

**Exposure Draft
April 2017**

Comments due: August 1, 2017

ISA.

International Standard on Auditing

Proposed International Standard on Auditing 540 (Revised)

Auditing Accounting Estimates and Related Disclosures

IAASB

International Auditing
and Assurance
Standards Board

About the IAASB

This Exposure Draft was developed and approved by the International Auditing and Assurance Standards Board (IAASB).

The objective of the IAASB is to serve the public interest by setting high-quality auditing, assurance, and other related standards and by facilitating the convergence of international and national auditing and assurance standards, thereby enhancing the quality and consistency of practice throughout the world and strengthening public confidence in the global auditing and assurance profession.

The IAASB develops auditing and assurance standards and guidance for use by all professional accountants under a shared standard-setting process involving the Public Interest Oversight Board, which oversees the activities of the IAASB, and the IAASB Consultative Advisory Group, which provides public interest input into the development of the standards and guidance. The structures and processes that support the operations of the IAASB are facilitated by the International Federation of Accountants (IFAC).

For copyright, trademark, and permissions information, please see [page 90](#).

REQUEST FOR COMMENTS

This Exposure Draft, Proposed ISA 540 (Revised), *Auditing Accounting Estimates and Related Disclosures*, was developed and approved by the International Auditing and Assurance Standards Board® (IAASB®).

The proposals in this Exposure Draft may be modified in light of comments received before being issued in final form. **Comments are requested by August 1, 2017.**

Respondents are asked to submit their comments electronically through the IAASB website, using the "[Submit a Comment](#)" link. Please submit comments in both a PDF and Word file. First-time users must register to use this feature. All comments will be considered a matter of public record and will ultimately be posted on the website.

This publication may be downloaded from the IAASB website: www.iaasb.org. The approved text is published in the English language.

EXPLANATORY MEMORANDUM

CONTENTS

	Page
Section 1 Introduction	6
Section 2 Guide for Respondents	6
Section 3 Significant Matters.....	7
Section 4 Request for Comments	18
Exposure Draft	
Proposed International Standard on Auditing (ISA) 540 (Revised), Auditing Accounting Estimates and Related Disclosures.....	20

Executive Summary

This exposure draft (ED) of proposed International Standard on Auditing (ISA) 540 (Revised), *Auditing Accounting Estimates and Related Disclosures* (ED-540) is the result of a significant effort over the last two years. In early 2015, the International Auditing and Assurance Standards Board (IAASB) commenced a project to address issues relevant to the audits of financial institutions, as well as ISA 540 more broadly. Outreach activities with regulators and other key stakeholders, along with the impending adoption of IFRS 9,¹ pointed to the need for the IAASB to focus attention in the near term on revisions to ISA 540.²

The objective of ED-540 is for the auditor to obtain sufficient appropriate audit evidence to evaluate whether accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated. ED-540 includes enhanced requirements for risk assessment procedures and the auditor's work effort in responding to the assessed risks of material misstatement to support this evaluation.

ED-540 highlights that the auditor's identification and assessment of the risks of material misstatement for accounting estimates, and the auditor's responses to those assessed risks, are affected by complexity, the need for the use of judgment by management, and estimation uncertainty. Accordingly, these three factors are incorporated throughout ED-540. ED-540 also emphasizes the important considerations regarding complex models, forward-looking information, and internal controls in auditing accounting estimates.

Professional skepticism plays a central role in the audit of accounting estimates. ED-540 contains several key provisions that are designed to enhance the auditor's application of professional skepticism and consideration of the potential for management bias, including enhanced risk assessment requirements, more granular requirements with respect to obtaining audit evidence, and requirements to "stand back" and evaluate the audit evidence obtained.

The IAASB also sought to make ED-540 scalable, recognizing that the standard applies to all accounting estimates. The ED-540 requires the auditor, when dealing with accounting estimates with low inherent risk, to determine whether one or more specific further audit procedures that may provide sufficient appropriate audit evidence in the circumstances. For inherent risk that is not low, the auditor is required to design further audit procedures to obtain audit evidence about matters relating to complexity, judgment or estimation uncertainty, to the extent these factors are the reasons for the assessed risks of material misstatement.

The ED also includes conforming amendments to ISA 260 (Revised),³ ISA 500,⁴ and ISA 580.⁵ Of particular note are the conforming amendments to ISA 500, which deal with the audit evidence implications of external information sources.

¹ International Financial Reporting Standard (IFRS) 9, *Financial Instruments*

² ISA 540, *Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures*

³ ISA 260 (Revised), *Communication with Those Charged with Governance*

⁴ ISA 500, *Audit Evidence*

⁵ ISA 580, *Written Representations*

Section 1 Introduction

1. This memorandum provides background to, and an explanation of ED-540, which was approved for exposure by the IAASB in March 2017.

Section 1-1 – Background

2. The IAASB consultations in developing its *Strategy for 2015–2019*⁶ and related *Work Plan for 2015–2016*⁷ indicated a need for the IAASB to take action to address issues relevant to the application of ISA 540 in audits of financial institutions, as well as more broadly.
3. Since early 2015, the IAASB has undertaken outreach activities to identify issues regarding the auditing of accounting estimates for financial institutions and other entities. The outreach included meetings with representatives of the International Accounting Standards Board, United States Public Company Accounting Oversight Board, the Financial Stability Board, the Basel Committee on Banking Supervision’s Accounting Expert Group, the International Association of Insurance Supervisors, and the International Forum of Independent Audit Regulators – as well as auditors (including small and medium practitioners), industry groups, preparers, and others.
4. The outreach indicated that regulators and auditors of financial institutions were of the view that the IAASB should focus on the issues for audits of financial institutions arising from IFRS 9, ahead of its effective date for financial statements for annual periods beginning on or after January 1, 2018, and a similar project conducted by the United States Financial Accounting Standards Board. These standards adopt expected credit loss models for loan loss provisions, which fundamentally changes the way that banks and other entities will account for their loan assets and other credit exposures.
5. After listening to key stakeholders, including the IAASB Consultative Advisory Group and the Public Interest Oversight Board, the IAASB concluded that most, if not all, of the issues identified with respect to expected credit losses would be equally relevant when auditing other complex accounting estimates.⁸ Accordingly, it was concluded that a holistic revision of ISA 540 should be undertaken as a matter of priority. The Task Force issued a project update⁹ in early 2016 to summarize the audit challenges identified with respect to expected credit losses and set out initial thinking on how these challenges may be addressed under the current ISAs.

Section 2 Guide for Respondents

The IAASB welcomes comments on all matters addressed in this ED, but especially those identified in the Request for Comments section. Comments are most helpful when they refer to specific paragraphs, include the reasons for the comments, and make specific suggestions for any proposed changes to wording. Respondents are free to address only questions relevant to them from the Request for Comments section. When a respondent agrees with proposals in this ED (especially those calling for change in current practice), it will be helpful for the IAASB to be made aware of this view as this cannot always be inferred when not stated.

⁶ www.ifac.org/system/files/publications/files/IAASB-Strategy-2015-2019_0.pdf

⁷ www.ifac.org/system/files/publications/files/IAASB-Work-Plan-2015-2016.pdf

⁸ For example, the impending Insurance Contracts standard that the IASB is expected to issue in 2017.

⁹ www.ifac.org/system/files/publications/files/IAASB-ISA-540-Project-Publication.pdf

Section 3 Significant Matters

Section 3A – Public Interest Issues Addressed in ED-540

6. Although all the proposals in ED-540 are made with the public interest in the forefront, revisions that are most important in supporting the public interest are set out below.

Modernizing the ISA for an Evolving Business Environment

7. In proposing revisions to ISA 540, the IAASB recognized that serving the public interest included modernizing ISA 540 for evolving financial reporting frameworks. Making accounting estimates in accordance with IFRS 9 and other recent financial reporting standards will often give rise to greater estimation uncertainty, require greater use of modelling and forward-looking information, and involve the need for an enhanced control or governance environment. These financial reporting standards often require enhanced disclosures that explain the basis on which accounting estimates have been made and the significant judgments and assumptions involved.
8. The IAASB also decided that, given the increasing use of external information sources in making accounting estimates (such as pricing services for financial instruments), improving and clarifying the requirements and application material regarding the use of information from such sources as audit evidence is in the public interest (see Section 3E below).
9. In modernizing the ISA, the IAASB also sought to make the new and enhanced requirements scalable. Although ED-540 addresses the auditing of all accounting estimates, the IAASB saw merit in explicitly treating accounting estimates with an assessed risk of material misstatement that is based on low inherent risk differently to those where inherent risk is not low (see section 3C-1 below).

Fostering an Appropriately Independent and Skeptical Mindset of the Auditor

10. The IAASB recognizes the central role that professional skepticism plays in the audit of accounting estimates. ED-540 contains several key provisions that are designed to enhance the auditor's application of professional skepticism, including:
- Enhanced risk assessment requirements (see section 3B below) provide a better basis for identifying and assessing the risks of material misstatement related to accounting estimates;
 - More granular requirements regarding obtaining audit evidence when inherent risk is not low; and
 - Requirements to “stand back” and evaluate the audit evidence obtained regarding the accounting estimates, including both corroborative and contradictory audit evidence.

