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February 15, 2017

Mr. Matthew Waldron
Technical Director
International Auditing and Assurance Standards Board
International Federation of Accountants
529 5th Avenue, 6th Floor
New York, NY 10017 USA

Dear Mr. Waldron,

JICPA Comments on the Request for Input,
Exploring the Growing Use of Technology in the Audit, with a Focus on Data Analytics

The Japanese Institute of Certified Public Accountants (“we” or “JICPA”) is truly grateful for being given the opportunity to comment with respect to the Request for Input “Exploring the Growing Use of Technology in the Audit, with a Focus on Data Analytics” (hereinafter referred to as “Request for Input”). The following are the comments of JICPA.

1. Comments to the questions stated in the Request for Stakeholder Input

(a) Have we considered all circumstances and factors that exist in the current business environment that impact the use of data analytics in a financial statement audit?

(Comments)

Given that we are basically in agreement with Paragraph 18, “Challenges Posed by Environmental Factors and Circumstances in the Business Environment,” we believe that the following points need to be carefully considered:

[Paragraph 18(a)]

While IAASB lists data acquisition, data security and privacy, as well as the required infrastructure as challenges, JICPA believes that the peripheral tasks relating to data analytics, which are conducted as part of auditing, will also need to be considered. In other words, we also

need to think about knowledge and technology required by the peripheral processes, the processes to ensure the reliability of data analytics, and the cost of data analytics and the resulting performance. Moreover, we believe that the progress made in IT as a whole that impact data analytics including cloud computing should also be included in the scope of consideration.

Also, in terms of Artificial Intelligence (AI), given its increasing media and public attention, we believe that a simple explanation of its general application and application to auditing, as well as its relationship to data analytics would be helpful.

[Paragraph 18(b)]

We believe that when obtaining “sufficient appropriate audit evidence,” as required by ISA, we need to consider to what extent should the auditor monitor the data existing both inside and outside the entity and whether the availability of such data should be considered. It is thought that as entities improve their audit environments and data analytics become more relevant, in cases where such data may be used the quality and volume of the acquired evidence will be required to serve as “sufficient appropriate audit evidence.”

We believe that even in such cases where data analytics are not being used, ISA still leaves room for “sufficient appropriate audit evidence” to be obtained by other audit procedures. However, it will be necessary to consider the differences between the quality and quantity of “sufficient appropriate audit evidence” obtained through other audit procedures and that which has been obtained through the wide use of data analytics. Furthermore, we will also need to consider cases in which data usage is restricted and there are no methods of obtaining alternative audit evidence. In such cases, the possibility of data analytics which could also restrict the scope of the audit needs to be considered.

[Paragraph 18(f)]

The effectiveness and the quality of the audit will likely be negatively impacted during the transitional period in which the auditor acquires the required knowledge and skills, and how such negative impact can be mitigated will also require discussion. Moreover, educating the

stakeholders and providing information in order to bridge the gap between reality and expectations will also be required.

Additionally, according to recent studies on professional skepticism by the IFAC, interviews with audit partners on environmental factors within the firm revealed that the use of IT “may lead to reduced PS.” This is due to the fact that young staff, unlike traditional auditors, no longer learn to “read people,” think critically, and probe for answers (Westermann et al. (2015))¹. We hope that in-depth discussions are conducted on the relationship between data analytics and professional skepticism.

Furthermore, paragraph 39 assumes that the re-education of today’s accountants and auditors will take place within the industry but we believe that a wider perspective will be required for nurturing a new type of professional including coordination with institutions of higher learning and research institutes, joint research, recommendations for and cooperation with university curriculums as part of the education prior to hiring, the acceptance of interns, etc. Additionally, we will also need to consider whether the audit industry can be an attractive workplace for such talent as data scientists and whether there is room for utilization of open resources, and the like.

(b) Is our list of standard-setting challenges accurate and complete?

(Comments)

While we agree with Paragraph 19, “Challenges Encountered by Auditors that May Affect Audit Standard Setting,” we ask that special attention be paid to the following points:

[Paragraph 19(a)]

If data analytics were fully adopted, we will need to consider, the economic aspects of auditing such as the growing number of procedures and the increase in audit hours entailed by the increased testing of internal IT controls, and to what extent such processes will replace or reduce existing audit procedures, in addition to the technological aspects such as the leveling of testing and the reliability of data.

