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Takiah Mohd Iskandar – Principal Investigator, Universiti Kebangsaan Malaysia

Norman Mohd Saleh, Universiti Kebangsaan Malaysia

Romlah Jaffar, Universiti Kebangsaan Malaysia

Zakiah Muhammadun Mohamed, Universiti Kebangsaan Malaysia

Sayed Alwee Hussnie Sayed Hussin, National Audit Department of Malaysia

AUDITOR REPORTING

The Informational Value of Key Audit Matters in the Auditor's Report: Evidence from an Eye-tracking Study

Authors:

Louis-Philippe Sirois, *HEC Montréal*; Jean Bédard, *Université Laval*; Palash Bera, *Saint Louis University*
(Full paper available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2469905)

Research objectives

The objective of this research is to provide direct evidence on the “costs and benefits” of the communication of key audit matters (KAM) in the auditor's report, as proposed by the IAASB (ISA 701).

On the one hand, our research provides empirical evidence to the IAASB on the potential benefits expected from the communication of KAMs in the auditor's report. The proposed changes to the auditor's report format are expected to increase the communicative value of the auditor's report (i.e., lower the “information gap”) by, among others, highlighting information and providing “(...) a roadmap to help users better navigate complex financial reports and focus them on matters likely to be important to their decision-making” (IAASB 2012, par. 36). Moreover, “(...) the IAASB is of the view that changes in auditor reporting may have positive benefits to audit quality or users' perception of it.” (IAASB 2013, par. 7).

On the other hand, the potential benefits mentioned above must be weighed against non-trivial challenges and issues associated with the increased disclosure. Among such issues raised by the IAASB is the risk of including too many matters in the auditor's report which may diminish the overall effectiveness of the auditor's communication on such matters (IAASB 2013 p. 89; ISA 701.A7). Users may also inappropriately rely on auditor's disclosures as a “(...) substitute for reading the financial statements” (IAASB 2012 par. 63(d)). Ultimately, the auditor's commentary may unintentionally bias users' reading of an entity's financial statements, leading them to discard otherwise useful information not referred to in the auditor's commentary while placing exaggerated emphasis on the information explicitly commented on. In turn, the overreaching objective of the IAASB to “improve users' ability to make informed decisions on the basis of the financial statements and the audit” (emphasis added, IAASB 2012 par. 8) may be compromised.

Likewise, it is unclear that the proposed changes to the auditor's report would indeed enhance audit quality, or users' perception of it, and may even increase the persisting “expectations gap”. For example, “there is a risk (...) readers interpret the inclusion of Auditor Commentary as providing assurance on individual accounts or disclosures” (IAASB 2012, ¶ 63(b)), or that the “(...) KAMs (be) perceived as separate assurance or ‘piecemeal opinions’ (...)” (IAASB 2013, ¶ 49).

Research design

Based on cognitive psychology we develop hypotheses as to how highlighting information in the auditor's reports affects investors' information acquisition. We test these hypotheses in a laboratory experiment employing unobtrusive eye-tracking technology. Throughout the experiment, subjects' eye-movements are recorded as they navigate freely and naturally across the different sections of a complete web-based set of audited financial statements. This technology allows us to objectively and precisely measure users' attention to specific information contained in the auditor's report and the related financial statements, along

with their search patterns when navigating across those statements. This technology further allows us to understand the actual process by which this information is acquired and how it affects users' perception of the audit. We capture users' perception of the audit through a series of seven post-experimental questions, namely their assessment of the level of audit quality (factor score based on subjects' answers to six 7-point questions), and their perception of the uniformity of the assurance level provided by the auditor across the different components of the financial statements (one 7-point question).

Ninety-eight post-graduate accounting students participated in an experiment where they played the role of junior financial analysts and analyzed the full set of audited financial statements of a manufacturing company that presented one of four versions of the auditor's report: current auditor's report (Group A), auditor's report with one or three key audit matters (Groups B and C, respectively), and three KAMs presented along with related audit procedures (Group D). In all three extended audit reports, the auditor comments explicitly on note 5 to the financial statements (total of 15 notes). Audit reports with three matters disclosed, groups C and D, also refer to two additional notes to the financial statements, notes 1k and 14. This 1 x 4 between-subjects design allows us to evaluate the effect on users' behavior (i.e., search patterns, attention level and perception of the audit) of (1) an auditor's report with KAMs, (2) the number of matters presented in the auditor's report, and (3) the inclusion of the audit procedure in the description of a KAM. See Appendices A and B in the paper for details.