Use of the Term “Reasonable”

11. The word “reasonable” is used in both extant ISA 540 and ED-540 in the objective and many key requirements. In extant ISA 540, the objective of the standard uses the term “reasonable” for accounting estimates but “adequate” for disclosures, although neither term is defined or explained further. The IAASB concluded that both the accounting estimate and the related disclosures should be “reasonable” in the context of the applicable financial reporting framework, as continuing to use “adequate” may inappropriately suggest that disclosures are less important than the accounting estimate itself.

12. The IAASB debated whether “reasonable” is a sufficiently clear and high threshold. It was suggested that the subjective nature of the term may not adequately promote, and could undermine, the exercise of professional skepticism. The IAASB considered alternative approaches, before concluding that “reasonable” would be most appropriate terminology, provided that guidance was included as to its meaning. The IAASB has therefore provided guidance in the application material (see paragraph A2) regarding factors that may be relevant to the auditor’s evaluation of whether the accounting estimates and related disclosures are reasonable. Guidance has also been provided in paragraph A3 regarding the term “appropriate,” which is used in a number of paragraphs throughout ED-540, including, most importantly, in describing what “reasonable” means (see also section 3C-2 below).
13. In aligning the objective of ED-540 to refer to “reasonable in the context of the applicable financial reporting framework” for the accounting estimate and related disclosures, the IAASB recognized that ISA 700 (Revised) uses the terms “appropriate” and “adequate” in relation to disclosures.¹⁰ Noting a degree of inconsistency, the IAASB decided not to make conforming amendments to ISA 700 (Revised) at this time, but rather to consider the need to do so as part of the planned post-implementation review of that ISA.

Other Matters

14. ED-540 contains a number of other proposals in the public interest. The ED includes a new requirement (see section 3D) to enhance the communication in accordance with ISA 260 (Revised) between auditors and those charged with governance about accounting estimates, and to provide a stronger basis for the communication about the auditor’s views about significant qualitative aspects of the entity’s accounting practices.¹¹

Section 3B – Risk Assessment and Related Activities

An Enhanced Approach to Risk Assessment

15. As a result of the outreach conducted during the development of ED-540, one of the focus areas for the project was the risk assessment requirements, and particularly what could be done to reinforce professional skepticism. The importance of enhancing the risk assessment requirements was also highlighted in the findings from the ISA Implementation Monitoring project.¹² These findings indicated inconsistency in the extent to which auditors obtain an understanding of accounting estimates (including the underlying data, the models used in making the accounting estimates, the internal consistency of management assumptions used, and how management has understood and addressed estimation uncertainty). In addition, these findings indicated that changes in the business environment, including the increased use of information technology systems, the use of information from external sources, and the importance of the regulatory environment in certain industries are not emphasized in extant ISA 540. As a result of these inputs, the IAASB concluded that the risk assessment requirements needed to be more specific to address the auditing challenges in an increasingly complex business environment and increased complexity in financial reporting frameworks.

¹⁰ ISA 700, paragraphs 13(b), 13(e), and 39(b)(iii)

¹¹ See ISA 260 (Revised), paragraph 16(a)

¹² www.iasb.org/projects/isa-implementation-monitoring

16. In addition to other changes, paragraph 10 of ED-540 addresses these points through:
- Paragraph 10(b), which requires the auditor to obtain an understanding of the regulatory factors, if any, relevant to accounting estimates. The IAASB believes that, given the important role of regulators in certain industries, such as the banking and insurance industry, obtaining such an understanding may assist the auditor in determining whether additional disclosures are required, and may provide an indication of areas in which there may be a potential for management bias. The application material also highlights that there may be separate regulatory reporting requirements that are not consistent with the requirements of the applicable financial reporting framework, such as requirements for regulatory capital maintenance purposes (see paragraphs A14–A15).
 - Paragraph 10(c), which requires the auditor to obtain an understanding of the nature of the accounting estimates and related disclosures that the auditor expects to be included in the entity’s financial statements. The IAASB noted that requiring this understanding enhances the application of professional skepticism in the risk assessment process by avoiding or mitigating cognitive biases, such as confirmation bias. The auditor may obtain the required understanding based on the auditor’s past knowledge and experience (including that obtained through other audits), the auditor’s understanding of the applicable financial reporting framework, or the auditor’s understanding of the nature of the entity and its environment (see paragraph A16).
 - Paragraphs 10(e)(i) and A26–A31, give greater emphasis to obtaining an understanding of the use of models, and factors that may be relevant in obtaining that understanding. The IAASB noted that the use of models has increased due to changes in accounting standards, such as the introduction of an expected credit loss model, and the increased complexity of the business environment. Therefore, the IAASB was of the view that enhancing the requirements and related application material with respect to management’s use of models will assist auditors in performing a robust risk assessment. The related application material includes factors that the auditor may consider in obtaining an understanding of the models used and related control activities.
 - Paragraph 10(e)(iii), which requires the auditor to obtain an understanding of the process used to select data, including the source(s) of that data and how management identifies significant data.¹³ The IAASB recognizes that accounting estimates are increasingly generated using data that comes in large volumes, is derived from complex information technology systems, or is from systems that traditionally have not been part of the financial reporting process. The IAASB was therefore of the view that more specificity in the risk assessment and further enhancements in the application material (see paragraphs A39–A42) would foster a more consistent work effort in addressing these circumstances.
 - Paragraph 10(f), which requires the auditor to obtain an understanding of each of the components of internal control, as described in ISA 315 (Revised),¹⁴ as they relate to making accounting estimates. The IAASB recognized that the requirements and application material needed to be modernized for more complex environments as in these environments, oversight by those charged with governance is critical to ensure that models are appropriate in the

¹³ ED-540, paragraph A35A explains that significant data is data for which a reasonable variation in the data would materially affect the measurement of the accounting estimate.

¹⁴ ISA 315 (Revised), *Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment*

circumstances, and that appropriate assumptions and data are used. The related application material (see paragraphs A48–A60) provides extensive guidance about matters that the auditor may consider in obtaining this understanding.

Identifying and Assessing the Risks of Material Misstatement

17. Extant ISA 540 focuses specifically on estimation uncertainty with respect to the identification and assessment of the risks of material misstatement. Outreach performed by the IAASB indicated that there may be other factors that influence the risks of material misstatement in relation to an accounting estimate. Therefore, the IAASB discussed possible other factors and concluded that the following three factors are most likely to influence the risks of material misstatement in relation to making an accounting estimate:

- Complexity;
- The need for the use of judgment by management; and
- Estimation uncertainty.

18. The three factors are mentioned in the introduction section of ED-540 (see paragraphs 2 and 3), and the application material (see paragraphs A79–A93). Appendix 2 provides further background on the factors. Together, these sections provide material to aid understanding of each of the factors, and the interrelationships among them.

Significant Risks

19. Extant ISA 540 has an emphasis on determining whether any of the accounting estimates that have been identified as having high estimation uncertainty give rise to significant risks. In developing ED-540, other factors were identified that have to be considered in identifying and assessing the risks of material misstatement relating to accounting estimates (see paragraphs 17 and 18). In addition, more granular requirements have been introduced (see Section 3C-1) to obtain sufficient audit evidence about specified matters when those factors are reasons for a risk of material misstatement and inherent risk is not low. The IAASB concluded that determining whether an accounting estimate is a significant risk involves considering relevant factors (including those in paragraph 28 of ISA 315 (Revised)) in relation to all accounting estimates not just those where there is high estimation uncertainty (see paragraph 15 of ED-540).

<p>Factors</p> <p>Throughout ED-540 reference is made to the factors of complexity, the need for the use of judgment by management, and estimation uncertainty. In the view of the IAASB, these factors are important in the identification and assessment of, and response to, the risks of material misstatement relating to accounting estimates. This table provides a summary of these factors.</p> <p><i>Complexity</i></p> <p>The Board recognized that the business environment has become more complex since the last time ISA 540 was revised. The increasingly complex business environment has also increased the complexity in making accounting estimates. Complexity in making accounting estimates can arise from the method used, including modelling, and the data on which the accounting estimate is based.</p> <p><i>Judgment</i></p> <p>Judgment will be used by management in the selection or application of appropriate methods, the selection or development of appropriate assumptions, and the selection or interpretation of data. Accounting estimates that require the need for significant judgment by management increase the risk of intentional or unintentional management bias.</p> <p><i>Estimation Uncertainty</i></p> <p>Estimation uncertainty arises from factors that give rise to an inherent lack of precision in the measurement of an accounting estimate. Although the concept of estimation uncertainty was included in extant ISA 540, ED 540 further highlights the need for management to understand and address estimation uncertainty, and how this relates to the auditor's evaluation of the reasonableness of management's point estimate and related disclosures.</p>
--

Retrospective Review

20. The IAASB's deliberations and outreach discussions highlighted the importance of the retrospective review (see paragraph 11). It was agreed that the value of the retrospective review could be enhanced by highlighting that it can also be performed over several periods or over a shorter period (such as a half-year or quarterly). In addition, the IAASB agreed to clarify that the auditor is required to take into account the characteristics of the accounting estimates in determining the nature and extent of the retrospective review.

