

### Audit Evidence and Risk Response (AE&RR) – Technology

This Agenda Item sets out the key messages from the stakeholder feedback received from the outreach for technology-related issues, and the related Staff's views and recommendations.

#### Background

##### *AE&RR Project Proposal – Proposed Action(s)*

1. The AE&RR project proposal includes an action to explore introducing principle-based requirements or relevant application material related to the use of technology in obtaining sufficient appropriate audit evidence, such that the standards remain fit-for-purpose.<sup>1</sup>

##### *Previous IAASB Deliberations*

2. In June 2025, the Board decided to retitle the term 'automated tools and techniques' as 'technological tools,' and to place the revised description of 'technological tools' in the quality management standards, including ISQM 1<sup>2</sup> and ISA 220 (Revised).<sup>3</sup> The revised description, in the context of the ISAs, clarifies that technological tools are understood as technological resources that facilitate the design or performance of audit procedures in obtaining sufficient appropriate evidence.

#### Overview of the Feedback from Outreach and Coordination Activities

##### *Stakeholder Engagement*

3. Staff have engaged on this topic with regulators, audit firms and Forum of Firms (FoF) representatives.

##### *Highlights from the Feedback<sup>4</sup>*

##### Trends in the Use of Technological Tools

- Broad acknowledgement about the growing importance and use of technological tools on audits.
- Views that the auditor's use of technological tools is largely influenced by the extent of the entity's use of technology in its financial reporting process and the stakeholders' expectations of the auditor.

##### Determining Whether it is Necessary to Use Technological Tools

- Majority of firms did not support introducing an explicit requirement for the auditor to determine

<sup>1</sup> See Actions C.2 and C.3 of **Agenda Item 9–I**.

<sup>2</sup> International Standard on Quality Management (ISQM) 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements*.

<sup>3</sup> International Standard on Auditing (ISA) 220 (Revised), *Quality Management for an Audit of Financial Statements*.

<sup>4</sup> Refer to **Agenda Item 9** for a comprehensive overview of the feedback received from the project outreach undertaken to date with a broad range of stakeholders.

whether it is necessary to use a technological tool given that:

- The principles in the extant standards are fit for purpose.<sup>5</sup>
- There are limited scenarios (e.g., blockchain and crypto engagements or engagements where complex financial modelling technologies are used) where the use of technological tools is necessary.
- The determination of the appropriate use of technology should be commensurate with the specific circumstances of the engagement.
- Concerns from some regulators about practices where companies with highly automated financial reporting processes are audited without deploying equivalent technological tools.

#### Use of Technological Tools on Audit Engagements

- Broad support for guidance (authoritative and non-authoritative) to enhance clarity about the auditor's responsibilities when using technological tools on audit engagements.
- Concerns from majority of firms about the 'input-operation-output' model and the need for requirement(s) when the auditor uses technological tools. Key views included:
  - The operation of the tool is in scope of ISQM 1<sup>6</sup> and this is not a conditional consideration.
  - The foundational principles relating to evaluating the relevance and reliability of information intended to be used as audit evidence already encompasses the inputs to the tool.
  - Consideration of an 'output-focused' model may also be necessary in view of concerns around the operability of the model relating to emerging technologies (e.g., generative AI tools (Gen AI)).
- Some regulators provided the following views:
  - Caution against dating the ISAs. At the same time, regulators acknowledge that existing principles may not always be interpreted consistently across audit firms, which can lead to inconsistent adoption and application of technological tools.
  - Certain emerging technologies, such as GenAI, pose heightened risks to audits and guidance is needed to support their appropriate use.
  - While firms may certify technological tools at the firm level, engagement teams remain responsible for assessing the appropriateness of the inputs to, and the outputs of, technological tools.

#### *Input from the Technology Consultation Group (TCG)*

4. In July 2025, Staff of the AE&RR project sought views and input on the topic of introducing principle-based requirements or application material relating to the use of technological tools in obtaining sufficient appropriate audit evidence from members and Staff of the TCG. The key themes from the input provided are summarized below:

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<sup>5</sup> See ISA 220 (Revised), paragraphs 25 and A60 and Proposed ISA 500 (Revised), *Audit Evidence*, paragraph 9.