Key findings and implication for practice

Consistent with our hypotheses, we find that the disclosure of KAMs impacts users' information search pattern and increases their attention level to matters reported on by the auditor. Specifically, users exposed to KAMs in the auditor's report:

1. Access matters of the financial statements (i.e., notes) that are referred to in the auditor's report more rapidly (Hypothesis 1a, see Table 4 in the paper);
2. Pay greater attention to matters of the financial statements that are referred to in the auditor's report (Hypothesis 1b, see Table 5 and Figure 3 in the paper);
3. Pay less attention to matters not reported on as KAMs (Hypothesis 2, see Tables 5 and 6, and Figure 2 in the paper). Particularly for subjects exposed to an auditor's report with three KAMs (Groups C and D), the evidence suggests that users navigate more quickly through, and pay overall less attention to, the financial statements as a whole, excluding the notes commented on by the auditor (notes 1k, 5 and 14).

We also find evidence suggesting that the lower the number of KAMs reported on, the greater is the effect on users' information acquisition behavior. For example, when only one KAM is reported, subjects pay significantly more attention than any other group to the note referred to explicitly in the auditor's report (i.e., note 5).

Taken together, these results imply that:

- The disclosure of KAMs does act as a "roadmap" that may help users navigate more efficiently across complex financial statements and increases the prominence of potentially valuable information to users.

- Yet, such disclosure appears to bias users' information acquisition process and may leave them to disregard or simply miss otherwise valuable information contained in the financial statements.
- When only one (or possibly two) KAMs are disclosed, users' may place exaggerated emphasis on the related matters disclosed in the financial statements which may, in turn, bias their interpretation of those matters. They may also miss valuable information not easily accessible in those statements.
- Alternatively, when several KAMs are disclosed, users may increasingly rely on these as substitutes for reading the financial statements.

With respect to users' perception of the audit, we find that the disclosure of KAMs (one or three) leads users to perceive that the degree of assurance provided by the auditor differs across components of the financial statements.

- We note, however, that subjects' level of experience/training is significantly positively related to their perception of a uniform degree of assurance.

Moreover, we find that the communication of one KAM negatively impacts subjects' perception of audit quality. When three KAMs are reported, subjects' perception of audit quality is slightly lower than that of the control group (i.e., current standard auditor's report), albeit not at statistically significant levels.

- Further analysis suggest that subjects' negative perception is partly related to their level of attention to the content of note 5 commented on in all three versions of the modified auditor's reports used. This negative effect, however, is only present when subjects are exposed to such report (one or three KAMs). This note deals with a liquidity risk the company is facing and is arguably the disclosure with the most negative tone in our experimental setting.
- We find further that the more subjects perceive the assurance level to be uniform, the higher their perception of overall audit quality, although factor analysis confirms that this attribute of the audit is different from the more general concept of "perceived audit quality". Also, this relation only holds for subjects exposed to an auditor's report with one or three KAMs.
- Yet, controlling for subjects' attention level to note 5 and/or their perception of the uniformity of the assurance level does not eliminate the highly significant negative perception of audit quality documented for subjects exposed to one KAM. We cannot rule out that this relation is merely driven by the nature of the KAM disclosed by the auditor in the experiment. We can only speculate that users exposed to only one KAM referring to an arguably negative and/or "high risk" matter may overemphasize this matter and equate the KAM to a "qualified audit opinion". However, to understand *why* this would adversely affect users' perception of the audit quality would require additional research.

Taken together, these results imply that:

- The reporting of KAMs may aggravate the expectations gap as users are likely to perceive KAMs as separate assurance or “piecemeal opinions” provided by the auditor.
- However, education on the audit process may dampen KAMs’ negative impact on the expectations gap.
- Contrary to the IAASB’s expectation, the changes in auditor reporting (at least those related to the inclusion of KAMs) may have only limited, if any, positive impact on users’ perception of audit quality. Worst, given the nature of KAMs emphasized users’ perception of audit quality may actually decrease.
- Ultimately, auditors will have to be careful in the selection of the KAMs and the number of matters to communicate in the auditor’s report.

Finally, we note no significant difference between including or not the audit procedure in the description of a KAM on users’ information search pattern, their level of attention to components of the financial statements, or their perception of the audit.

Recommendations to the IAASB

Our study has provided evidence consistent with the attention directing role of KAMs, emphasizing some of the benefits expected from the communication of KAMs in the auditor’s report. However, our results also illustrate that the communication of KAMs may have unintended consequence, most notably this may aggravate the expectations gap and even lower users’ perception of audit quality in certain settings. Unfortunately, no one study, including ours, can conclude with certainty on the *net* benefit KAMs are likely to have, notwithstanding the fact that their impact on users will evolve as users and auditors become more familiar with the new reporting format. Moreover, it is important to recognize the inherent limitations of our study when interpreting the results.