Consideration of Whether Specialized Skills or Knowledge are Required

21. Given the increasingly complex nature of certain accounting estimates the IAASB considered how to emphasize the importance of considering whether specialized skills and knowledge are required in auditing accounting estimates. The IAASB noted that extant ISA 540 has a requirement (see paragraph 14) for such a consideration as part of the auditor's response to the assessed risk of material misstatement. The IAASB decided to add a similar requirement in relation to the identification and assessment of the risks of material misstatement to emphasize the importance of considering the need for specialized skills or knowledge earlier in the process and in relation to understanding or identifying and assessing the risks of material misstatement (see paragraph 12).

Section 3C – Work Effort*Section 3C-1 – Obtaining Audit Evidence about Accounting Estimates*

22. Extant ISA 540 requires the auditor to undertake one or more of four responses to the risks of material misstatement relating to an accounting estimate. In brief, the four responses are:
- Determine whether events occurring up to the date of the auditor's report provide audit evidence regarding the accounting estimate;
 - Test how management made the accounting estimate and the data on which it is based;
 - Test the operating effectiveness of the controls over how management made the accounting estimate, together with appropriate substantive procedures; and
 - Develop a point estimate or a range to evaluate management's point estimate.
23. During outreach and the related IAASB discussions, it was noted that the approach in extant ISA 540 does not require the auditor to select the most appropriate procedure, and does not specify the circumstances in which each of the responses is required to be applied (though guidance on this is included in the application material). It was also noted that, in some cases, auditors may not identify and assess risks at a sufficiently granular level, which may result in the development of further audit procedures that do not adequately address the risks.
24. Banking and insurance regulators noted that the auditor's testing of the operating effectiveness of controls relating to accounting estimates, in particular controls over models, can be critical in auditing accounting estimates. However, it was noted that extant ISA 540 does not require the auditor to focus on this aspect of the audit, and has limited references to controls in the work effort requirements (see paragraph 13(c) of extant ISA 540). A controls-based approach was seen to be particularly important for audits of financial institutions given the nature of their accounting estimates, and the complexity and judgment often involved in management's selection of methods, assumptions and data in making those accounting estimates.

25. By contrast, the IAASB also heard concerns that an overly prescriptive approach for all accounting estimates would be impractical and unnecessary when dealing with accounting estimates with low inherent risk.
26. In response to these concerns, the IAASB chose to develop an approach (see paragraphs 15–20) that:
- (a) Builds upon the factors discussed in paragraph 16 above so that the requirements can better address specific circumstances (see Section 3C-2 below);
 - (b) For risks of material misstatement where inherent risk is not low, identifies certain matters that may result from a specific risk of material misstatement, rather than addressing responses for seeking audit evidence about accounting estimates;
 - (c) Supports scalable application of the standard by introducing more detailed objective based requirements to design and perform further audit procedures to obtain sufficient appropriate audit evidence about certain matters, only when inherent risk is not low. When inherent risk is low, the auditor determines whether one or more further audit procedures adopting one or more responses would provide sufficient appropriate audit evidence regarding the assessed risks of material misstatement (see paragraph 15(a)). When inherent risk is not low, the auditor's further audit procedures are required to include procedures to obtain audit evidence about certain matters in applicable circumstances when one or more of the factors are a reason for the assessment of the risk of material misstatement (see paragraph 15(b));
 - (d) Notes that the auditor's further audit procedures (whether substantive tests or test of controls) have to be responsive to the reasons for the assessment given to the risk of material misstatement and that the higher the assessed risk of material misstatement, the more persuasive the audit evidence needs to be. This reminds the auditor of the obligation under ISA 330¹⁵ and reinforces the need for the auditor's responses to be commensurate with the assessed risks of material misstatement; and
 - (e) Reinforces the need to test the operating effectiveness of controls when the auditor intends to rely on those controls relating to accounting estimates or when substantive procedures alone cannot provide sufficient appropriate audit evidence at the assertion level (see paragraph 16).

Section 3C.2 – Work Effort When There is Complexity, Judgment, or Estimation Uncertainty

27. When inherent risk is not low, ED-540 would require that the auditor's further audit procedures include procedures to obtain audit evidence about the matters in paragraphs 17–20, when applicable. The matters in those paragraphs relate to specific assessed risks of material misstatement that are relevant when the reasons for the assessment include complexity, the need for the use of judgment by management, or estimation uncertainty.
28. The requirements in paragraphs 17–19 are not drafted in the form of procedures that shall all be performed, or a list of possible procedures from which the auditor shall choose. Instead, these paragraphs contain requirements that are focused on objectives that the procedures selected by the auditor need to accomplish. These requirements are intended to guide the auditor in designing and performing further audit procedures to obtain sufficient appropriate audit evidence about the specific

¹⁵ ISA 330, paragraph 7(b)

matters that are relevant when one or more of the factors of complexity, judgment, or estimation uncertainty are reasons for the assessed risk of material misstatement.

29. For example, when the reason for the assessment given to a risk of material misstatement include the need for the use of judgment by management, paragraph 18 directs the auditor to design and perform procedures to obtain audit evidence about management’s judgments in the selection of the method, the significant data or significant assumptions, and about management’s judgments when the application of the method involves complex modelling. Paragraphs 18(a)-(c) set out the specific objective based requirements relevant when each of the three factors is a reason for the assessment.
30. The IAASB believes that this approach provides a suitable granular work effort, which is targeted at the reasons given to the assessment of the risks of material misstatement. The IAASB believes that the use of objective based requirements will enable their proportionate application in terms of the nature (whether substantive procedures or tests of controls), timing and extent of the procedures performed, recognizing that the higher the assessed risk of material misstatement, the more persuasive the audit evidence needs to be. In addition, it is believed that this approach also helps to clarify the intent of the auditor’s procedures (that is, to be responsive to the reasons for the assessed risk of material misstatement, as required by ISA 330).

Significant Risks

31. In developing ED-540, the IAASB noted that the requirements reserved for significant risks in extant ISA 540¹⁶ would also be applicable in relation to many risks that are not be determined to be significant risks. Accordingly, the IAASB has not continued to include specific requirements for significant risks in ED-540. Instead, significant risks are also included under the risk factors driven approach discussed above. Paragraphs 15 and 16 of ED-540 drive the auditor’s response to all risks of material misstatement, including significant risks, and the more granular requirements in paragraphs 17–20 apply when the inherent risk is not low

Focus on the Use of an Auditor’s Point Estimate or Ranges

32. One of the procedures in extant ISA 540 that the auditor can undertake to respond to the assessed risks of material misstatement is to develop an auditor’s point estimate or range to evaluate management’s point estimate (see paragraph 22 above). If the auditor concludes that it is appropriate to use an auditor’s range, extant ISA 540 requires the auditor to “narrow the range”, based on the audit evidence available, until all outcomes in the range are considered reasonable.
33. The guidance in extant ISA 540 on narrowing the range indicates, among other matters, that the auditor’s range is required to encompass all “reasonable outcomes” rather than all possible outcomes and that ordinarily a range that has been narrowed to be equal to or less than performance materiality is adequate for evaluating management’s point estimate (although it also notes that in some industries it may not be possible to do so). It also describes a two-step process for narrowing the range by eliminating, from the range of all possible outcomes, those at the extremities (judged by the auditor to be unlikely to occur) and continuing to narrow the range, based on audit evidence available, until all outcomes in the range are considered reasonable. The IAASB discussed concerns that this approach to “narrowing the range”, coupled with a lack of explanation about what would constitute a “reasonable outcome”, could result in an auditor’s range that is inappropriately wide and agreed not to retain this approach.