<sup>6</sup> See ISQM 1, paragraphs 32(f) and A98-A101.

(a) Scenarios Where the Use of Technological Tools is Necessary:

- When auditing certain sectors, the use of technological tools is often necessary (e.g., crypto, blockchain, banking for expected credit losses and insurance for actuarial liabilities).
- The auditor is more likely to use technological tools when the entity is complex, makes extensive use of technology, or particularly uses emerging technologies in its financial reporting processes.

(b) Requiring Auditors to Determine Whether to Use Technological Tools

- There was broad support for application material that provides guidance on how the auditor determines whether to use technological tools, including providing examples to encourage greater use of technological tools without imposing prescriptive requirements.
- There were mixed views on whether an explicit requirement for the auditor to determine the use of technological tools is necessary:
  - Some noted concern about prescribing such determination, given the use of technological tools could be impractical due to varied circumstances auditors face.
  - Some believe a more explicit requirement for determination would enhance consistency in practice.
  - Some commented that an explicit requirement for the auditor to document the consideration of technological tools could promote more vigilant attention to their use in audits.
- Views were also shared that:
  - Technological tools should generally be used in today's audits, with their use considered the default approach, except where circumstances warrant flexibility in this regard or where clear barriers to their use exist.
  - Large audit firms generally have access to their client's systems and data to enable the use of technological tools on engagements, whereas small and medium-sized firms may face some challenges, such as data access or resource constraints. However, such limitations should not, by default, exempt engagement teams from using technological tools, unless such usage is not needed in the circumstances or is impractical.

(c) Suitability of an 'Input-Operation-Output' Model to Emerging Technological Tools

- Views were shared that the 'input-operation-output' model is suitable for rule-based, deterministic technological tools, however it is difficult to apply to adaptive AI tools (e.g., GenAI). For adaptive AI tools, challenges with specific components of the model may include:
  - Determining or assessing the completeness and accuracy of inputs. For example, the input data to large language models may not be visible, clearly defined, or easily verifiable.

- Assessing whether the tool operates as intended is challenging due to the inherent opacity of adaptive AI tools. In addition, given the breadth and diversity of AI tools, approaches to certification vary significantly in practice and continue to evolve rapidly.
- The need for flexible and practical guidance was emphasized to avoid dating the standards. It was also noted that:
  - It is difficult at the current stage to draft fit-for-purpose requirements on the use of technological tools in obtaining audit evidence, given the rapid evolution of technologies. Comments were made that an active review of output generated by adaptive AI tools is essential.
  - The operation of the technological tool should be addressed through audit firms' systems of quality management. In this context, the importance of the IAASB's Technology Quality Management Workstream was highlighted, as it is undertaking a series of activities to help the global audit community navigate how the quality management standards apply to emerging technologies.

## **Staff Views and Recommendations**

### *Views on the Feedback*

5. Based on the collective feedback across stakeholder constituencies, Staff notes support for developing guidance to promote consistency when technological tools are used on audit engagements and to support the auditor in determining when it may be necessary to use technological tools to obtain sufficient appropriate audit evidence.
6. An important message from the feedback is the caution around not dating the standards, in view of the increased use of technological tools in audits and particularly the rapid evolution of emerging technological tools. This includes uncertainty regarding the continued applicability of the 'input-operation-output' model as a result of emerging technologies.

### *Principle-Based Requirements for Technology*

7. Staff proposes not pursuing technology-related requirements that would apply conditionally or otherwise. Instead, Staff is of the view that application material is the appropriate means to facilitate and encourage the auditor's use of technological tools in obtaining and evaluating audit evidence for the in-scope standards. This is because such guidance would clarify the auditor's responsibilities for use of technological tools, promote consistency in practice, and reduce uncertainty, while also maintaining the flexibility needed to future proof and accommodate technological innovation.
8. In forming its view, Staff considered that the existing principles in the standards remain fit for purpose as they accommodate a broad range of considerations, regardless of whether the auditor uses technological tools or not, to obtain and evaluate audit evidence. For example:
  - At the engagement level, paragraph 25 of ISA 220 (Revised) sets an obligation for the engagement partner to determine that sufficient and appropriate resources to perform the engagement are assigned or made available to the engagement team in a timely manner. This extends to all resources, such as human, technological and intellectual resources. On this

basis, it would be unnecessary to require the auditor to determine whether a technological tool should be used as it is already a required determination.