Despite the caveat above, we make the following recommendations to the IAASB:

1. Maintain or even increase efforts for educating financial statements users on the audit process as greater understanding of the audit function is likely to dampen KAMs’ negative impact on the expectations gap.
2. Unintended consequences of communicating KAMs appear greatest when only one KAM is communicated. And while the nature and number of KAMs the auditor chooses to disclose is ultimately a matter of professional judgment, it may be appropriate to point out to auditors that limiting their report to one KAM may lead users to “overemphasize” this KAM to the detriment of other information in the financial statements (similar to ISA 701.A7 in the case of multiple KAMs).

INTEGRATED REPORTING

Auditors' Materiality Judgments under Integrated Reporting: The Impact of Strategic Relevance of Reported Information and Strategic Linkages in the Client's Integrative Performance Measurement System

Authors

Wendy Green and Mandy Cheng, *University of New South Wales*

Research Objectives

We examine two factors that are predicted to influence auditors' non-financial performance indicator (NFPI) materiality judgments in the context of Integrated Reporting <IR>, namely, the level of strategic relevance associated with the NFPI being assessed, and the presence of strategic linkages in the client's performance measurement system.

Research Design

Our research design employs two methodologies:

First, we test our hypothesis using 77 auditors in a 2 x 2 x (2) experimental design.

Our participants cover each of the Big4 audit firms and were recruited via contact partners, university alumni network, or personal contacts. On average, participants have 4.85 years work experience as an auditor, and 36 were female. Each participant received a non-performance contingent incentive in the form of a \$30 shopping gift card.

The experiment manipulated two between-subjects independent variables.

- The first independent variable is the client company's strategic focus, manipulated at two levels: strategic focus is either on supply chain management or on customer service. In line with Cheng et al. (2014), we manipulate the client company's strategic focus to enable us to vary the strategic relevance of a number of NFPI items for which the participants are asked to make materiality assessments.
- The second independent variable is the absence versus the presence of strategic linkages associated with the client's strategic objectives in the client's PMS.

In addition, a within-subject independent variable was manipulated which required all participants to make two types of materiality assessments:

- materiality assessments on nonfinancial information relevant to a customer service focus strategy, and
- materiality assessments relevant to a supply chain focus strategy

Second we conducted semi-structured interviews with six audit seniors/managers to further inform our findings.

Key findings

1. Auditors did not distinguish between strategically relevant and non-strategically relevant information in setting their materiality thresholds.

2. When judging whether an identified NFPI misstatement is material:
3. The presence of strategic linkages in the clients performance management system (such as those envisaged under the connectivity principle of the <IR> Framework) increases the salience of strategically relevant NFPI to the auditor, and in turn leads to auditors to judge misstated NFPI of high strategic relevance to be more material than misstated NFPI with low strategic relevance.
4. In the absence of such strategic linkages auditors were not able to differentially assess materiality between strategically relevant and non-strategically relevant misstated NFPI.
5. Auditors generally make more conservative materiality judgments when the integrated report is directed at a broader audience.

Implications for practice

The first finding suggests that in establishing their audit plan, auditors are not able to properly consider strategic relevance in determining materiality thresholds. Given that materiality thresholds establish the level of audit work to be performed, and should specifically imbed the level of risk, our findings suggest that auditors will either be over-auditing the less risky non-strategically relevant information or under-auditing the more risky strategically relevant information, which suggests an associated risk of not detecting misstatements in key strategic information.

However, the second finding suggests that once a misstatement is identified, where strategic linkages are clearly provided, the auditor is able to imbed the strategic importance in their judgment as to whether the information is materially misstated.

These findings have implications for auditors, standard setters and report preparers:

Auditors:

Auditors providing assurance services for NFPI would benefit from considering the strategic relevance of reported NFPI in order to ensure they are identifying key audit risks. The presence of strategic linkages between reported information and the corporate strategy (for example through a strategy map) would assist in this assessment.

As such:

- Where the client utilizes a strategy map, auditors should specifically review the client's strategy map to assist in identifying strategically relevant reported NFPI prior to setting their materiality thresholds as well as in assessing whether reported NFPI is materially misstated.
- Where the client does not utilize a strategy map, in order to enable the auditor to appropriately consider risks associated with reported information, the auditor could discuss the benefits of this tool with management, and encourage them to consider implementing a strategy map. Otherwise, the auditor should undertake a thorough analysis to develop their own strategy map for the client.

Standard setters:

- In regard to assurance under <IR>, standard setters may need to develop further guidance for auditors in determining audit materiality to ensure auditors specifically consider the strategic relevance of reported information

- In regard to reporting under <IR>, standard setters may need to develop further guidance for report preparers suggesting they clearly identify the strategic linkages between reported information and corporate strategy. A valuable tool for establishing such linkages is a strategy map.

