007). The goal of the process was to revise ISA 600 in light of the concerns expressed.¹ At the IAASB meeting in South Africa (IAAS 2002a), the IAASB made a tentative decision that the existing practice of allowing the option for a division of responsibility ("DOR" or "divided responsibility" in the rest of the document) in the consolidated financial statements audit opinion would be permitted to continue. At that time, when the group auditor did not audit every subsidiary of the overall group of companies, there were two audit report choices, based on two different levels of involvement that the group auditors could have with the audit of the subsidiary company. That is, the group auditor could be the sole named auditor in the audit opinion (*sole responsibility*, and hence a higher level of involvement with the component auditor and audit), or the group auditor could explicitly acknowledge the work of the component auditor in the audit opinion (*divided responsibility*, and hence a lower involvement with the component auditor and audit).

The minutes note: "As a result of the legal frameworks of certain countries, it was agreed that the division of responsibility provision in the existing ISA 600 should be retained" (IAASB 2002a). This decision was reconfirmed without discussion at the next meeting (IAASB 2002b) and again with limited debate at the following meeting (IAASB 2003a). However, in May 2003, initial questioning of this decision occurred at the meeting of the IAASB's Consultative Advisory Group.

The European Commission representative stated "a preference for the group auditor to take sole responsibility for the auditor's report on the group financial statements" (IAASB 2003b). While the IAASB noted those comments, "After debate, it was concluded that, should the IAASB agree to retain division of responsibility as an alternative, the explanatory memorandum accompanying the exposure draft should provide the conceptual reason(s) for retaining it" (IAASB 2003b). However, pointed questioning of the tentative decision occurred again in late June of 2003, where:

Although not originally planned for discussion, IOSCO² raised division of responsibility at a meeting of representatives of the IAASB and IOSCO Audit

¹ Unfortunately, public data for IAASB deliberations is very limited prior to December 2002, with only limited minutes available for September and October meetings that year, and nothing available for the earlier 2002 meetings. Requests to the IAASB for assistance with this project have not been answered as of the date of writing.

² The International Organization of Securities Commissions (IOSCO) is responsible for coordinating individual countries' stock market regulators by developing common standards internationally that are enforced by national or regional bodies. The objectives of IOSCO are to protect investors; ensure fair, efficient and transparent markets; and reduce systemic risk (IOSCO 2010).

Working Party held on June 30, 2003. IOSCO indicated that they considered sole vs. division of responsibility as an important matter to be resolved by the IAASB, and was of the opinion that the IAASB should not provide for current practice, but for the best quality approach in the proposed revised ISA 600. IOSCO also indicated that it would be disappointed if the IAASB provided for both alternatives, and strongly urged the IAASB to decide on one approach.

IAASB 2003b

At the July meeting of the IAASB (IAASB 2003c), one of the members of the board (not identified in the minutes) asked, “It is not clear why one approach is considered better than the other, which is what is implied by the term “desirable.” Does the one approach render a better outcome (audit)?” (IAASB 2003c).

The specific goal of creating this research synthesis is an attempt to answer that question. To inform the group audit standard setting debate, we assess research evidence (both that in existence in 2003 as well the period post 2003) to understand what was and is known in the academic literature on this topic.

Research Question

Based on the above background, we presented and discussed the following research question in a meeting with the committee of standard setter representatives:

Is a group audit where the group auditor takes sole responsibility in the audit report for all component audits likely to be more, less or equally effective as when there is divided responsibility in the audit report between the group and component auditor?

As a result of our discussions, we identified and refined the focal question as follows:

Under what supervisory (sole versus divided responsibility) approach is a component audit likely to be carried out more effectively?³

In this synthesis, we examine how the two different group audit supervisory approaches could drive different audit outcomes by looking at the effects of these approaches on the likely effectiveness of the component audit via its effects on the component auditor's planning, evidence collection and evaluation, and reporting. Evidence of audit effectiveness includes fewer observable audit failures and/or more accurate accounting, based on the following assumptions that appeared to be reasonable to the committee:

- **Assumption 1:** More effective component audit means more accurate accounting numbers in the component as a result of or in anticipation of:
 - a more thorough component audit and/or
 - more attention and effort by the component auditor in performing the audit and/or
 - consideration of a greater set of more relevant information by the component auditor in formulating a conclusion about the component accounting numbers.
- **Assumption 2:** The group auditor taking sole responsibility implies greater involvement with the component auditor in terms of the scope of the component audit (i.e. evidence collection process) and in reviewing the conclusions drawn from the evidence (i.e. audit outcomes).
- **Assumption 3:** The group auditor would (and is required by professional standards) put more effort into setting the scope of the component auditor's work and evaluating the results of that work if the group auditor were taking sole responsibility in the audit report compared to if it were taking divided responsibility in the report.