¹ “Executive Summary: State of the Art Research Related to Auditor Professional Skepticism (2013 - 2015)” (December 2015)

Furthermore, in contemplating how data analytics will be used in auditing going forward, insights into the patterns of data analytics and its capabilities as audit evidence and its relationship with the audit process will also become crucial. For example, we will need to examine how methods such as extraction analysis and distribution analysis are being used in the processes of risk identification and risk assessment, and how much room for change remains given future advancements in technology. While paragraph 19 (d) partially touches upon this issue, we look forward to more in-depth discussions, keeping in mind that this will become the biggest point of contention for adopting data analytics in audits.

[Paragraph 19(b)]

We agree with the notion of “expanding the ISAs to provide greater specificity and guidance” while maintaining stability of the audit standards. We also believe that, in order to clarify the issues relating to risks and the reliability of evidence, the definition of information relating to audits produced by the entity should be clarified in ISA 500 Audit Evidence.

[Paragraph 19(c)]

External data are outside the control of the auditee, and, as such, may not be verifiable or may not be obtained more than once. Hence it will be necessary to consider how to assess its reliability and how to preserve it as evidence. It will become evident that an even more sophisticated method than before will be required when assessing the reliability of external data, in terms of both financial and non-financial data, and evidence obtained from third-parties both in digital and paper form. Hence this point will also need clarification in the discussions going forward.

[Paragraph 19(d)]

When considering the addition/revision in the ISA with the audit evidence obtained from data analytics, discussions based on information obtained in a timely manner and that assume technological advancements and facilitate proper judgment will become crucial.

[Paragraph 19(e)]

When data analytics are used in procedures other than risk assessment, particularly in risk response procedures (procedures for the assessment of effectiveness of internal controls and substantive procedures), it will be necessary to consider the basis to which the audit evidence provided by data analytics conforms and to what extent it can be used as corroborating evidence. For example, if data analytics were utilized to gather data compiled through the integration and reconciliation of multiple data within an IT system relating to the order receipt, shipment and invoicing processes in sales operations, such data would be considered audit evidence based on the reliability of general IT controls but it would not be adequate evidence of whether the processes are being conducted based on fact, and it would need to be supplemented by other evidence (evidence that would prove the fact of order receipt, shipment and invoicing). Hence, further discussion is required on how audit evidence provided by data analytics may be used in risk response procedures from the perspective of appropriateness and completeness of the evidence in line with the nature of the risk.

[Paragraph 19(g)]

In certain cases, upon carefully defining “outliers” to appropriate levels, an extremely large number of outliers may be identified; and even after the method of identification is refined, such as through the addition of more conditions, a substantial number of outliers may remain. In such cases, instead of automatically making the decision to sample or test each case, it will be necessary to consider whether the subject of these procedures and the audit evidence required belong to an area with a relatively high probability of material misstatements. If it is such an area, priority should be given to the process of confirming whether the possible aberrations are actual outliers, rather than conducting sampling.

Additionally, when extracting specific items, as in the above case, the absence of any identified outliers in the remaining population does not necessarily mean that risk assessment procedures are not required, since, while not falling under any extraction standards for analysis (assumed

risk of material misstatement), the above procedures alone will not ensure that it is free of the risk of other material misstatements.

[Paragraph 19(h)]

IAASB states that by using data analytics, the auditor can more effectively and efficiently analyze data and as a result measure the risk for a particular assertion or portion thereof. However, we find that this expression may be somewhat abstract and may mean different things and expectations to different readers. We, therefore, believe it is important that concrete examples of elements and methods of data analytics that allow for the accurate measurement of a particular assertion or portion thereof are cited and that their implications are considered. In such cases, by indicating in detail specific situations in which such methods are applied (such as the development of a model that predicts accounting fraud utilizing data), its significance will be better understood.

[Paragraph 19(i)]

If analysis results identical to those obtained by the auditor cannot be repeated depending on the type of data and the characteristics of the tool, handling of the data, including retention, should be carefully considered. Each type of data should be considered separately, for example recordable data including public data such as stock prices.

[Paragraph 19(j)]

As for data analytics technology and tools used by the auditor etc., prior to the consideration of its reliability in terms of practical use, the question of its accountability of whether it contributes to achieving the purpose of the audit will arise. In terms of third-party developed data analytics technology and tools, if the auditor has developed a proprietary logic as an add-on to the basic functions, and similar cases, we believe that the auditor will need to consider the reliability of the third-party developed tool.

(c) To assist the DAWG in its ongoing work, what are your views on possible solutions to the standardsetting challenges?

(Comments)

Participants in DAWG

As previously announced, we believe that participants in the DAWG should not be limited to auditors but include a wide variety of talent. In particular, we believe that it should include analytic specialists such as data scientists, the audited entities that prepare the data used, and vendors of operational programs that prepare the transaction data, among others. At the same time, in projects such as this which include a variety of talent, the participants will assume different events and have different notions of data analytics. Appropriately dealing with such diversity among its participants will become crucial.