- Paragraph 9 of Proposed ISA 500 (Revised), *Audit Evidence*, requires the auditor to evaluate the relevance and reliability of information intended to be used as audit evidence. This extends to all information used, regardless of whether technology is used in performing audit procedures.
9. In addition, in view of the rapid evolution of emerging technological tools, Staff also believes that:
- (a) The IAASB Technology Quality Management Workstream is well positioned to explore the impact of emerging technologies used in audits and there are yet insights for the Board to draw from such work.
  - (b) On this basis, it is currently premature to determine a single workable model on which technology-related requirements could be developed. For example, GenAI-enabled tools challenge the ‘input-operation-output’ model as in some cases it may not be possible to fully evaluate the appropriateness of inputs to the tools or to determine the operation of the tools as designed. Accordingly, more than one model, or an alternative model to the ‘input-operation-output’ model, may be needed to accommodate different types of technological tools. In the current environment, such matters may be more effectively addressed through guidance.

### *Engagement Resources*

10. Staff propose:
- (a) To introduce in paragraph 25 of ISA 220 (Revised) specificity about the resources used on engagements, such as human, technological and intellectual resources. Doing so would provide prominent consideration for technological (and other) resources at the engagement level, which is the level where appropriate resource-related considerations should be made. Staff considered that, based on the Board’s decision in June 2025 to introduce the term ‘technological tools’ (as a type of technological resource) as a replacement for ‘automated tools and techniques’ and that such change will be made in ISA 220 (Revised) for the ISAs, it makes sense to position specificity about resources in ISA 220 (Revised). In addition, this would be consistent with ISQM 1 that differentiates in the requirement between human, technological and intellectual resources.<sup>7</sup>
  - (b) New application material in ISA 220 (Revised) to better support the auditor’s determination of whether to use technological tools along with examples of circumstances where the use of technological tools may be necessary to obtain audit evidence.
11. **Appendix 1** provides illustrative drafting for the proposals above. In addition, given the proposed changes to the requirement in paragraph 25 of ISA 220 (Revised), related amendments are proposed to paragraphs in other ISAs where this requirement is referenced in the standards (i.e., to paragraph 8 of ISA 300<sup>8</sup> and paragraph 6 of ISA 600 (Revised)<sup>9</sup>).

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<sup>7</sup> See ISQM 1, paragraph 32.

<sup>8</sup> ISA 300, *Planning an Audit of Financial Statements*.

<sup>9</sup> ISA 600 (Revised), *Special Considerations—Audits of Group Financial Statements (Including the Work of Component Auditors)*

*Other Technology Related Enhancements to Application Material*

12. **Appendix 2** sets out proposed enhancements to the application material for the in-scope standards to address actions of the AE&RR project proposal related to developing application material (e.g., guidance and/or examples) addressing technology-related matters.<sup>10</sup>
13. The proposed application material aims to address:
  - (a) Examples of new or changing risks introduced by the use of new or emerging technologies by auditors and by entities (see paragraphs A45 and A47 of Proposed ISA 500 (Revised) and paragraphs A10A and A62 of ISA 330 in **Appendix 2**).
  - (b) Enhanced linkages in ISA 330 with Proposed ISA 500 (Revised), regarding: (i) the level of detail of information relating to meeting the intended purpose(s) of audit procedures; and (ii) examples to illustrate how the level of information may impact the effectiveness of substantive procedures (see paragraphs A15-A16 of ISA 330 in **Appendix 2**).

**Further Work for Technology**

14. Subject to the Board views and input, post September 2025, Staff will continue to progress the work on addressing technology-related matters for the in-scope standards. Such work, including Staff recommendations, will be presented to the Board in due course.