³ In our "Limitations" section, as well as Appendix section "Scoping Decision", we articulate our consideration of a second question from the perspective of an external reader of financial statements. In our "Synthesis" section, we acknowledge our focus on how the different regimes affect the work of the component auditor.

Research Reviewed

We first synthesize research related to the topic of group audits and assess the evidence against our focal question. Since there are few research studies on group audits (especially as at 2003), we characterize the group/component auditor relationship as one in which the component auditor is accountable to the group auditor, and the two different supervisory approaches influence this accountability relationship. We then synthesize psychology research on accountability that reports evidence of the behavior of subordinates who are accountable to a superior, and we evaluate what these findings indicate about the conditions in which audit effectiveness is likely to occur under the two approaches. Finally, we synthesize auditing research that reports evidence that the effects of accountability generalize to the auditing setting and have relevant implications for group audit effectiveness.

Audit effectiveness in Group Audits

This section synthesizes the findings reported in research on group audits in two phases, first at the time of the specific issue we are examining, early 2003, and then updates the research post-2003. It is typical for the revision of a standard to draw attention from academic research community to that standard and, hence, a greater amount of research tends to emerge after a standard is revised.

In the pre-2003 period, we examine audit research on multi-location and multinational audits because the search focused on group audits did not yield any results. The number of research articles on this topic is small and emphasizes audit planning considerations of sampling and risk assessment. The literature does not have direct implications for the focal research question, i.e., audit outcomes produced by the different group audit supervisory approaches. This highlights the importance of researchers understanding the underlying conceptual issues and drawing appropriate analogies to the broader empirical evidence, so that informed, research-based advice can be made available to the decision makers in the substantive context; in this case, the group/component auditor context.

In the post-2003 period, especially after the revised standard was issued in 2007, we find a significant increase in research specifically on group audits. Overall, the research differentiates group audits from traditional single-entity focused audits by identifying practice issues, proposing effort allocation techniques, and posing future research questions relevant to the group audit setting. However, there is relatively little evidence of auditor behaviour or audit outcomes (Downey 2013; Sunderland and Trompeter 2017).

Downey's (2013) literature review on geographically distributed audit work identifies the following factors that likely contribute to lower performance effectiveness for group audits versus traditional audits, and proposes potential interventions:

- 1) lack of shared understanding, increased conflicts and poor conflict resolution may be remedied by synchronous communication and more time together;
- 2) inabilities to share contextual and implicit knowledge may be overcome with informal interactions and working across sites;
- 3) weaker relationship and motivation to work could be alleviated by work redesign; and,
- 4) presence of out-group dynamics may be addressed by strengthening in-group social identities.

Evidence consistent with the presence and nature of these challenges in practice is described in a case study of a multinational audit (Barrett, Cooper and Jamal 2005), a questionnaire study of group audits (Bedard and Downey 2018), and a hybrid interview and experimental study on offshoring audit work (Downey 2018). Evidence indicates that firms can address these challenges and produce higher audit quality when the group auditor has expertise in either or both conducting global group audits and conducting audits in the country where a client has a significant subsidiary (Gunn and Michas 2018). Research also suggests that a benefit of the group audit setting is better audit quality at subsidiary entities compared to non-consolidated entities, suggesting that component auditors accountable to a group auditor in a subsidiary-parent relationship perform audits more effectively (Glover and Wood 2014). While the purpose of this research is to differentiate group audits from traditional ones, the implication for our sole responsibility versus DOR approach question is that a sole responsibility principal auditor will likely be more successful at establishing the conditions that address the challenges of group audits, rather than divided coordination among geographically distributed firms. The challenges can also potentially be overcome by the sole responsibility principal auditor establishing pre-decisional process accountability conditions, as we propose in the accountability literature synthesized in this report.