¹⁶ Extant ISA 540, paragraphs 15, 16, 17, 20 and 23(a)

34. The IAASB also noted the importance of clarity in the requirements regarding the auditor's response to the risk of material misstatement relating to estimation uncertainty. Accordingly, when the reasons for the assessment given to a risk of material misstatement include estimation uncertainty, and inherent risk is not low, ED-540 requires the auditor to obtain sufficient appropriate audit evidence about whether management has taken appropriate steps to understand and address estimation uncertainty and to develop a point estimate and related disclosures that are reasonable. If, in the auditor's judgment, management has not done so, the auditor is required, to the extent possible, to develop an auditor's point estimate or range to enable the auditor to evaluate the reasonableness of management's point estimate and the related disclosures that describe the estimation uncertainty (see paragraph 19).
35. The IAASB further acknowledged the importance of the auditor's consideration of how management has taken steps to understand and address estimation uncertainty and has depicted the estimation uncertainty in the financial statements, that is, whether management has selected an appropriate point estimate, and has developed appropriate related disclosures in the financial statements that describe the estimation uncertainty, in view of the requirements and other objectives of the applicable financial reporting framework. The IAASB has therefore included in ED-540 additional application material to assist the auditor in considering these matters, and in evaluating the reasonableness of management's point estimate and related disclosures (see paragraphs A113–A125).
36. If the auditor concludes that it is appropriate to develop an auditor's range, paragraph 20 requires the auditor to include in that range only amounts that:
- Are supported by the audit evidence; and
 - The auditor has evaluated to be reasonable in the context of the measurement objectives and other requirements of the applicable financial reporting framework.
37. These requirements are also supported by application material (see paragraphs A128–A134). The application material describes how the auditor may develop a point estimate or range, including, for example, using management's model and selecting alternative assumptions or data sources to develop a point estimate or range (see paragraph A131).
38. The application material also highlights the need to consider whether there is an indication of management bias in the selection of the assumptions, data or method (see paragraph A133), and the implications in circumstances when the auditor's range is multiples of materiality for the financial statements as a whole (see paragraph A134). In these circumstances, ED-540 indicates that the auditor's evaluation of the reasonableness of the disclosures about estimation uncertainty becomes increasingly important, and also has potential implications for the auditor's evaluation of whether sufficient appropriate audit evidence has been obtained and of whether a misstatement exists.
39. ED-540 also includes application material addressing the determination of the misstatement when management's point estimate differs from the auditor's point estimate or range (see paragraphs A143–A146).

Section 3.C-3 – The Importance of “Standing Back”

40. In discussing professional skepticism for ED-540, the IAASB noted that a “stand back” provision at the assertion level for accounting estimates would improve auditors' focus on obtaining sufficient appropriate audit evidence in relation to accounting estimates, particularly those for which inherent risk is not low. Accordingly, the IAASB believed that, when inherent risk is not low and the reasons for the assessment given to the risk of material misstatement include complexity, the need for the

use of judgment by management, or estimation uncertainty and inherent risk, it is particularly important for the auditor to step back and re-evaluate certain matters with respect to each of those accounting estimates.

41. As a result, the IAASB decided to include a stand back provision in paragraph 22, which requires the auditor to evaluate whether, based on the audit procedures performed and the audit evidence obtained, the assessed risks of material misstatement remain appropriate; sufficient appropriate audit evidence has been obtained; and management's decisions relating to the recognition, measurement, presentation, and disclosure of these accounting estimates in the financial statements are in accordance with the applicable financial reporting framework. The application material (see paragraphs A139–A141) explains the purpose of the requirement, and provides a practical example and guidance on accounting estimates that have not been recognized but may need to be disclosed.
42. The IAASB considered, but rejected, explicitly including reference to professional skepticism in paragraph 22 on the basis that including references to professional skepticism in specific requirements, but not others, would not improve professional skepticism, as long as the requirements reinforced the concept. The IAASB also included a requirement (see paragraph 23) to consider all relevant audit evidence obtained, whether corroborative or contradictory to highlight this important element of professional skepticism.

Section 3C-4 – Audit Evidence about Disclosures

43. In addition to the requirement addressing whether the disclosures related to accounting estimates are in accordance with the applicable financial reporting framework, extant ISA 540 requires the auditor, for significant risks only, to evaluate the adequacy of disclosures regarding estimation uncertainty.
44. The IAASB has noted the increasingly important role of disclosures in financial reporting, and particularly with respect to accounting estimates, and has already completed a project addressing the audit implications of disclosures in general.¹⁷ The IAASB noted that, in many cases, disclosures relating to accounting estimates are critical to users' understanding of the accounting policies applied, the nature and extent of estimation uncertainty, key judgments and other matters relating to accounting estimates and more so when estimation uncertainty is high.
45. ED-540 continues the IAASB's emphasis on the importance of disclosures by including requirements addressing:
 - (a) Disclosures for all accounting estimates (see paragraph 21). This paragraph requires the auditor to obtain audit evidence about whether the disclosures are reasonable in the context of the applicable financial reporting framework and:
 - i. In the case of a fair presentation framework, whether management has provided the disclosures beyond those specifically required by the framework that are necessary to achieve the fair presentation of the financial statements as a whole, or
 - ii. In the case of a compliance framework, whether the disclosures are those that are necessary for the financial statements not to be misleading.
 - (b) Disclosures that describe estimation uncertainty (see paragraph 19 (a)(ii) of ED-540). This requirement is based on the extant ISA 540 requirement to evaluate the adequacy of

¹⁷ www.ifac.org/publications-resources/addressing-disclosures-audit-financial-statements

disclosures for accounting estimates that give rise to significant risks, but is extended to all accounting estimates affected by risks of material misstatement when the reasons for the assessment include estimation uncertainty and inherent risk is not low (see also paragraph 33).

Section 3D – Other Matters

Communication with Those Charged with Governance

46. The IAASB recognized the importance of a two-way dialogue between the auditor and those charged with governance. In ED-540, the IAASB has included a new requirement (see paragraph 26) to place more emphasis on communications with those charged with governance or management regarding accounting estimates, including providing a basis for the communication about the auditor's views about significant qualitative aspects of the entity's accounting practices and the extent to which the accounting estimates and their related disclosures are affected by, or subject to, complexity, the need for the use of judgment by management, estimation uncertainty, or other relevant factors.¹⁸
47. The application material to paragraph 26 includes guidance on communications with regulators (see paragraph A157). The IAASB was of the view that this application material is particularly important for audits of financial institutions. It was also noted that a possible future International Auditing Practice Note on the communication between the auditor and financial institution regulators could elaborate how such communications could be addressed in those circumstances.

Documentation

48. The IAASB considered the merits of expanding the documentation requirement to provide more specificity. The IAASB concluded that the documentation requirements in ISA 230¹⁹ would already apply to many of the auditor's judgments required by ED-540. Accordingly, ED-540 includes new application material that links the requirement to ISA 230, and highlights aspects of the auditor's work under ED-540 that likely would give rise to judgments that would be documented under ISA 230 (see paragraph A158). In addition, the extant ISA 540 documentation requirement has been extended to include documentation of indicators of possible management bias, if any, and the auditor's evaluation thereof in forming the opinion on the financial statements as a whole.

Appendix 1

49. Appendix 1 discusses different types of measurement bases that may be relevant in making accounting estimates. It is intended to provide context for the auditor's consideration of the extent to which the factors of complexity, the need for the use of judgment by management, and estimation uncertainty may be inherent in the use of a particular measurement basis. This appendix replaces the appendix in extant ISA 540 on fair value measurements and disclosures.

¹⁸ See ISA 260 (Revised), paragraph 16(a).

¹⁹ ISA 230, *Audit Documentation*

Section 3E - Conforming and Consequential Amendments

ISA 500, Audit Evidence

50. In the Project Proposal,²⁰ the IAASB acknowledged that amendments to ISA 500 and ISA 540 may be needed to clarify the distinction between a third-party pricing source and a management's expert.

Scope

51. The IAASB noted that many entities use external parties as a source of non-pricing related information in preparing the financial statements and concluded that conforming and consequential amendments should also be made for non-pricing data obtained from external information sources. Paragraph A1B of ISA 500 includes examples of both pricing and non-pricing data. Given the nature of such data, the IAASB was of the view that it would be more appropriate to refer to external information sources instead of third-party pricing sources.

52. The IAASB proposes the following conforming and consequential amendments to ISA 500:

- A definition of an external information source (see paragraph 5cA of ISA 500) with related application material that explains how an external information source differs from a management's expert (see paragraphs A1A-A1C of ISA 500).
- Specifically including external information sources in paragraph 7 of ISA 500.
- New application material addressing audit evidence considerations related to external information sources (see paragraphs A33A-A33H of ISA 500). These paragraphs include material regarding factors about the relevance and reliability of information obtained from an external information source, specific material on fair value measurements, and when management and the auditor use the same information source.

53. In considering these amendments, the IAASB noted that the IAASB's Work Plan for 2017-2018²¹ includes a project to determine revisions necessary to ISA 500. This raised the question within the IAASB whether the amendments to ISA 500 should be exposed in ED-540, whether they should be considered as part of a project to revise ISA 500 more holistically, or whether the amendments should be made within ISA 540. As addressing external information sources as part of ED-540 would be responsive to stakeholders, especially banking and insurance regulators, the IAASB concluded that external information sources should be addressed as part of the project to revise ISA 540. The IAASB also decided that the changes to ISA 500 should be strictly limited to external information sources.