**Matter for IAASB Consideration:**

1. The Board is asked for their views on Staff's views and recommendations discussed in this Agenda Item. In particular:
  - (a) The proposal not to pursue technology-related requirements in the ISAs, and instead to develop application material to facilitate the use of technological tools in audits, as discussed in paragraphs 7–9 above.
  - (b) The proposal to provide specificity of the type of resources used on engagements discussed in paragraphs 10–11 above, including the proposed drafting presented in **Appendix 1**.
  - (c) The proposed application material discussed in paragraphs 12–13 above, including the proposed drafting presented in **Appendix 2**.

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<sup>10</sup> See Actions C.10, C.14 and C.16 in **Agenda Item 9–I**.

## Appendix 1

This appendix sets out illustrative drafting for the proposal discussed in paragraphs 11–10 of this Agenda Item relating to providing specificity about the resources used on engagements.

### ISA 220 (Revised), Quality Management for an Audit of Financial Statements

#### Requirements

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#### Engagement Resources

25. The engagement partner shall determine that sufficient and appropriate resources, such as human, technological and intellectual resources, to perform the engagement are assigned or made available to the engagement team in a timely manner, taking into account the nature and circumstances of the audit engagement, the firm's policies or procedures, and any changes that may arise during the engagement. (Ref: Para. A60–A71, A74–A75, A79)

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#### Application and Other Explanatory Material

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#### *Technological Resources*

- A64. The use of technological resources on the audit engagement may assist the auditor in obtaining sufficient appropriate audit evidence. Use of technological resources may allow the auditor to more effectively and efficiently manage the audit. The use of technological resources may also allow the auditor to evaluate large amounts of data more easily to, for example, provide deeper insights, identify unusual trends or more effectively challenge management's assertions, which enhances the ability of the auditor to exercise professional skepticism. Technological resources may also be used to conduct meetings and provide communication tools to the engagement team. Inappropriate use of such technological resources may, however, increase the risk of overreliance on the information produced for decision making purposes, or may create threats to complying with relevant ethical requirements, for example, requirements related to confidentiality.

- A64A. Technological resources that are used directly by engagement teams in engagements may serve multiple purposes in planning and performing the engagement. Technological resources include technological tools that facilitate the design or performance of engagement procedures in obtaining sufficient appropriate evidence.<sup>11</sup>

#### *Examples of technological tools*

- IT applications that facilitate analysis of data using modeling and visualization or analysis of image processing technology.

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<sup>11</sup> ISQM 1, paragraph A99A

- Engagement software built to manage workflows and assist in planning and performing audit procedures, analyzing evidence and reaching conclusions.
- Technologies that facilitate automating aspects of audit procedures (e.g., robotic process automation technologies), or that facilitate gathering and analysis of large amounts of information from various sources (e.g., artificial intelligence technologies).
- A spreadsheet programmed to perform functions related to designing or performing engagement procedures (e.g., data analysis or generation of information to aid decision making).

*[Note that paragraphs A64 and A64A above are presented as included in Agenda Item 4-B of the June 2025 IAASB meeting (not marked or updated) and are provided for context only]*

A64B. In some circumstances, the entity may use complex or advanced technology to produce information relevant to the preparation of the financial statements. In such circumstances, the engagement partner may consider the entity's use of technology in determining whether sufficient and appropriate technological resources are assigned or made available to the engagement team. How the entity's use of technology affects the assigned resources of the auditor is a matter of professional judgment and is influenced by the nature and circumstances of the audit engagement.

Examples:

- An entity may use complex or advanced technology-enabled models to develop key assumptions used in estimating expected credit losses of loans. The engagement partner may determine that it is necessary for the engagement team to use a technological tool to evaluate the assumptions generated by the models.
- An entity may use a distributed ledger technology to conduct and record transactions of digital assets. The engagement partner may determine that it is necessary for the engagement team to use a technological tool to facilitate the retrieval of the entity's transaction data from the distributed ledger, as it may not be possible or practicable to perform the audit procedure without using such a tool.