The evidence quality from archival studies of SEC registrants in the U.S. is weak, in that the main data comes from Form 2 disclosures about component auditors. Form 2 disclosures are only made when component auditors are not principal auditors of any other SEC issuers, hence, the research is potentially biased towards finding the component auditor to be less effective (Mao et al. 2018). Indeed, the limited research indicates lower group audit quality for issuers that disclose participation of Form 2 component auditors (Dee, Lulseged and Zhang 2015). Evidence suggests importance of the home country when principal auditors assume sole responsibility, reporting that geographical distance from the home country and having a large proportion of audit work done outside the U.S. is associated with higher audit quality for U.S.-based Big N principal auditors compared to home country-based Big N principal auditors (Asthana, Raman and Xu 2015). While this finding suggests that sole responsibility would be better, it is not conclusive. Australian evidence suggests that for principal auditors assuming sole responsibility, using within-network affiliate auditors for component audits is associated with poorer audit quality compared to using non-affiliates (Carson, Simnett, Trompeter and Vanstraelen 2014). The challenge in determining implications for our focal research question is the inability to parse out whether undesirable audit outcomes are attributable to the principal auditors' versus the component auditors' performance.

The Group/Component Auditor Relationship as an Accountability Relationship

The purpose of this section is to develop an analogy between the group/component auditor relationship and evidence from psychology research on the likely effects of the two supervisory approaches on this relationship. In this section, we show that the psychology literature strongly suggests that better judgments and decisions are made under conditions that map onto the sole responsibility relationship between group auditor and component auditor. The next section then demonstrates that significant research in auditing on accountability supports our reliance on this much larger psychology literature to answer the research question.

Table 1 shows the differences in the group auditor’s involvement with the component auditor under DOR versus sole responsibility. In a DOR audit, the component auditor is directly identified in and referred to in the group auditor’s report. In that case, the group auditor is only required to assure themselves that the component auditor has “the professional qualifications, independence, professional competence and resources” to do the audit and that the other auditor has an appropriate “quality control process”. Beyond that, the group auditor’s only required involvement with the component auditor is of a practical nature, such as coordination of schedules and deadlines (Table 1, Row 2).

In contrast, in the sole responsibility audit, the group auditor has extensive involvement that substantially influences the process of how the component auditor carries out its work. These include setting planning parameters and requirements for the conduct of the work, reporting matters arising from the audit, and more, all in advance of the component auditor carrying out the audit. Table 1, Row 3 provides details about what the group auditor is required to convey in advance to the component auditor.

Table 1 – ISA 600 Proposed Group Auditor Responsibilities (December 2002)

	The Group Auditor’s Procedures in Relation to the Other Auditor’s Work and Report under Sole Responsibility Approach	Group Auditor involvement with component audit under DOR Approach
1. Principles about the group auditor’s involvement with the component auditor and audit.	14. The group auditor should assess whether the work of the other auditor provides sufficient appropriate audit evidence in relation to the component’s financial information and, if not, perform additional audit procedures. 15. The nature, timing and extent of the group auditor’s procedures depends on: (a) the group auditor’s assessment of the independence, professional competence and quality control process of the other auditor; (b) the group auditor’s judgment concerning the materiality of the component and the level of risks of	35. The local regulations of some countries permit a group auditor to base the report on the group financial statements solely upon the report of another auditor regarding the audit of one or more components. When the group auditor does so, the group auditor’s report should state this