Other Conforming Amendments

54. The IAASB agreed to propose conforming amendments to ISA 260 (Revised) and ISA 580. The conforming amendments to ISA 260 (Revised) are needed given the addition of a requirement related to the communication with those charged with governance and management. The proposed changes to ISA 260 (Revised) include highlighting matters that the auditor may communicate with those charged with governance related to accounting estimates (included in Appendix 2 of ISA 260 (Revised)) and highlighting the factors of complexity, judgement and estimation uncertainty).

55. The conforming amendment to the illustrative representation letter, as included in Appendix 2 of ISA 580, was made to keep the representation letter aligned with paragraph 22 of ED-540.

²⁰ www.ifac.org/system/files/publications/files/IAASB-ISA-540-Project-Proposal.pdf

²¹ www.ifac.org/publications-resources/iaasb-work-plan-2017-2018-enhancing-audit-quality

Section 4 Request for Comments

Respondents are asked to comment on the clarity, understandability and practicality of application of the requirements and related application material of ED-540. In this regard, comments will be most helpful if they are identified with specific aspects of ED-540 and include the reasons for any concern about clarity, understandability and practicality of application, along with suggestions for improvement.

Overall Questions

- 1) Has ED-540 been appropriately updated to deal with evolving financial reporting frameworks as they relate to accounting estimates?
- 2) Do the requirements and application material of ED-540 appropriately reinforce the application of professional skepticism when auditing accounting estimates?

Focus on Risk Assessment and Responses

- 3) Is ED-540 sufficiently scalable with respect to auditing accounting estimates, including when there is low inherent risk?
- 4) When inherent risk is not low (see paragraphs 13, 15 and 17–20):
 - a) Will these requirements support more effective identification and assessment of, and responses to, risks of material misstatement (including significant risks) relating to accounting estimates, together with the relevant requirements in ISA 315 (Revised) and ISA 330?
 - b) Do you support the requirement in ED-540 (Revised) for the auditor to take into account the extent to which the accounting estimate is subject to, or affected by, one or more relevant factors, including complexity, the need for the use of judgment by management and the potential for management bias, and estimation uncertainty?
 - c) Is there sufficient guidance in relation to the proposed objectives-based requirements in paragraphs 17 to 19 of ED-540? If not, what additional guidance should be included?
- 5) Does the requirement in paragraph 20 (and related application material in paragraphs A128–A134) appropriately establish how the auditor’s range should be developed? Will this approach be more effective than the approach of “narrowing the range”, as in extant ISA 540, in evaluating whether management’s point estimate is reasonable or misstated?
- 6) Will the requirement in paragraph 23 and related application material (see paragraphs A2–A3 and A142–A146) result in more consistent determination of a misstatement, including when the auditor uses an auditor’s range to evaluate management’s point estimate?

Conforming and Consequential Amendments

- 7) With respect to the proposed conforming and consequential amendments to ISA 500 regarding external information sources, will the revision to the requirement in paragraph 7 and the related new additional application material result in more appropriate and consistent evaluations of the relevance and reliability of information from external information sources?

Request for General Comments

- 8) In addition to the requests for specific comments above, the IAASB is also seeking comments on the matters set out below:

- (a) Translations—Recognizing that many respondents may intend to translate the final ISA for adoption in their own environments, the IAASB welcomes comment on potential translation issues respondents note in reviewing the ED-540.
- (b) Effective Date—Recognizing that ED-540 is a substantive revision, and given the need for national due process and translation, as applicable, the IAASB believes that an appropriate effective date for the standard would be for financial reporting periods ending approximately 18 months after the approval of a final ISA. Earlier application would be permitted and encouraged. The IAASB welcomes comments on whether this would provide a sufficient period to support effective implementation of the ISA.

Invitation for Field Testing

The IAASB recognizes that the significance of accounting estimates to audits of all types of entities may make the impact of this ED particularly significant for audit practices. Accordingly, the IAASB welcomes field testing of the proposals by auditors of all different sizes and in relation to auditing different estimates (i.e., subject to varying degrees of complexity, judgment, and estimation uncertainty).

Interested auditors should contact Brett James, IAASB Deputy Director, at brettjames@iaasb.org for further information on the field testing information package.

**PROPOSED INTERNATIONAL STANDARD ON AUDITING 540
(REVISED)
AUDITING ACCOUNTING ESTIMATES AND RELATED DISCLOSURES**

(Effective for audits of financial statements for periods
beginning on or after [TBA].)

CONTENTS

	Paragraph
Introduction	
Scope of this ISA	1
Nature of Accounting Estimates	2–3
Key Concepts of This ISA.....	4–6
Effective Date	7
Objective	8
Definitions	9
Requirements	
Risk Assessment Procedures and Related Activities	10–12
Identifying and Assessing the Risks of Material Misstatement	13
Responses to the Assessed Risks of Material Misstatement.....	14–20
Disclosures Related to Accounting Estimates	21
Overall Evaluation Based on Audit Procedures Performed	22–23
Indicators of Possible Management Bias	34
Written Representations	25
Communication with Those Charged With Governance or Management.....	26
Documentation.....	27
Application and Other Explanatory Material	
Nature of Accounting Estimates	A1
Key Concepts	A2–A3
Definitions	A4–A8
Risk Assessment Procedures and Related Activities	A9–A70
Identifying and Assessing the Risks of Material Misstatement	A71–A93
Responses to the Assessed Risks of Material Misstatement.....	A94–A134
Disclosures Related to Accounting Estimates	A135–A138
Overall Evaluation Based on Audit Procedures Performed	A139–A141

PROPOSED INTERNATIONAL STANDARD ON AUDITING 540 (REVISED)
AUDITING ACCOUNTING ESTIMATES AND RELATED DISCLOSURES

Misstatements.....	A142–A146
Indicators of Possible Management Bias	A147–A152
Written Representations	A153–A154
Communication with Those Charged With Governance or Management.....	A155–A157
Documentation.....	66

Appendix 1: Measurement Bases of Accounting Estimates

Appendix 2: Factors That May be Indicators of Risks of Material Misstatement for Accounting Estimates

<p>International Standard on Auditing (ISA) 540 (Revised), <i>Auditing Accounting Estimates and Related Disclosures</i>, should be read in conjunction with ISA 200, <i>Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing</i>.</p>

Introduction

Scope of this ISA

1. This International Standard on Auditing (ISA) deals with the auditor's responsibilities relating to accounting estimates and related disclosures in an audit of financial statements. Specifically, it expands on how ISA 315 (Revised),²² ISA 330,²³ ISA 500²⁴ and other relevant ISAs are to be applied in relation to accounting estimates. It also includes requirements and guidance on misstatements of individual accounting estimates, and indicators of possible management bias.

Nature of Accounting Estimates

2. Many financial statement items are susceptible to an inherent lack of precision in their measurement, which is referred to as estimation uncertainty. In the ISAs, such financial statement items are referred to as accounting estimates. Accounting estimates vary widely in nature, and their measurement may also be subject to, or affected by, complexity and the need for the use of judgment by management. The extent to which they are subject to or affected by complexity and judgment is often related closely to the extent to which they are subject to or affected by estimation uncertainty. Accordingly, the auditor's identification and assessment of the risks of material misstatement relating to accounting estimates, and the auditor's responses to those assessed risks are affected by these three factors, and the interrelationship among them. (Ref: Para: A1, Appendix 1, Appendix 2)
3. When an accounting estimate is being made, its susceptibility to misstatement may increase because of the need to:
 - (a) With respect to complexity:
 - (i) Apply appropriate specialized skills or knowledge in the selection, design or application of the method used to make the accounting estimate, including when the method involves complex modelling.
 - (ii) Appropriately consider the relevance and reliability of the data used, whether the data is obtained from internal sources or from external information sources.
 - (iii) Maintain the integrity of the data used.
 - (b) With respect to the use of judgment by management:
 - (i) Appropriately take into account available information when selecting methods, assumptions, or data.
 - (ii) Mitigate the risk of management bias.
 - (c) With respect to estimation uncertainty:
 - (i) Take appropriate steps to address estimation uncertainty.
 - (ii) Select an appropriate management point estimate or make appropriate related disclosures in the financial statements.

²² ISA 315 (Revised), *Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment*

²³ ISA 330, *The Auditor's Responses to Assessed Risks*

²⁴ ISA 500, *Audit Evidence*

Key Concepts of This ISA

4. This ISA focuses the auditor's attention on designing and performing further audit procedures (including, where appropriate, tests of controls) responsive to the reasons for the assessment given to the assessed risks of material misstatement, particularly when those reasons include complexity, judgment or estimation uncertainty. This ISA also recognizes that the factors of complexity, judgment or estimation uncertainty are interrelated and that there are inherent limitations in reducing estimation uncertainty beyond certain limits.
5. The application of professional skepticism by the auditor is particularly important to the auditor's work relating to accounting estimates. Professional skepticism also is important because there is a particular risk of management bias affecting accounting estimates due to their subjective, potentially complex and uncertain nature.
6. This ISA requires an evaluation of accounting estimates based on the audit procedures performed and the audit evidence obtained. In doing so, the auditor is required to evaluate whether the accounting estimates, and related disclosures, are reasonable in the context of the applicable financial reporting framework. (Ref: Para. A2–A3).