## **ISA 300, Planning an Audit of Financial Statements**

### **Requirements**

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#### **Planning Activities**

8. In establishing the overall audit strategy, the auditor shall consider the information obtained from complying with the requirements of ISA 220 (Revised) and:
  - (a) Identify the characteristics of the engagement that define its scope;
  - (b) Ascertain the reporting objectives of the engagement to plan the timing of the audit and the nature of the communications required;

- (c) Consider the factors that, in the auditor's professional judgment, are significant in directing the engagement team's efforts;
- (d) Consider the results of preliminary engagement activities and, where applicable, whether knowledge gained on other engagements performed by the engagement partner for the entity is relevant; and
- (e) Ascertain the nature, timing and extent of resources, such as human, technological and intellectual resources, necessary to perform the engagement.<sup>12</sup> (Ref: Para. A9-A13)

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## **ISA 600 (Revised), *Special Considerations—Audits of Group Financial Statements (Including the Work of Component Auditors)***

### **Introduction**

#### **Scope of this ISA**

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#### *Involvement of Component Auditors*

6. ISA 220 (Revised)<sup>13</sup> requires the engagement partner to determine that sufficient and appropriate resources, such as human, technological and intellectual resources, to perform the engagement are assigned or made available to the engagement team in a timely manner. In a group audit, such resources may include component auditors. Therefore, this ISA requires the group auditor to determine the nature, timing and extent of involvement of component auditors.

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<sup>12</sup> ISA 220 (Revised), paragraph 25

<sup>13</sup> ISA 220 (Revised), paragraph 25

## Appendix 2

This appendix sets out illustrative drafting for the proposals discussed in paragraphs 12–13 of this Agenda Item regarding introducing application material addressing: (i) new or changing risks introduced by the use of new or emerging technologies by auditors and by entities; and (ii) the level of detail of information relating to meeting the intended purpose(s) of audit procedures.

### Proposed ISA 500 (Revised), *Audit Evidence*

#### Application and Other Explanatory Material

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**Designing and Performing Audit Procedures to Obtain Sufficient Appropriate Audit Evidence** (Ref: Para. 8)

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*Form, Availability, Accessibility and Understandability of Information*

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A45. Information intended to be used as audit evidence may exist, but access to such information may be restricted. Such restrictions may be imposed by law or regulation, the source providing the information, or by other conditions.

Examples:

- Laws or regulations may prohibit transfer of certain information to another jurisdiction and the auditor may only be able to use such information by physically visiting the jurisdiction where the information is available.
- War, civil unrest or outbreaks of disease may present conditions where access to certain information to be used as audit evidence is restricted.
- Privacy or secrecy laws or regulations may prohibit the use of certain sensitive client information in some technological tools without proper consent or safeguards.

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A47. In some circumstances, specialized skills or knowledge may be needed to understand or interpret the information intended to be used as audit evidence. Accordingly, the auditor may consider using an auditor's expert to assist in understanding or interpreting the information if the engagement team does not have the appropriate competence and capabilities to do so. Other resources may also be appropriate for such purposes, such as technological or intellectual resources that are available to the auditor, as explained in ISA 220 (Revised).<sup>14</sup>

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<sup>14</sup> ISA 220 (Revised), paragraphs A59–A69

Examples:

Information where specialized skills or knowledge may be needed to understand or interpret information intended to be used as audit evidence may include:

- The information may be highly dependent on the interpretation of local tax laws and regulations (e.g., a tax opinion on a structured transaction), and the auditor may need a local tax lawyer or tax accountant to help interpret the information.
- The information may be included in a contract that contains complicated legal terminology, and the auditor may need a lawyer to help interpret the information.
- The information may have been generated by an IT application used by the entity that is ~~uses a~~ highly complex system or the auditor may use a complex technological tool to perform an audit procedure. The auditor may use an IT ~~programming~~ expert to assist in understanding how the information is generated or interpreting the results.
- The information may be in another language and may need to be translated.

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## **ISA 330, *The Auditor's Responses to Assessed Risks***

### **Application and Other Explanatory Material**

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#### **Audit Procedures Responsive to the Assessed Risks of Material Misstatement at the Assertion Level**

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*The Nature, Timing and Extent of Further Audit Procedures* (Ref: Para. 6)

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Responding to the Assessed Risks at the Assertion Level (Ref: para. 7(a))

#### **Nature**

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A10. The reasons for the assessment given to a risk are relevant in determining the nature of audit procedures. For example, if an assessed risk is lower because of the particular characteristics of a class of transactions without consideration of the related controls, then the auditor may determine that substantive analytical procedures alone provide sufficient appropriate audit evidence. On the other hand, if the assessed risk is lower because the auditor plans to test the operating effectiveness of controls, and the auditor intends to base the substantive procedures on that low assessment, then the auditor performs tests of those controls, as required by paragraph 8(a). This may be the case, for example, for a class of transactions of reasonably uniform, non-complex characteristics that are routinely processed and controlled by the entity's information system.