	<p>material misstatement in the group financial statements arising from that component; and</p> <p>(c) whether, in the limited circumstances set out in paragraph 35, the group auditor’s report refers to a division of responsibility.</p>	<p>fact clearly and should indicate the magnitude of the portion of the financial statements audited by the other auditor. When the group auditor makes such a reference in the group auditor’s report, audit procedures are ordinarily limited to those described in paragraph 16.</p>
<p>2. Group auditor’s involvement with the component auditor and audit – all audits</p>	<p>16. The group auditor should obtain information about:</p> <p>(a) the professional qualifications, independence, professional competence and resources of the other auditor; and</p> <p>(b) the other auditor’s quality control process.</p>	<p>Same as group audit paragraph 16</p>
<p>3. Group auditor’s involvement with the component auditor and audit with NO division of responsibility</p>	<p>20. To the extent that the group auditor intends obtaining audit evidence from the other auditor, the group auditor should communicate with the other auditor to provide the other auditor with the group auditor’s requirements.</p> <p>21. Communications are established between the auditors during the initial stage of their respective engagements and further communications take place as necessary throughout the engagement.</p> <p>22. The group auditor communicates to the other auditor matters relevant to the other auditor’s work and report, for example the group structure, business activities of the group, related parties, etc.</p> <p>23. The other auditor is made aware of the group auditor’s requirements and communicates any anticipated problems or other audit matters with the group auditor on a timely basis.</p> <p>24. The group auditor’s requirements ordinarily are communicated in a letter of instruction sent to the other auditor. The letter of instruction includes matters such as:</p> <p>Matters relevant to the planning of the other auditor’s work</p> <p>(a) The timetable for completion of the audit.</p> <p>(b) The use that is to be made of the other auditor’s work and report, the scope of work to be performed, and</p>	<p>None of these is done except as needed to facilitate prompt reporting in an administrative capacity</p>

	<p>arrangements for the coordination of efforts at the initial stage of the audit.</p> <p>(c) Planning materiality that the group auditor expects the other auditor to use.</p> <p>(d) The threshold for reporting to the group auditor identified uncorrected misstatements in the component's financial information, that is the amount below which misstatements need not be accumulated because the group auditor expects that the accumulation of such amounts clearly would not have a material effect on the group financial statements.</p> <p>(e) Guidance on other statutory reporting responsibilities, for example reporting on internal control.</p> <p>(f) Areas requiring special consideration, such as significant risks of material misstatement in the group financial statements that require special audit consideration.</p> <p>Matters relevant to the conduct of the other auditor's work</p> <p>(g) The application of ISAs, requesting written representation as to compliance with them.</p> <p>(h) The applicable financial reporting framework, including statutory or other disclosure and financial reporting requirements, requesting written representation as to the component's compliance with them.</p> <p>Matters relevant to the other auditor's report</p> <p>(i) The content of a summary memorandum, if required by the group auditor.</p> <p>(j) The form of the other auditor's report to be provided to the group auditor.</p> <p>(k) Procedures for reporting material weaknesses in internal control, fraud and irregularities to the group auditor.</p> <p>(l) Procedures for notifying the group auditor of any significant or unusual event as early as possible.</p> <p>Other information and representations required</p> <p>(m) A request for a list of any other related parties identified by the other auditor during the conduct of the work (refer paragraph 22).</p> <p>(n) A request for written representation as to compliance with the <i>Code of Ethics for Professional Accountants</i> of the International Federation of Accountants (IFAC), including the independence requirements regarding both the parent company and the component.</p>	
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Extracted from IAASB 2002 Agenda item 9B December 2002 Draft 8, **emphasis** added by researchers

The underlying supervisory relationships analyzed through an accountability perspective

In the group audit setting, the relationship that standard setters appear to endorse is one where the component auditor is accountable to the group auditor, albeit in a very different fashion from both the sole and the divided responsibility approach. Of course, in both approaches, the component auditor has professional responsibility to carry out a GAAS-compliant audit. However, the two approaches would vary greatly in the extent to which that audit focused on the explicit concerns of the group auditor. Hence, we analyze the incremental difference that, beyond carrying out a GAAS-compliant audit, the two supervisory approaches would have on the component auditor.

To be accountable, one has to be “required or expected to justify actions or decisions”.⁴ However, in the two supervisory approaches for the group/component auditor relationship, there are at least two ways for the component auditor to be accountable – process-focused or outcome-focused – and two timings associated with the accountability – pre-decisional or post-decisional (these terms are defined next). **Process accountability** “focus[es] on holding others accountable for their efforts to achieve outcomes” and generally occurs prior to the actions or decisions being undertaken (i.e. **pre-decisional**). **Outcome accountability** focuses on holding other accountable “for their effectiveness in actually delivering outcomes” and can occur either prior to the process being undertaken, or after the outcome of the process is known (i.e. **post-decisional**).⁵

While most supervisory methods that establish accountability involve some elements of process and outcome accountability, the conditions in the DOR group/component auditor relationship makes it clear that the group auditor is only relying on the outcome of the component auditor’s audit. The group auditor does not communicate any process-related information except that which facilitates meeting reporting deadlines; the group auditor does nothing to investigate the quality of the work that the component auditor performs. In effect, the component auditor is only nominally accountable to the group auditor; that is, the component auditor must deliver the audit report (i.e. the outcome of the component auditor’s work), but the component auditor only experiences accountability later, such as in regulatory inspections or as part of a judicial process. Hence, the DOR component auditor’s de facto accountability is **outcome-focused** and mainly **post-decisional**, that is, after the audit report for the component is submitted.