Effective Date

7. This ISA is effective for audits of financial statements for periods beginning on or after [TBA].

Objective

8. The objective of the auditor is to obtain sufficient appropriate audit evidence about whether:
 - (a) Accounting estimates, whether recognized or disclosed in the financial statements; and
 - (b) Related disclosures in the financial statements,are reasonable in the context of the applicable financial reporting framework.

Definitions

9. For purposes of the ISAs, the following terms have the meanings attributed below:
 - (a) Accounting estimate – A monetary amount, prepared in accordance with the requirements of the applicable financial reporting framework, the measurement of which is subject to estimation uncertainty. (Ref: Para. A4)
 - (b) Auditor's point estimate or auditor's range – An amount, or range of amounts, respectively, developed by the auditor in evaluating management's point estimate. (Ref: Para. A5)
 - (c) Estimation uncertainty – The susceptibility of an accounting estimate to an inherent lack of precision in its measurement. (Ref: Para. A6)
 - (d) Management bias – A lack of neutrality by management in the preparation of information. (Ref: Para. A7)
 - (e) Management's point estimate – The amount selected by management for recognition or disclosure in the financial statements as an accounting estimate.

- (f) Outcome of an accounting estimate – The actual monetary amount that results from the resolution of the underlying transaction(s), event(s) or condition(s) addressed by an accounting estimate. (Ref: Para A8)

Requirements

Risk Assessment Procedures and Related Activities

10. When performing risk assessment procedures and related activities to obtain an understanding of the entity and its environment, including its internal control, as required by ISA 315 (Revised),²⁵ the auditor shall obtain an understanding of the following: (Ref: Para. A9–A10)
 - (a) The requirements of the applicable financial reporting framework relevant to accounting estimates, including the recognition criteria, measurement bases and the related presentation and disclosure requirements. (Ref: Para. A11–A13)
 - (b) Regulatory factors, if any, relevant to accounting estimates.²⁶ (Ref: Para. A14–A15)
 - (c) The nature of the accounting estimates and related disclosures that the auditor expects to be included in the entity’s financial statements. (Ref: Para. A16–A17)
 - (d) How management identifies those transactions, events and conditions that may give rise to the need for accounting estimates to be recognized or disclosed in the financial statements. In obtaining this understanding, the auditor shall make inquiries of management about changes in circumstances that may give rise to new, or the need to revise existing, accounting estimates. (Ref: Para. A18–A23)
 - (e) How management makes accounting estimates, including: (Ref: Para. A24–A25)
 - (i) The methods used, how they are selected or designed, and how they are applied, including the extent to which they involve modelling; (Ref: Para. A26–A31)
 - (ii) The process used to select assumptions, including alternatives considered and how management identifies significant assumptions; (Ref: Para. A32–A38)
 - (iii) The process used to select data, including the source(s) of that data and how management identifies significant data; (Ref: Para. A39–A42)
 - (iv) The extent to which management has applied specialized skills or knowledge, including whether a management’s expert has been used; (Ref: Para. A43–A44)
 - (v) How the risk of management bias is identified and addressed; (Ref: Para. A45)
 - (vi) How management has addressed estimation uncertainty; and (Ref: Para. A46)
 - (vii) How management has addressed the need for a change from the prior period in the methods, assumptions or data used, and if so, the nature of, and reasons for, such changes. (Ref: Para. A47).
 - (f) Each of the components of internal control as they relate to making accounting estimates.²⁷ (Ref: Para. A48–A60)

²⁵ ISA 315 (Revised), paragraphs 5–6 and 11

²⁶ ISA 315 (Revised), paragraph 11(a)

²⁷ ISA 315 (Revised), paragraphs 14–24

11. The auditor shall review the outcome of accounting estimates included in the previous period financial statements, or, where applicable, their subsequent re-estimation to assist in identifying and assessing the risk of material misstatement in the current period. The auditor shall take into account the characteristics of the accounting estimates in determining the nature and extent of that review. The review is not intended to call into question judgments about previous period accounting estimates that were appropriate based on the information available at the time they were made. (Ref: Para. A61–A66)
12. The auditor shall determine whether specialized skills or knowledge are required, in order to perform the risk assessment procedures, or to identify and assess the risks of material misstatement. (Ref: Para. A67–A70)

Identifying and Assessing the Risks of Material Misstatement

13. In applying ISA 315 (Revised), the auditor is required to identify and assess the risks of material misstatement, at the financial statement and assertion levels, and to determine whether any of the risks of material misstatement identified are, in the auditor's judgment, significant risks. In identifying and assessing risks of material misstatements in relation to an accounting estimate, the auditor shall take into account the extent to which the accounting estimate is subject to, or affected by, one or more, relevant factors, including: (Ref: Para. A71–A78)
 - (a) Complexity in making the accounting estimate, including:
 - (i) The extent to which the method, including modelling, involves specialized skills or knowledge; and (Ref: Para. A79–A81)
 - (ii) The difficulty, if any, in obtaining relevant and reliable data and maintaining the integrity of that data; (Ref: Para. A82)
 - (b) The need for the use of judgment by management and the potential for management bias, including with respect to methods, assumptions, and data; and (Ref: Para. A83–A85)
 - (c) Estimation uncertainty, including the extent to which the accounting estimate is sensitive to the selection of different methods or to variations in the assumptions and data used. (Ref: Para. A86–A93)

Responses to the Assessed Risks of Material Misstatement

14. In responding to the assessed risks of material misstatement related to accounting estimates, the auditor shall determine whether specialized skills or knowledge are required to design and perform audit procedures, or to evaluate the results of those procedures. (Ref: Para. A67–A70)
15. In applying ISA 330, the auditor is required to design and perform further audit procedures to respond to the assessed risks of material misstatement, including significant risks, at the assertion level. In doing so: (Ref: Para A94–A95)
 - (a) When inherent risk is low, the auditor shall determine whether one or more of the following further audit procedures would provide sufficient appropriate audit evidence regarding the assessed risk(s) of material misstatement in the circumstances: (Ref: Para A96)
 - (i) Obtaining audit evidence about events occurring up to the date of the auditor's report;

- (ii) Testing how management made the accounting estimate and the data on which it is based; or
 - (iii) Developing a point estimate or range based on available audit evidence to evaluate management's point estimate.
- (b) When inherent risk is not low, the auditor's further audit procedures shall include procedures to obtain audit evidence about the matters in paragraphs 17–20, when applicable. (Ref: Para A97)

The auditor's further audit procedures shall be responsive to the reasons for the assessment given to the risk of material misstatement in accordance with paragraph 13, recognizing that the higher the assessed risk of material misstatement the more persuasive the audit evidence needs to be.

16. If the auditor intends to rely on controls relating to accounting estimates, or if substantive procedures alone cannot provide sufficient appropriate audit evidence at the assertion level, the auditor shall design and perform tests of controls to obtain sufficient appropriate audit evidence as to their operating effectiveness.²⁸ (Ref: Para A98–A100)

Complexity

17. In complying with paragraph 15(b), when the reasons for the assessment given to the risk of material misstatement include complexity related to management's use of a complex method (including complex modelling), or when management's method otherwise involves the use of specialized skills or knowledge, the auditor shall obtain sufficient appropriate audit evidence about the following matters: (Ref: Para A101–A104)
- (a) Whether the method, and significant data and significant assumptions, are appropriate in the context of the applicable financial reporting framework;
 - (b) Whether significant data is relevant and reliable.²⁹
 - (c) Whether management has appropriately understood or interpreted significant data, including with respect to contractual terms. (Ref: Para. A105)
 - (d) Whether the integrity of significant data and significant assumptions has been maintained in applying the method; and (Ref: Para. A106)
 - (e) Whether the calculations are mathematically accurate and appropriately applied.