Report preparers:

The results of this study suggest that a strategy map is a useful tool to enable auditors to assess risks associated with the NFPI reported by the client. As such, report preparers could benefit from employing such a tool to help them assess the strategic relevance (and associated risks) of their NFPI.

Recommendations to IAASB

Our results suggest that additional guidance from the IAASB may be required for auditors as outlined above. In particular, a requirement for auditors to consider the strategic relevance of reported NFPI, as well as the potential need to determine this relevance through either client-developed or self-developed strategy maps.

INTEGRATED REPORTING

An Examination of the Implications of Integrated Reporting Assurance on Investor Judgment

Authors

Diane Janvrin (Iowa State University), William Dilla (Iowa State University), Jon Perkins (Iowa State University), and Robyn Raschke (University of Nevada Las Vegas)

Research Objectives

This report examines whether presenting non-financial information separately or in an Integrated Report influences investor judgment. Further, it explores whether the level of assurance (reasonable vs. limited) and amount of detail regarding procedures performed presented in a non-financial information assurance report will influence investor judgments. Finally, it examines whether assurance report format (i.e. non-financial assurance reported separately or combined with financial assurance) influences investor judgments. Specifically, this project addresses the following research questions:

Presentation of Non-Financial Information in Separate vs. Integrated Reports

RQ1: Does presenting non-financial information separately vs. integrated with financial information influence investor judgments?

Presence of Assurance on Non-Financial Information Contained in Separate vs. Integrated Reports

RQ2a: Does providing assurance on non-financial information contained in a separate report influence investor judgments?

RQ2b: Does providing assurance on non-financial information contained in an Integrated Report influence investor judgments?

Level of Assurance on Non-Financial Information Contained in Separate vs. Integrated Reports

RQ3a: In a separate report format, does the level of assurance of non-financial information (i.e., reasonable versus limited) influence investor judgments?

RQ3b: In an Integrated Report format, does the level of assurance of non-financial information (i.e., reasonable versus limited) influence investor judgments?

Assurance Report Detail

RQ4: Does the amount of detail regarding procedures performed presented in a non-financial information assurance report influence investor judgments?

Assurance Report Format

RQ5: Does whether non-financial information assurance is presented in a separate report versus combined with the financial assurance report influence investor judgments?

Research Design

We developed an online simulation where nonprofessional investors viewed filtered financial and nonfinancial information and provided investment desirability and investment amount judgments. We varied presence of Integrated Reporting, presence of assurance on environmental information, assurance level on environmental information (reasonable vs limited), assurance details (no detail vs with detail), and assurance report format (separate vs. combined). Participants in the study made investment judgments for a hypothetical diversified manufacturing company. They rated the company's desirability as an investment, expressed on a 0 to 10 scale where 0 = 'very undesirable' and 10 = 'very desirable' and indicated the amount of \$10,000 they would invest in the hypothetical company versus a fixed yield savings account.

The online experimental materials included two manipulation check questions about whether there was assurance on the financial and environmental information, and questions about the overall reliability and credibility of the hypothetical company's financial and environmental information. Participants also completed questions designed to assess their views regarding the importance of environmental, versus financial performance and about whether companies' environmentally responsible activities increase investment returns. Finally, participants provided demographic information.

We collected responses from 766 nonprofessional investors through an online survey firm. Of these participants, 239 failed the non-financial information assurance manipulation check. The mean age of the 527 participants passing the manipulation check is 46.6 years and 65 percent are male. These participants had mean investment experience of 12.40 years. Thirty-four percent held at least undergraduate degrees, ten percent had some graduate courses and 34 percent held graduate degrees.

Key Findings

Exhibit 1 summarizes key findings. First, it appears that non-financial information presentation format (i.e., separate vs. integrated with financial information) does not influence non-professional investors' influence desirability and investment amount judgments. Further, providing assurance on non-financial information contained in either a separate or integrated report does not influence investor judgments, on average. However, the non-financial information assurance level (limited vs. reasonable) does influence both investment desirability and amount judgments. Specifically, investor judgments are unexpectedly higher when non-financial information is included in an Integrated Report that has *limited* as opposed to *reasonable* assurance. In addition, assurance report format and assurance level have an interactive influence on investor judgments. Specifically, investors make higher investment judgments when limited assurance is provided on non-financial information in a separate report. At the same time, non-financial assurance level does not influence investor judgments when financial and non-financial assurance are presented in a combined report.