In contrast, in the sole responsibility approach, the group auditor takes an active role in defining the processes and approaches for the component auditor to focus on areas important to the group

⁴ This is the Oxford English Dictionary definition available at <https://en.oxforddictionaries.com/definition/accountable>. A more precise academic definition is advanced by Lerner and Tetlock (1999 p.255): “accountability refers to the implicit or explicit expectation that one may be called on to justify one’s beliefs, feelings, and actions to others.”

⁵ These definitions come from Patil, Vieider, & Tetlock (2014), although they date back to Simonson & Nye (1992) and earlier research.

audit (see Table 1, Row 3), which may or may not have been a focus of the component auditor's GAAS audit. Under the sole responsibility approach, the group auditor also specifies, in advance, the details of component auditor's reporting requirements, which normally will go beyond a GAAS audit report. In effect, under the sole responsibility approach, the component auditor is substantively accountable to the group auditor with both a **process** and an **outcome focus**. Further, the component auditor knows the details of the accountability relationship prior to developing their detailed audit plan and carrying out the work, that is, the accountability is predominantly **pre-decisional** (i.e. before the audit work is done), as well as potentially post-decisional.

There is a significant amount of research on accountability, with focal articles tabulated in Appendix section "Data Extraction" that were subject to a detailed review by Lerner and Tetlock in 1999 along with those from 1998-2003. Based on that article, and our review of the individual studies cited in Appendix section "Data Extraction", we document that pre-decisional process accountability incrementally improves judgment "to the extent that a given bias results from lack of effort, self-critical awareness of one's judgment processes" (quote from Arkes, 1991). Lerner and Tetlock (1999) describe the rationale as being straightforward: when individuals expect to justify their judgments, they want to avoid appearing foolish in front of the party to whom they are accountable. Hence, they prepare themselves by engaging in an effortful and self-critical search for reasons to justify their actions (details supporting characterization are based in part on Lerner & Tetlock, 1994; Tetlock, 1983a; Tetlock & Lerner, 1999; Tetlock et al., 1989).

In general, under pre-decisional process accountability conditions, individuals examined a wider range of relevant evidence, paid greater attention to the evidence they used, anticipated counterarguments and weighed the evidence impartially, and were more aware of the processes they employed to reach their conclusions (Lerner and Tetlock 1999 p. 263). Robust evidence across multiple studies (see selected studies cited in brackets for detailed research evidence supporting conclusions) supports the following benefits from pre-decisional process accountability:

- consideration of often-overlooked situational attributions for another (e.g. an auditee's) behavior (Lerner et al., 1998; Tetlock, 1985; Wells, Petty, Harkins, Kagehiro, & Harvey, 1977);
- use of effortful, systematic judgment strategies (Ashton, 1992; Cvetkovich, 1978; Doney & Armstrong, 1996; Ford & Weldon, 1981; McAllister, Mitchell, & Beach, 1979; Mero & Motowidlo, 1995; Murphy, 1994; Weldon & Gargano, 1988);
- awareness of judgmental processes, and as a result, improved consistency of evidence utilization, consensus within groups, and consistency of judgment-strategy use across an evaluators judgments (Hagafors & Brehmer, 1983; Johnson & Kaplan, 1991; Siegel-Jacobs & Yates, 1996);
- attentiveness to detailed information rather than just labels (Boudreau, Baron, & Oliver, 1992; Kruglanski & Freund, 1983, Study 2; Pendry & Macrae, 1996);

- vigilant processing, and, as a result, less reliance on the order in which information appears (Kruglanski & Freund, 1983, Study 1; Schadewald & Limberg, 1992; Tetlock, 1983b; Webster, Richter, & Kruglanski, 1996);
- attention to further relevant evidence and revising estimates rather than anchoring on initial evidence (Kruglanski & Freund, 1983, Study 3; de Dreu et al 2000);
- in a group setting, sharing information more often, and better group decision making (Scholten et al 2007);
- increased decision accuracy and reduced cognitive judgment bias, including preference reversal between frames (Vieider 2011; Pit-ten et al 2016), self-serving decisions under moral hazard and negative consequences of power (Pitesa and Thau 2013);
- complexity of thought and, as a result, greater predictive accuracy (Mero & Motowidlo, 1995; Tetlock & Kim, 1987); and
- attention to conjunction rules in probability estimation (Simonson & Nye, 1992).