Judgment

18. In complying with paragraph 15(b), when the reasons for the assessment given to the risk of material misstatement include the need for the use of judgment by management, the auditor shall obtain sufficient appropriate audit evidence about the following matters:
- (a) When the accounting estimate involves the use of significant data or significant assumptions:
 - (i) Whether management's judgments regarding the selection and use of the method and the significant data and significant assumptions: (Ref: Para A107)

²⁸ ISA 330, paragraph 8

²⁹ ISA 500, paragraph 7

- a. Are appropriate in the context of the measurement objectives and other requirements of the applicable financial reporting framework; or
 - b. Give rise to indicators of possible management bias.
- (ii) Whether management's judgments about changes from previous periods in the method or the significant data or significant assumptions, are appropriate (Ref: Para. A108–A110).
 - (iii) Whether significant assumptions are consistent with each other and with those used in other accounting estimates or with assumptions used in other areas of the entity's business activities.
- (b) When relevant to the appropriateness of the significant assumptions or the appropriate application of the requirements of the applicable financial reporting framework, whether management has the intent to carry out specific courses of action and has the ability to do so. (Ref: Para. A111);
 - (c) When management's application of the method involves complex modelling, whether judgments made have been applied consistently and whether, when applicable:
 - (i) The design of the model meets the measurement objective of the applicable financial reporting framework and is appropriate in the circumstances;
 - (ii) Changes, if any, from the previous period's model are appropriate in the circumstances; and
 - (iii) Adjustments, if any, to the output of the model are consistent with the measurement objective of the applicable financial reporting framework and are appropriate in the circumstances. (Ref: Para A112)

Estimation Uncertainty

19. In complying with paragraph 15(b), when the reasons for the assessment given to the risk of material misstatement include estimation uncertainty:
- (a) The auditor shall obtain sufficient appropriate audit evidence about whether, in the context of the applicable financial reporting framework:
 - (i) Management has taken appropriate steps to understand and address the estimation uncertainty, and develop a point estimate that meets the measurement objective; and (Ref: Para. A113–A115)
 - (ii) Management's point estimate is reasonable, and the disclosures in the financial statements that describe the estimation uncertainty are reasonable. (Ref: Para. A116–A125)
 - (b) When, based on the audit evidence obtained, in the auditor's judgment, management has not appropriately understood and addressed the estimation uncertainty, the auditor shall, to the extent possible, develop an auditor's point estimate or range to enable the auditor to evaluate the reasonableness of management's point estimate and the related disclosures in the financial statements that describe the estimation uncertainty. (Ref: Para A126–A134)

20. If the auditor concludes that it is appropriate to develop an auditor's range, the auditor shall only include in that range amounts that:
- (a) Are supported by the audit evidence; and
 - (b) The auditor has evaluated to be reasonable in the context of the measurement objectives and other requirements of the applicable financial reporting framework.

Disclosures Related to Accounting Estimates

21. The auditor shall obtain sufficient appropriate audit evidence about whether the disclosures related to accounting estimates are reasonable in the context of the requirements of the applicable financial reporting framework including: (Ref: Para. A135–A138)
- (a) In the case of a fair presentation framework, whether management has provided the disclosures beyond those specifically required by the framework that are necessary to achieve the fair presentation of the financial statements as a whole, or
 - (b) In the case of a compliance framework, whether the disclosures are those that are necessary for the financial statements not to be misleading.

Overall Evaluation Based on Audit Procedures Performed

22. In applying ISA 330³⁰ to each accounting estimate for which the auditor's further audit procedures are required to address the matters in paragraphs 17–19, the auditor shall evaluate, based on the audit procedures performed and audit evidence obtained, whether: (Ref: Para A139–A141)
- (a) The assessments of the risks of material misstatement at the assertion level remain appropriate, including when indicators of possible management bias have been identified;
 - (b) Sufficient appropriate audit evidence has been obtained; and
 - (c) Management's decisions relating to the recognition, measurement, presentation and disclosure of these accounting estimates in the financial statements are in accordance with the applicable financial reporting framework.
23. Based on the audit procedures performed and the audit evidence obtained, the auditor shall evaluate whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated. In making this evaluation, the auditor shall consider all relevant audit evidence obtained whether corroborative or contradictory. If the auditor is unable to obtain sufficient appropriate audit evidence, the auditor shall evaluate the implications for the audit.³¹ (Ref: Para. A2, A142–A146)

Indicators of Possible Management Bias

24. The auditor shall evaluate whether judgments and decisions made by management in making the accounting estimates included in the financial statements, even if they are individually reasonable, indicate possible bias on the part of the entity's management. When indicators of possible bias are identified the auditor shall evaluate the implications for the audit. (Ref: Para. A147–A152)

³⁰ ISA 330, paragraphs 25 and 26

³¹ ISA 330, paragraph 27

Written Representations

25. The auditor shall obtain written representations from management and, when appropriate, those charged with governance that they believe the methods, significant data, and significant assumptions used in making the accounting estimates and their related disclosures are appropriate to achieve recognition, measurement or disclosure that is reasonable in the context of the applicable financial reporting framework. The auditor shall also consider the need to obtain representations about specific accounting estimates, including in relation to the methods, assumptions, or data used. (Ref: Para. A153–A154)

Communication with Those Charged With Governance or Management

26. In applying ISA 260 (Revised)³² and ISA 265,³³ the auditor is required to communicate with those charged with governance or management about certain matters, including significant qualitative aspects of the entity's accounting practices and significant deficiencies in internal control, respectively. In doing so, the auditor shall consider the matters, if any, to communicate related to the extent to which the accounting estimates and their related disclosures are affected by, or subject to, complexity, the need for the use of judgment by management, estimation uncertainty, or other relevant factors. (Ref: Para. A155–A157)

Documentation

27. The audit documentation shall include:³⁴
- (a) The basis for the auditor's evaluation of the reasonableness of the accounting estimates and related disclosures; and
 - (b) Indicators of possible management bias, if any, and the auditor's evaluation thereof in forming the auditor's opinion on whether the financial statements as a whole are materially misstated. (Ref: Para. A158–A159)

* * *

Application and Other Explanatory Material

Nature of Accounting Estimates (Ref: Para. 2)

- A1. Examples of situations where accounting estimates may be required include:
- Inventory obsolescence.
 - Warranty obligations.
 - Depreciation method.
 - Outcome of long term contracts.
 - Estimated costs arising from litigation settlements and judgments.
 - Expected credit losses.

³² ISA 260 (Revised), *Communication with Those Charged with Governance*, paragraph 16(a)

³³ ISA 265, *Communicating Deficiencies in Internal Control to Those Charged with Governance and Management* paragraph 9

³⁴ ISA 230, *Audit Documentation*

- Insurance contract liabilities.
- Financial instruments, including complex financial instruments that are not traded in an active market.
- Employee pension liabilities.
- Share-based payments.
- Assets or liabilities acquired in a business combination, including goodwill and intangible assets.
- Property or equipment held for disposal.
- Transactions involving the exchange of assets or liabilities between independent parties without monetary consideration, for example, a non-monetary exchange of plant facilities in different lines of business.
- Infrastructure asset valuation.

Key Concepts (Ref: Para. 6, 23)

A2. The auditor is required to obtain sufficient appropriate audit evidence about whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework. Reasonable, in the context of the applicable financial reporting framework,³⁵ means that all the relevant requirements of the applicable financial reporting framework have been applied appropriately, including those that address:

- The making of the accounting estimate, including the selection of the method, assumptions and data from available alternatives in view of the nature of the accounting estimate and the facts and circumstances of the entity;
- The selection of a management's point estimate that is representative of the range of reasonably possible outcomes of the measurement process; and
- The disclosures about the accounting estimate, including disclosures about how the accounting estimate was developed and that explain the nature, extent, and sources of estimation uncertainty.

Other considerations that may be relevant to the auditor's consideration of whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework include whether:

- The data and assumptions used in making the accounting estimate are consistent with each other and with those used in other accounting estimates or areas of the entity's business activities; and
- The accounting estimate takes into account appropriate information as required by the applicable financial reporting framework.

A3. The term "appropriate" is used in this ISA to mean in a manner that both complies with the requirements of the applicable financial reporting framework and that, in doing so, reflects judgments that are consistent with the measurement basis in the applicable financial reporting framework.

³⁵ See also ISA 700 (Revised), *Forming an Opinion and Reporting on Financial Statements*, paragraph 13(c).

Definitions

Accounting Estimate (Ref: Para. 9(a))

- A4. Accounting estimates are monetary amounts that may be classes of transactions or account balances recognized in the financial statements, but also include accounting estimates used in disclosures or used to make judgments about whether or not to recognize or disclose a monetary amount.

Auditor's Point Estimate or Auditor's Range (Ref: Para. 9(b))

- A5. An auditor's point estimate or range may be developed for an accounting estimate as a whole (for example, the expected credit losses for a particular loan portfolio or the fair value of different types of financial instruments), or a component of an accounting estimate (for example, an amount to be used as a significant assumption or significant data for an accounting estimate). A similar approach may be taken by the auditor in developing an amount or range of amounts in evaluating an item of data or an assumption (for example, an estimated useful life of an asset).

Estimation Uncertainty (Ref: Para. 9(c))

- A6. Estimation uncertainty is an inherent characteristic of accounting estimates. The nature and implications of estimation uncertainty are discussed further in Appendix 2.

Management Bias (Ref: Para. 9(d))

- A7. Financial reporting frameworks often call for neutrality, that is, freedom from bias. The inherent lack of precision in the measurement of accounting estimates gives rise to the need for the use of judgment by management. Such judgment may be influenced by unintentional or intentional management bias (for example, as a result of motivation to achieve a desired profit target or capital ratio). The susceptibility of an accounting estimate to management bias increases with the extent to which there is a need for judgment in making the accounting estimate. Management bias may be difficult to detect at an account level and may only be identified when considered in groups of accounting estimates, all accounting estimates in aggregate, or when observed over a number of accounting periods.