In addition, a substantial percentage of participants failed a manipulation check regarding the presence or absence of sustainability information assurance. Coram et al. (2009) observe that investors may incorrectly assume that the auditor's report on financial information also gives assurance on nonfinancial information accompanying the statements. Indeed, we found that the proportion of participants who indicated that non-financial information assurance was present when it was absent is substantially greater than the proportion provided with an assurance report that were unaware of its presence.

Implications for Practice

Exhibit 1 summarizes the implications of this study for practice. Companies may be reluctant to obtain reasonable assurance on non-financial information if non-professional investors appear to assign higher value to *limited* rather than *reasonable* assurance. Further, the benefits of acquiring assurance on non-financial information may be greater when companies present their financial and nonfinancial information in an Integrated Report rather than in separate reports. In addition, investors appear to better understand separate assurance reports on financial and non-financial information as opposed to a combined assurance report. This suggests that companies should disclose financial and non-financial assurance in separate reports, at least in the short-term. Providing additional details about procedures in the assurance report (i.e. a 'long form' presentation) does not appear to influence nonprofessional investors' judgments. At the same time, more research is needed to determine whether professional investors attend to the additional information about procedures contained in 'long form' assurance reports. Finally, our results which indicate that investors do not always perceive when non-financial information assurance is present suggest that companies which obtain assurance on non-financial information should consider making the presence of this assurance more salient to investors.

Recommendations to the IAASB

Exhibit 1 summarized recommendations to the IAASB. First, further work is needed to develop non-financial information assurance report wording, especially with respect to communicating the level of assurance provided. In particular, future research needs to investigate whether the language of the limited assurance report provides a false sense of security to nonprofessional investors. Additionally, nonprofessional investors may not be familiar with the difference between limited and reasonable assurance. This suggests the need to educate investors on the differences between these assurance levels. The effectiveness of assurance reports that combine financial and non-financial assurance also needs further examination. Investor input might be sought to determine ways to make the combined assurance report easier to understand. The IAASB may examine whether 'short form' reports (IAASB 2012; IIRC 2014) that include only the basic reporting assurance elements versus 'long form' reports with additional explanations about the procedures performed by the practitioner have differential impacts on professional investors' judgments. Finally, results suggest that the IAASB might consider standards which require companies to more explicitly disclose to investors which information does and does not have independent assurance.

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Agenda Item 10-A

EXHIBIT 1

SUMMARY OF FINDINGS, IMPLICATIONS FOR PRACTICE, AND RECOMMENDATIONS TO IAASB

Findings	Implications for Practice	Recommendations to IAASB
Nonprofessional investors make higher investment judgments when <i>limited</i> rather than <i>reasonable</i> assurance is provided on non-financial information.	Companies may not want to obtain reasonable rather than limited assurance on non-financial information given investors appear to value limited assurance higher.	Results demonstrate importance of further work by the IAASB in developing wording that communicates the level of assurance for a non-financial information assurance report. Investor input into this process may be useful. The IAASB should consider investor education programs so that investors are better able to distinguish between limited and reasonable assurance on non-financial information.
Differences in assurance level provided on non-financial information had a greater effect when presenting summarized performance information in an integrated rather than separate format.	The benefit to companies for providing assurance on their non-financial information may be higher when they present performance information in an Integrated Report rather than when presenting financial and non-financial information separately.	Results demonstrate need to continue to examine the implications of assurance for Integrated Reports as it appears that assurance may be as important or more important to investors when financial and nonfinancial information is integrated than when it is presented separately.
In an Integrated Reporting environment, assurance level has greater influence on investor judgments when assurance reports are presented separately than when the financial and non-financial assurance reports are combined.	Investors appear to better understand separate assurance reports on financial and non-financial information as opposed to a combined assurance report. It appears that companies may want to present separate financial and non-financial assurance reports at this time.	Investors appear to better understand separate assurance reports rather than a combined report. This may be due to a lack of consistent wording in the combined report or investors not being familiar with the wording of a combined report. Perhaps investors input should be sought in determining wording for a combined assurance report.

IAAER Research Feedback
IAASB Main Agenda (March 2015)

Level of detail presented in the assurance report regarding procedures performed does not influence investors judgments.	Companies may not benefit from more details about assurance procedures in the assurance report on non-financial information.	Our preliminary evidence suggests that providing details in an assurance report does not influence non-professional investor judgments; however, examining the influence of providing details with professional investors is probably needed.
Investors perceive that assurance on non-financial information is present when it is not.	Companies that obtain assurance on non-financial information should make the presence of this assurance more salient to investors.	Results suggest the need to consider whether standards should require explicit communication to investors regarding what information is and is not assured.

PROFESSIONAL SKEPTICISM

Hindsight Bias and Professional Skepticism: Does the End Justify the Means?