We note that the research also shows that pre-decisional process accountability is not a panacea for all judgment and decision problems. Accountability cannot substitute for:

- lack of knowledge (Simonson & Nye, 1992, Kerr, MacCoun, & Kramer, 1996; Wegener & Petty, 1995; Wilson & Brekke, 1996) or
- lack of understanding of rules, such as those involved in statistical sampling (Simonson & Nye, 1992, Kahneman & Tversky, 1982, Kahneman, Slovic, & Tversky, 1982, Selart, 1996; Tversky & Kahneman, 1980, Lichtenstein & Slovic, 1971).

There are limited cases where pre-decisional accountability is likely to amplify judgment biases and errors, particularly when evidence is presented to the accountable party by someone presumed to be knowledgeable about the task (Lerner and Tetlock, 1999 p. 265). When such a person provides the evidence, it is more likely that irrelevant information will affect the judgment of the accountable party, especially if the resulting outcome is one that appears to be easiest to justify to the party to whom one is held accountable. Other settings, less likely to be germane to auditing, where pre-decisional accountability is likely to amplify judgment biases and errors, include conformity errors (or continue to use prescribed rules when other rules would be better, Patil et al 2017), and a decoy effect (reversing one's original preference when another, less preferable option – a decoy – is introduced, Connolly and Kausel 2013).

Research evidence also shows that accountability focused on outcomes, rather than processes, undermines improvements from pre-decisional process accountability (summarized in Lerner and Tetlock, 1999). In other words, outcome accountability reduces the positive effects of: the accountable party's use of effortful strategies (for evidence see Doney & Armstrong, 1996); the accountable party's awareness of their judgment process (Siegel-Jacobs & Yates, 1996); the precision with which accountable parties quantify the uncertainty surrounding their likelihood estimates (Siegel-Jacobs & Yates, 1996); commitments to sunk costs (Simonson & Staw, 1992); and the accountable party's judgment quality in simple task (Langhe et al 2011). Outcome

accountability also exacerbates difficulty in deciding between options (Zhang and Mittal 2005), and leads to less severe judgment of other's ethically dubious decision (Silva and Simoes 2011), accountable party's smaller quantity of ideas generated (Hausser et al 2017), and smaller gains in negotiation (Simoes 2011).

Furthermore, in an issue that will be pertinent in the audit setting (which we describe in the next section), accountability to a party whose outcome preferences are known undermines improvements in predictive accuracy (for evidence see Mero & Motowidlo, 1995), the ability to perceive common interests among negotiators (Thompson, 1995), and omission errors (Skitka et al., 1996). The accountable party will strive, subject to reasonableness norms, to justify the process undertaken or the outcome desired of the party that is holding them accountable, even if that party's motivations may be considered as illegitimate in some aspects (for research support see Cvetkovich, 1978, Tetlock 1983; Tetlock et al. 1989).

Accountability Research in Auditing

The purpose of this section is to convey robust evidence that key elements of psychology research on accountability applies to auditors in their professional setting. While some may question if auditors' behavior is unique, we take the position that auditors will act in a manner consistent with other individuals, unless there are specific task demands that require auditors either to possess on entry, or to develop, skills and abilities at information processing and social cognition that others do not have. In other words, this section answers the following question: can we generalize from more generic settings of psychology research to the richer institutional setting of auditing?

Audit researchers began by establishing that the audit setting was perceived by auditors to have a complex set of accountability demands. In a study that won the *Notable Contribution to Audit Research Award*, Gibbins and Newton (1994) validated the assumption that auditors feel accountable by gathering evidence that auditors at all levels of audit firms (50 partners/directors, 76 managers/principals, 29 audit staff) felt accountability pressures every day as part of their job.⁶ Further, Gibbins and Newton documented that auditors used the entire set of coping tactics that psychology researchers expected to manifest an accountability environment. Gibbins and Newton noted that the salience of the party their auditors felt accountable to varied by setting (superior, colleague, client, regulator, other audit firm). In other words, the study documented robust evidence that the psychology-based accountability framework fits the audit setting.