Timeliness and promptness of discussions

In areas with rapid technological advancements, various definitions and environments, upon which assumptions are made, change significantly with time, and the technology, which had been the subject of discussion, become outdated in a short period of time. Therefore, prompt initiation and development of discussions are thought to be crucial.

Analysis of the current situation

In the Request for Input, the specific methods and tools of data analytics are not clearly illustrated, and we are concerned that each DAWG participant could have a different notion of the methods and tools assumed. To make sure that everyone is on the same page, we will need to study the current practices and innovative cases in each country and audit firm etc., prior to the revision of ISA, and to share the results of such study. Sharing the results of such study will contribute to effective and beneficial consideration by converging rather than fracturing the discussions.

(d) Is the DAWG's planned involvement in the IAASB projects currently underway appropriate?

(Comment)

As stated in question (f) (i) below, certain ISA projects will have precedence over others but wide-ranging involvement is welcome.

(e) Beyond those initiatives noted in the Additional Resources section of this publication, are there other initiatives of which we are not currently aware of that could further inform the DAWG's work?

(Comment)

JICPA has released IT Committee Research Report No. 48 *The Outlook for IT-Based Auditing: Approaches to Next Generation Audit* (Abridged Version of Full Report) in English translation.

http://www.hp.jicpa.or.jp/specialized_field/files/0-10-48-2-20160726.pdf

Additionally, JICPA has released IT Committee Practical Guidance No. 4 *Guidance on Information Security in the Duties of Certified Public Accountants*, which also relates to this subject (Only the Japanese version has been released).

(f) In your view, what should the IAASB's and DAWG's next steps be? For example, actions the IAASB and DAWG are currently considering include:

- (i) Focusing attention on revisions, where appropriate, to ISAs affected by the IAASB's current projects.
- (ii) Exploring revisions to ISA 520.2
- (iii) Hosting one or more conferences with interested stakeholders to collectively explore issues and possible solutions to the identified challenges.
- (iv) Continuing with outreach and exploration of issues associated with the use of data analytics in a financial statement audit, with a view towards a formal Discussion Paper consultation in advance of any formal standard-setting activities.

(Comments)

Indicating a road map and milestones for the next steps will be indispensable for grasping the overall *picture* of these activities.

- (i) While we recognize that revisions to the ISAs are necessary, attention should be paid to the wording so as not to give the impression that all entities regardless of the situation would be required to use data analytics procedures. Additionally, there is no indication whether the revised ISA's (including revisions for the inclusion of data analytics) will consider the contents of audit without the use of data analytics to be valid or whether such audits will be

deemed inadequate. Furthermore, we will also need to consider whether the International Standards on Assurance Engagements also need revisions.

Moreover, it should be recognized that, in the testing of appropriateness of journal entries required by extant ISA240, data analytics are being widely used, and we should realize that ISA will no longer be able to maintain a neutral approach towards data analytics and there is a need to shift to a position promoting the use of data analytics in the near future.

- (ii) In addition to ISA 315 mentioned in paragraph 32, ISA 540 in paragraph 37 and ISAs 240, 320, 330, 500, 520 and 530 in paragraph 41, ISA 501 *Audit Evidence – Specific Considerations for Selected Items* and ISA 620 *Using the Work of an Auditor’s Expert* will also be affected.

ISAs 500 and 501, in particular, seem to present issues that require further consideration in terms of the reliability of audit evidence obtained through data analytics. Additionally, we will need to consider the requirements when using the results of data analytics as audit evidence and limiting the scope of substantive procedures. Attention will also need to be paid so that inconsistencies in accuracy do not occur with ISA 530 *Audit Sampling*.

Moreover, as data will be handled, ethical rules and ISQC1 will also be affected from the standpoint of protection of data privacy.

Furthermore, the extant ISAs are, by nature, basic and general rules and thus do not offer sufficient guidance to inexperienced auditors practicing analytical procedures. There seems to be no sufficient grounds on which the auditor can explain to a non-auditor what level of data analytics are being applied. Therefore, it is preferable that statistical experts also participate in compiling guidance that incorporates the latest knowledge on statistics and data analytics and abundant applied cases.

- (iii) DAWG should continue to consider the possibility of utilizing substantive procedures of data analytics (substantive analytical procedures and tests of detail) based on specific methods.

Sincerely yours,

Masahiko Tezuka

Executive Board Member – Auditing, Assurance Practice and IT

The Japanese Institute of Certified Public Accountants