Authors

Joseph F. Brazel, North Carolina State University, jfbrazel@ncsu.edu; Scott B. Jackson, University of South Carolina, scott.jackson@moore.sc.edu; Tammie J. Schaefer, University of Missouri-Kansas City, schaeferjt@umkc.edu; Bryan W. Stewart, Brigham Young University, bstewart@byu.edu

Research Objectives

Auditors continue to face criticism for failing to exercise sufficient skepticism (e.g., PCAOB 2011). Because the level of audit quality attained on audit engagements hinges on the amount of professional skepticism exercised by auditors (KPMG 2012), there has been a renewed focus on addressing this fundamentally important global audit issue, making it a priority for the International Auditing and Assurance Standards Board (IAASB) and others in the profession (PCAOB 2011; IAASB 2012). Highly skeptical auditors increase the likelihood that material misstatements are detected, which is important to promote investor confidence and global financial stability. However, exercising skepticism may also come at a cost (e.g., budget overruns/conflicts with management) when additional work is performed to obtain appropriate, sufficient evidence (Nelson 2009). Although many solutions have been proposed to increase auditor skepticism, such as firm trainings and mandatory audit firm rotations, we consider an unexplored barrier to skepticism – how auditors reward or penalize skeptical behavior based on outcomes.

Research Design

Drawing on psychology theory, we examine whether hindsight bias in the evaluation process may be a substantial barrier to professional skepticism in the field. Although auditors cannot know with certainty the results of audit testing a priori, hindsight bias predicts that evaluators will judge auditors' performances based on outcomes (i.e., results of their investigations) and ignore whether the skeptical behavior was warranted (e.g., Blank and Nestler 2007). In other words, supervisors will act as if the auditor should have known before testing whether a misstatement existed. Thus, if two staff auditors react to the same set of evidence by investigating an inconsistency, the one who finds a misstatement would be rewarded and the one that does not find a misstatement would be punished. This creates an environment where the costs of skepticism are "worth it" only if a misstatement is found (a low likelihood event).

If the hindsight bias we describe results from costs (budget and client pressures) incurred when professional skepticism is exercised, then a potential solution to alleviate the bias would be to remove such pressures. One way to reduce budget and client pressures may be to increase the audit committee's support of the auditor. An audit committee that is supportive of the auditor (e.g., supports the auditor if a disagreement arises with management and is open to considering additional fees) may reduce the likelihood of a negative evaluation because the costs typically associated with skeptical behavior would be largely eliminated. The reduction of costs should shift the focus of supervising auditors to the appropriateness of the skeptical behavior, rather than the outcome of the skeptical behavior.

We conducted an experiment where practicing audit seniors were asked to evaluate the performance of a hypothetical staff auditor who noticed an inconsistency between a revenue account and related non-financial measures (employee headcount, square footage of facilities, the NFM red flag identified by Brazel et al. (2009)) and chose to exercise an appropriate level of professional skepticism by investigating the

inconsistency. The investigation caused the staff auditor to go over-budget and strain relations with management (the costs of skepticism were incurred). We manipulated (a) the outcome of the staff auditor's investigation (as misstatement found vs. a reasonable explanation was found) and (b) the level of audit committee support (as high vs. low).

We also administered a survey to explore the extent to which auditors perceive and anticipate this bias in the field. The survey examines auditors' perceptions of how the outcome of investigating an inconsistency affects how they are evaluated. Three groups participated in the survey: the senior auditors that participated in the aforementioned experiment, Masters of Accounting (MACC) students with internship experience, and MACC students with no audit experience. Participants provided responses to questions related to the potential outcomes of an investigation – finding a misstatement or not finding a misstatement.

Key findings

Overall, we find strong evidence that the outcome of an investigation affects auditors' evaluations of skeptical behavior. Given the same evidence set and investigation by a staff member, hindsight bias prompts evaluators to penalize staff auditors for skeptical behavior when no misstatement is found and reward them when a misstatement is found. Interestingly, participants in all conditions indicated a strong belief that the inconsistency should have been investigated. This means that despite the fact that the participants all agreed that the matter under consideration warranted additional investigation, the staff auditors that found no misstatement still received significantly lower evaluations.

Surprisingly, the level of audit committee support did not effectively mitigate the hindsight bias in auditor evaluations. In our experiment, audit committee support includes a willingness to pay additional fees and side with the auditor when conflicts arise with management. Given prior findings that audit committee support can improve the audit process (e.g., Bierstaker et al. 2012), our results are particularly surprising. Even when the costs of skepticism were alleviated, auditor evaluations continued to exhibit hindsight bias.