Subsequent research focused initially on one key accountability relationship, the hierarchical structure of an audit firm, with its intensive multiple reviews of subordinate auditors' working papers (e.g., see Rich, Solomon and Trotman, 1997). Extensive research documents that the

⁶ Brtek & Motowidlo (2002) attempted a similar type of field validation in psychology. Employing 60 actual managers who rated each other on leadership potential under varying conditions of accountability and then followed the managers to the point of their next performance appraisal from their supervisor. They found that those managers held accountable made more congruent assessments of their fellow managers compared with their actual supervisors (whom it was presumed were held accountable for their performance evaluations in the business) than those not held accountable.

preferences of the reviewing superior auditor influenced the efforts of subordinate auditors (i.e. the accountable parties) through subordinates' documentation and conclusions, and the types of errors reviewers found (e.g., Asare & McDaniel, 1996; Owoso, Messier, & Lynch, 2002; Wilks 2002).

Audit researchers also investigated whether the accountability relationship within the audit firm leads to better performance in the collection and interpretation of audit evidence in the first place. Among the factors studied were:

- various audit tasks (e.g., inventory obsolescence, collectability of amounts owed to the firm, assessing the likelihood of bankruptcy, fraud risk assessment etc.) (see Kennedy 1993, 1995; Hoffman & Patton 1997; Turner 2001; Johnson & Kaplan 1991); post-2003 research has expanded to: materiality judgments (DeZoort et al. 2006); professional scepticism (Kim and Trotman 2015); inventory write-down assessment (Cianci et al. 2017); going concern assumptions (Hoos et al 2017);
- whom the auditor felt accountable to: the superior in the audit firm who was reviewing staff work (Hoffman & Patton 1997; Turner 2001); client management (Cohen & Trompeter 1998); and post-2003 revisiting Gibbins and Newton examining single versus multiple parties to whom the auditor is accountable (Bagley 2010; Hoos et al. 2017);
- various information processing and evidential collection biases that had been shown to affect auditor judgments (e.g., time pressure, dilution effect, recency effect, negative affect impact on judgement etc.) (see Turner 2001; Glover 1997; Hoffman & Patton 1997, Asare, Trompeter & Wright 2000; Cohen & Trompeter 1998; Bagley 2010).

Overall, audit research finds that accountability is an important factor in improving performance of the subordinate auditor (the accountable party). However, audit research also confirms psychology findings that accountability has limited performance effects when the party to whom auditors are accountable has known, clear preferences for processes and outcomes. The research shows that auditors tailor their findings (i.e. the outcome) or evidence gathering activities (i.e. the process) to whomever is salient as the party to whom they are accountable, including client management (for evidence see Turner 2001, Kaplan & Lord 2001; Kennedy, Kleinmuntz & Peecher 1997; Kim & Trotman 2015; Cianci et al. 2017). Further, auditors are adept at tailoring their findings to the expectations of those to whom they feel accountable (e.g., audit efficiency versus audit effectiveness goals) (for evidence see Turner 2001; Kaplan & Lord 2001).

Further, consistent with psychology research, but in a setting where task specific knowledge is much more important than in most psychology settings, audit researchers find that accountability's effectiveness in improving auditor performance depends very much on the auditor's knowledge. Accountability does not lead to auditor's improved performance in settings where they lack the knowledge needed to perform the task (for evidence see Tan & Kao 1999; Tan, Ng, & Mak, 2002).

Synthesis and conclusion about the research question

We examine the focal question about audit effectiveness under sole versus divided responsibility approaches by synthesizing research evidence on accountability and group audits. In a group audit, the component auditor is held responsible to the group auditor for the audit process; thus, the group/component auditor relationship is an accountability relationship, where the component auditor is directly accountable to the group auditor. Overall, the evidence from audit research on accountability confirms insights about improved performance of the accountable party under pre-decisional process accountability, similar to what is shown in the underlying psychology accountability research. The audit accountability research also shows detrimental effects of outcome-focused accountability, especially when the party that the auditor is accountable to has known preferences, or when the auditor faces multiple accountability. In the audit setting, like the psychology settings, the accountable party adapts its results to the demands of the party to whom it feels accountable. Hence, while the evidence base is narrower and more focused in auditing, it provides evidence that the implications of the broader psychology accountability research can be generalized to the group/component auditor supervisory setting. Further, in post-2003 audit research, we find some evidence directly on the topic of group audits. The evidence indicates that being accountable to a group auditor that has the expertise to establish coordination practices is associated with better audit outcomes in the component audits. These findings from group audit research tend to support the argument that we can generalize from the accountability setting to the group audit setting.