A10A. The entity's use of technologies may also be relevant in determining the nature of audit procedures, for example, in the case of implementing complex or advanced technologies. In such cases, ISA 220 (Revised)<sup>15</sup> requires the auditor to determine whether sufficient and appropriate technological resources, which may include technological tools, are assigned or made available to the engagement team. In other cases, the auditor may determine that it is more effective or efficient to use technological tools to perform further audit procedures in response to management's use of technologies.

Timing

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Extent

A15. The extent of an audit procedure judged necessary is determined after considering the materiality, the assessed risk, and the degree of assurance the auditor plans to obtain. When a single purpose is met by a combination of procedures, the extent of each procedure is considered separately. In general, the extent of audit procedures increases as the risk of material misstatement increases. However, increasing the extent of an audit procedure is effective only if the audit procedure itself is relevant to the specific risk [Moved from paragraph below]. Factors that may affect the relevance of information intended to be used as audit evidence include, among other factors, the level of detail needed to meet the intended purpose(s) of the audit procedure, as explained in Proposed ISA 500 (Revised).<sup>16</sup>

~~For e~~Examples:

- ~~i~~n response to the assessed risk of material misstatement due to fraud, increasing sample sizes or performing substantive analytical procedures at a more detailed level may be appropriate.
- The auditor may assess the risk of material misstatement as higher for completeness of related party transactions. The auditor may decide to use a technological tool to perform a detailed inspection of individual contracts or agreements of the entity and evaluate whether there are related party transactions that are not identified or disclosed.

~~However, increasing the extent of an audit procedure is effective only if the audit procedure itself is relevant to the specific risk.~~ [Moved to paragraph above]

A16. The use of ~~computer-assisted audit techniques (CAATs)~~ technological tools may enable more extensive testing of ~~electronic transactions and account files~~, which may be useful when the auditor decides to modify the extent of testing, for example, in responding to the risks of material misstatement due to fraud.

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<sup>15</sup> ISA 220 (Revised), paragraph 25

<sup>16</sup> Proposed ISA 500 (Revised), *Audit Evidence*, paragraphs A55.

Examples:

The auditor may use technological tools to:

- ~~Such techniques can be used to~~ Select sample transactions from ~~key electronic files~~ the entity's records, to sort transactions with specific characteristics, or to test an entire population instead of a sample.
- Match detailed information of large populations of transactions, such as dates, quantities and prices, recorded during the period to supporting documents, such as customer orders, invoices, shipping documents, and cash receipts.

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**Evaluating the Sufficiency and Appropriateness of Audit Evidence** (Ref: Para. 25–27)

A62. An audit of financial statements is a cumulative and iterative process. As the auditor performs planned audit procedures, the audit evidence obtained may cause the auditor to modify the nature, timing or extent of other planned audit procedures. Information may come to the auditor's attention that differs significantly from the information on which the risk assessment was based. For example:

- The extent of misstatements that the auditor detects by performing substantive procedures may alter the auditor's judgment about the risk assessments and may indicate a significant deficiency in internal control.
- The auditor may become aware of discrepancies in accounting records, or conflicting or missing evidence.
- Analytical procedures performed at the overall review stage of the audit may indicate a previously unrecognized risk of material misstatement.
- The auditor may become aware of previously unrecognized IT risks arising from the entity's use of IT owing to ineffective general IT controls over a complex or advanced technology.

In such circumstances, the auditor may need to reevaluate the planned audit procedures, based on the revised consideration of assessed risks of material misstatement and the effect on the significant classes of transactions, account balances, or disclosures and their relevant assertions. ISA 315 (Revised 2019) contains further guidance on revising the auditor's risk assessment.<sup>17</sup>

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<sup>17</sup> ISA 315 (Revised 2019), paragraph 37