Our survey results also suggest that auditors and MACC students perceive and anticipate there to be hindsight bias in the evaluation of skeptical behavior. When exercising skepticism, participants reported that finding a misstatement, relative to not finding a misstatement, influences (1) their performance evaluation, (2) whether the audit team and client perceive that they received something in return for the time spent, and (3) the client's evaluation of the audit team. These perceptions did not vary by experience level, illustrating that auditors are likely aware of hindsight effects in the evaluation process at the very beginning of their careers. Our combined results suggest that hindsight bias in the evaluation process, may be inhibit skepticism in the field.

Implications for practice

Our study has important implications for practice and should be of interest to the IAASB and others in the accounting community as they look for ways to increase the skepticism exercised by auditors. The results of the experiment highlight how professional skepticism is treated by the current reward and evaluation systems within accounting firms. Additionally, our survey results reveal an awareness of the bias in the evaluation systems, which may have a significant impact on auditor behavior. In other words, auditors know early on in their careers the potential costs of skepticism and, consequently, may choose to not exercise sufficient skepticism levels or identify and investigate evidence inconsistencies. Because understanding why auditors do not exercise sufficient skepticism is the first step to increasing skepticism, our results can help firms and regulators offer trainings to shed light on the effects of hindsight bias and/or make necessary adjustments to reward and evaluation systems.

Recommendations to IAASB

The IAASB strives to enhance audit quality and strengthen public confidence in the profession (IAASB 2012b). The IAASB Strategy and Work Plan notes that it will devote attention to projects of direct relevance to enhancing audit quality, including professional skepticism (IAASB 2012b). The IAASB also released a Staff publication to highlight key considerations within the clarified ISAs regarding professional skepticism and to stress the importance of exercising skepticism (IAASB 2012a). Our study benefits the IAASB and efforts related to audit quality and professional skepticism in three primary ways.

First, we identify a bias within the evaluation and reward system that may negatively impact audit quality by unintentionally discouraging auditors from appropriately adhering to the ISA's stated objectives. ISA 200 requires auditors to perform the audit with an attitude of professional skepticism to reduce the risk that the auditor overlooks unusual circumstances (IAASB 2004a). Similarly, ISA 240 requires auditors to maintain professional skepticism, recognize the possibility that fraud might exist, and investigate any inconsistencies encountered (IAASB 2004b). Our results demonstrate that supervisors evaluate audit staff less favorably when they follow the guidance of ISA 200 and ISA 240 by exercising an appropriate level of professional skepticism and do not find a misstatement (IAASB 2004a, b). Moreover, our survey results demonstrate that auditors (and future auditors) anticipate evaluators employing hindsight bias. Consequently, auditors may choose not to exercise skepticism in order to avoid negative evaluations.

ISQC 1 discusses the importance audit firm culture in promoting and supporting professional behavior in auditors, requiring that firms establish policies and procedures to: (1) promote an internal culture that recognizes that quality is essential in performing engagements (ISQC 1.18), (2) provide reasonable assurance that it has sufficient personnel with the competence, capabilities, and commitment to perform engagements in accordance with professional standards (ISQC 1.29), and (3) provide reasonable assurance that engagements are performed in accordance with professional standards (ISQC 1.32). The behavior found in our study is contrary to the intent and purpose of evaluation and reward systems, which is to provide monitoring and controls to ensure high-quality audit services are delivered. Consistent with ideas expressed in ISQC 1, our study demonstrates the importance of firm culture and informs firms on how they can encourage – and more effectively reward – auditor skepticism.

Second, we explore an engagement-level solution to the problem. One of the principal reasons why supervisors may evaluate skepticism less favorably is because the additional investigation may strain audit budgets and relationships with management. We find that even when these costs are reduced through a supportive audit committee, supervisors still use hindsight bias evaluating of audit staff. Consequently, higher levels of audit committee support may not always engender higher levels of skepticism amongst the engagement team.

Finally, our study will contribute specific context and empirical findings to complement the conceptual aspects of assurance standards related to skepticism (PCAOB 2006; IAASB 2004a). For example, the IAASB (2012a, p. 5) has asked: "What can be done by audit firms and auditors to enhance the awareness of the importance of professional skepticism and its application?" Our findings point to the crucial role that the auditor's evaluation plays in the application of professional skepticism in the field. Our study also addresses Q4: "At what stage in the audit process is professional skepticism necessary?" and Q5: "How does professional skepticism relate to the auditor's responsibilities with respect to fraud?" We investigate how supervisors evaluate staff auditors who exercise skepticism during the substantive testing phase of the audit process (where errors and fraud are likely to be detected). Related to fraud, our experimental materials include a fraud red flag that arises in the risky area of revenue recognition.