Implications of this analysis for Group/Component Auditor Setting

Based on evidence from research, our review suggests that there is a clear answer as to whether the sole responsibility group/component auditor relationship is more likely to result in a more effective audit than the divided responsibility relationship. Robust evidence indicates positive effects for the quality of the component audit carried out by the component auditor when the group auditor is able to establish conditions of strong pre-decisional process accountability under sole responsibility. We note that these effects would be incremental to the assurance the group auditor receives from the component auditor carrying out a GAAS audit. The accountability relationship established by a sole responsibility approach would cause the component auditor to focus on areas that are important to the group audit, but that may not have been as emphasized in the GAAS component audit carried out under divided responsibility. These effects include:

- use of more effortful, systematic judgment strategies including better evidence collection;
- improved consistency of evidence utilization, consensus within groups, and consistency of judgment-strategy use across auditor actions;
- increased attentiveness to detailed evidence where required;

- vigilant processing, and, as a result, less reliance on the order in which evidence appears;
- attention to further relevant evidence and revising estimates rather than anchoring on initial evidence; and
- complexity of thought and, as a result, greater predictive accuracy in areas such a going concern evaluation and bankruptcy prediction.

These benefits are accompanied by few, if any, downsides, as long as the group auditor is diligent in setting out their requirements in advance communications with the component auditor, as is contemplated by proposed standards.

A caveat to this analysis is that it presumes, as most audit standard setting does, that the group auditor appropriately balances efficiency and effectiveness concerns in their communications with the component auditor (i.e. their pre-decisional process accountability requirements). The evidence from audit and psychology research strongly suggests that if the preferences of the group auditor inappropriately prioritize audit efficiency over effectiveness, then the component auditor (the accountable party) will do whatever is necessary, within reasonableness constraints, to comply with the preference of that party. In addition, the audit and psychology research require that, for the benefits of being accountable to a group auditor to manifest, the component auditor possess adequate knowledge to carry out the planning, process and reporting activities for which the group auditor is holding them accountable.

Concluding comments about synthesis approach

Our research synthesis focuses on the question of audit effectiveness, with an emphasis on the component auditor, under sole- versus divided-responsibility group audit approaches. Our discussions with standard setters discovered a second research synthesis question with respect to how users interpret what the audit opinion communicates about the nature of the group audit. Both issues are worthy of a synthesis, but they are so different that to effectively answer both questions given the time between two standard setting board meeting, two separate research teams will be required to carry out two different syntheses of the academic research. Hence, we narrowed the focus on our research to the first question about substantive audit effectiveness leaving the second for future work if it is deemed useful. See Appendix section “Scoping Decision” for detailed documentation.

Limitations

We developed our detailed research synthesis proposal based on the “Critically Appraised Topic (CAT)” and the “Rapid Evidence Assessment (REA)” approaches (see Barends, Rousseau, and Briner 2017). CAT provides a quick and succinct assessment of what is known (and not known) in the scientific literature about an intervention or practical issue by using a systematic methodology to search and critically appraise primary studies. However, in order to be promptly available, a CAT makes concessions in relation to the breadth, depth and comprehensiveness of the search than a more traditional research synthesis for academic purposes would. Aspects of the search are limited to produce a quicker result than an academic synthesis:

- Focus: A very precise research question that draws on a common body of evidence.
- Searching: a limited number of databases may be consulted, and unpublished research from well-established sources are consulted.
- Data Extraction: only a limited amount of key data is extracted, such as year, population, sector, sample size, main findings, and effect size.
- Critical Appraisal: quality appraisal is often limited to methodological appropriateness.

By adopting the conventions of CAT and REA, we can produce to standard setters an informative synthesis of the evidence in the time period between standard setting meetings (normally eight to ten weeks).