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PROFESSIONAL SKEPTICISM

A Study of Skepticism Traits in Auditing Financial Statements

Authors

Takiah Mohd Iskandar – Principal Investigator, Universiti Kebangsaan Malaysia; Norman Mohd Saleh, Universiti Kebangsaan Malaysia; Romlah Jaffar, Universiti Kebangsaan Malaysia; Zakiah Muhammadun Mohamed, Universiti Kebangsaan Malaysia; Sayed Alwee Hussnie Sayed Hussin, National Audit Department of Malaysia

Research Objectives

The objectives of this study are:

1. To examine effects of professional skepticism traits on auditors' assessment of fraud risk,
2. To examine effects of organizational cultural environment on auditors' assessment of fraud risk, and to analyze its moderating effects on the relationships between professional skepticism traits and auditors' assessment of fraud risk.
3. To gain an in-depth understanding on the development of professional skepticism attitude among auditors.

Research Design

This study uses both the quantitative and qualitative approaches. A survey is conducted as the quantitative approach to explore effects of professional skepticism and organizational culture on auditors' fraud risk assessment. In this study, fraud risk assessment refers to the auditor's perception on the likelihood of material misstatements due to fraud. Effects of each trait of professional skepticism on auditors' fraud risk assessment are scrutinized separately. The survey also examines the moderating effects of organizational culture on the relationship between professional skepticism and auditors' fraud risk assessment. The study explains the associations between auditors' fraud risk assessment and professional skepticism, and organizational culture namely in-group collectivism and power distance using the social cognitive theory. Focus group discussions are steered as the qualitative approach to gain an in-depth understanding on the application of the concept of professional skepticism by auditors. The focus group discussions adopt an interpretive approach in line with the social learning theory to explain the application of professional skepticism in the auditing profession and how it may be developed among auditors.

Key Findings

Overall, the study confirms the significant positive effect of professional skepticism on fraud risk assessment of auditors. The positive effect of professional skepticism on fraud risk assessment is evident with respect to questioning mind, searching for knowledge, self-confidence and self-determining traits. Results suggest that the auditing standards need to address three other professional skepticism traits (i.e., searching for knowledge, self-confidence and self-determining) in addition to questioning mind trait which is already incorporated in the existing standards.

Findings of focus group discussions show that auditors accumulate knowledge on professional skepticism through the articulation and appropriation of experience in the workplace. Professional skepticism attitude may be formally developed through social learning process such as in-house training and proper education,

or on the job coaching such as internal inspection, peer review, and mentoring particularly among non-Big4 audit firms. The social learning environments are expected to influence the formation of knowledge on professional skepticism of individual auditors.

The study finds no significant influence of organizational cultural environment on auditors' fraud risk assessment either directly or in moderating the way auditors integrate professional skepticism in their actions. The study finds that bundling of services and time pressure are two impeding factors that may challenge auditors in making independent fraud risk assessment. Thus, audit firms need to enhance their auditors' professional skepticism through better internal audit procedures such as internal inspection and peer-review. In addition, findings also suggest that the application of strict regular monitoring mechanisms by regulators helps enhance the exercise of professional scepticism among auditors.

Implications for Practice

This study provides evidence on the use of social cognitive theory to explain auditors' skepticism attitude in the audit work environment. In addition, the study also shows the applicability of social learning theory to explain how the attitude of professional skepticism is developed among auditors through the articulation, appropriation, anticipation, accumulation and action of knowledge and experience.

For practical purposes, findings of this study provide inputs to standard setters in developing clear and comprehensive descriptions on professional skepticism to be appropriately and effectively applied within the auditing profession. The awareness on professional skepticism among auditors should be nurtured at individual level of auditors during the formal and on the job training, such as higher learning education curriculum, in-house training, continuing professional education programs, and mentoring or coaching system. The development of professional skepticism attitude within the individual auditors would be translated into the value and routine practices of audit team that is responsible for an audit engagement.

Recommendations to IAASB

The study makes the following recommendations:

1. Auditing standards on professional skepticism need to incorporate a clearer definition of professional skepticism. The standard needs to broaden its scope of professional skepticism to include searching for knowledge, self-confidence and self-determining traits in addition to the trait of questioning mind which is already incorporated in the existing standards.
2. The auditing standard should provide clear guidelines on the application of skepticism in auditing financial statements by providing relevant illustrations for each identified traits of professional skepticism.
3. An enhancement of professional skepticism attitude among auditors of non-Big4 firms through monitoring by regulators.
4. A review of the International Standard of Quality Control (ISQC) to include clearer provision for the requirements of the practice of professional skepticism by audit firms.
5. Review of audit fees structure in line with the spirit of maintaining a high level of professional skepticism.