Outcome of an Accounting Estimate (Ref: Para. 9(f))

- A8. Some accounting estimates, by their nature, do not have an outcome that is relevant for the auditor's work performed in accordance with this ISA. For example, an accounting estimate may be based on perceptions of market participants at a point in time. Accordingly, the price realized when an asset is sold or a liability is transferred may differ from the related accounting estimate made at the reporting date because, with the passage of time, the market participants' perceptions of value have changed.

Risk Assessment Procedures and Related Activities (Ref: Para. 10)

- A9. In relation to performing the risk assessment procedures and related activities required by paragraph 10 of this ISA for the entity's accounting estimates, the auditor's primary consideration is whether the understanding obtained is sufficient to:
- Identify and assess the risks of material misstatement, including determining whether, in the auditor's judgment, any of those risks are significant risks; and
 - Plan the nature, timing and extent of further audit procedures.

A10. ISA 315 (Revised) notes that smaller entities may use less structured means and simpler processes and procedures to achieve their objectives.³⁶ Further, for entities that have simple businesses, processes relevant to financial reporting may also be uncomplicated, including as they relate to accounting estimates. In those situations, the extent of the understanding of the matters in paragraph 10 is likely influenced by the extent to which these matters are relevant to the entity (for example the entity may be subject to few, if any, regulatory factors or specialized skills or knowledge may not have been applied in making the accounting estimates). Obtaining this understanding may be primarily achieved through inquiries from management with appropriate responsibilities for the financial statements. ISA 315 (Revised) also notes that the manner in which the auditor's understanding of the entity and its environment are documented is for the auditor to determine using professional judgment. For example, in audits of small entities the documentation may be incorporated in the auditor's documentation of the overall strategy and audit plan.³⁷ For entities that have simple businesses and processes relevant to financial reporting, the auditor's documentation may be simple in form and relatively brief.

Obtaining an Understanding of the Requirements of the Applicable Financial Reporting Framework (Ref: Para. 10(a))

A11. Obtaining an understanding of the requirements of the applicable financial reporting framework provides the auditor with a basis for discussion with management and, where applicable, those charged with governance about how management has applied those requirements relevant to the accounting estimates, and about the auditor's determination of whether they have been applied appropriately. This understanding also may assist the auditor in communicating with those charged with governance when the auditor considers a significant accounting practice, that is acceptable under the applicable financial reporting framework, not to be the most appropriate in the circumstances of the entity.³⁸

A12. For certain accounting estimates, financial reporting frameworks may prescribe or provide guidance on the basis for selecting management's point estimate, which may be, for example, the most likely outcome³⁹ or a discounted probability-weighted expected value. Depending on the circumstances, it may be possible for the accounting estimate to be determined directly, or it may be possible to select a management point estimate only after considering alternative assumptions or the range of possible measurement outcomes.

A13. Financial reporting frameworks may specify criteria for, or guidance on, the disclosure of information concerning judgments, assumptions, or other sources of estimation uncertainty relating to accounting estimates.

Obtaining an Understanding of Regulatory Factors (Ref: Para. 10(b))

A14. Obtaining an understanding of the regulatory factors that are relevant to accounting estimates (for example regulation established by banking and insurance regulators) may assist the auditor in determining whether the regulatory framework:

³⁶ ISA 315 (Revised) paragraph A53

³⁷ ISA 315 (Revised) paragraph A152–A153

³⁸ ISA 260 (Revised), paragraph 16(a)

³⁹ Different financial reporting frameworks may use different terminology to describe point estimates determined in this way.

- Addresses conditions for the recognition, or methods for the measurement, of accounting estimates, or provides related guidance thereon;
- Specifies, or provides guidance about, disclosures in addition to the requirements of the applicable financial reporting framework; or
- Provides an indication of areas for which there may be a potential for management bias to meet regulatory requirements.

A15. Obtaining an understanding of the applicable regulatory factors may also highlight requirements for regulatory purposes that are not consistent with requirements of the applicable financial reporting framework, which may indicate potential risks of material misstatement. For example, for certain financial statement items, the measurement basis for regulatory capital maintenance purposes may require earlier recognition of losses than the measurement basis required by the applicable financial reporting framework.

Obtaining an Understanding of the Nature of the Accounting Estimates and Related Disclosures That the Auditor Expects to be included in the Financial Statements (Ref: Para. 10(c))

A16. Obtaining an understanding of the nature of accounting estimates that the auditor expects to be included in the entity's financial statements assists the auditor in understanding the measurement basis of such accounting estimates and the nature and extent of disclosures that may be relevant. Such an understanding provides the auditor with a basis for discussion with management about how management has made the accounting estimates. The auditor may obtain an understanding of the accounting estimates that the auditor expects to be included in the financial statements through the auditor's:

- Understanding of the nature of the entity, including the nature of the assets and liabilities and other financial statement items that it would be expected to have, given the nature of its operations, ownership and governance structures and investments, the way it is structured and financed, its objectives and strategies and related business risks;
- Understanding of the applicable financial reporting framework, and other relevant legal, regulatory and other external factors;
- Past knowledge and experience, including that obtained through other audits; and
- Previous experience with the entity.⁴⁰

A17. Developing an expectation of the nature of the accounting estimates and related disclosures may also assist the auditor in understanding whether the accounting estimates are complex to make, require significant judgment by management, or have high estimation uncertainty.

Obtaining an Understanding of How Management Identifies the Need for the Accounting Estimates (Ref: Para. 10(d))

A18. The preparation of the financial statements requires management to determine whether a transaction, event or condition gives rise to the need to make an accounting estimate, and that all necessary accounting estimates have been recognized, measured, presented, and disclosed in the financial statements, in accordance with the applicable financial reporting framework.

⁴⁰ ISA 315 (Revised), paragraph 9

A19. Management's identification of transactions, events and conditions that give rise to the need for accounting estimates is likely to be based on:

- Management's knowledge of the entity's business and the industry in which it operates.
- Management's knowledge of the implementation of business strategies in the current period.
- Where applicable, management's cumulative experience of preparing the entity's financial statements in previous periods.

Management may periodically review the circumstances that give rise to the need for accounting estimates and for re-estimating them as necessary. Further, management may have established a risk assessment process in this area which may involve a formal risk management or similar function. In such circumstances, the auditor's risk assessment procedures may be directed at understanding such a review or risk assessment processes. How management addresses the completeness of accounting estimates, particularly estimates related to liabilities, is often an important consideration of the auditor.

A20. The auditor's understanding of the entity and its environment obtained during the performance of risk assessment procedures, together with other audit evidence obtained during the course of the audit, assists the auditor in identifying circumstances, or changes in circumstances, that may give rise to the need for accounting estimates.

A21. Inquiries of management about changes in circumstances may include, for example, whether:

- The entity has engaged in new types of transactions that may give rise to accounting estimates.
- Terms of transactions that gave rise to accounting estimates have changed.
- Accounting policies relating to accounting estimates have changed, as a result of changes to the requirements of the applicable financial reporting framework or otherwise.
- Regulatory or other changes outside the control of management have occurred that may require management to revise, or make new, accounting estimates.
- New conditions or events have occurred that may give rise to the need for new or revised accounting estimates.

A22. During the audit, the auditor may identify transactions, events and conditions that give rise to the need for accounting estimates that management failed to identify. ISA 315 (Revised) deals with circumstances where the auditor identifies risks of material misstatement that management failed to identify, including determining whether there is a significant deficiency in internal control with regard to the entity's risk assessment processes.⁴¹

Considerations Specific to Smaller Entities

A23. Obtaining this understanding for smaller entities is often less complex as their business activities and transactions may be less complex. Further, often a single person, for example the owner-manager, identifies the need to make the accounting estimates and the auditor's inquiries may be focused accordingly.

⁴¹ ISA 315 (Revised), paragraph 16

Obtaining an Understanding of How Management Makes Accounting Estimates (Ref: Para. 10(e))

A24. The preparation of the financial statements also requires management to establish financial reporting processes for making accounting estimates, including adequate internal control. Such processes include the following:

- Selecting appropriate accounting policies and prescribing estimation processes, including appropriate estimation or valuation methods, including, where applicable, models.
- Developing or identifying relevant data and assumptions that are used in making accounting estimates.
- Periodically reviewing the circumstances that give rise to the accounting estimates and re-estimating as necessary.

A25. Matters that the auditor may consider in obtaining an understanding of how management makes the accounting estimates include, for example:

- The types of accounts or classes of transactions to which the accounting estimate relate (for example, whether the accounting estimates arise from the recording of routine and recurring transactions or whether they arise from non-recurring or unusual transactions).
- Whether and, if so, how management has used recognized measurement techniques for making particular accounting estimates.
- Whether the accounting estimates were made based on data available at an interim date and, if so, whether and how management has taken into account the effect of events, transactions and changes in circumstances occurring between that date and the period end.

Methods (Ref: Para. 10(e)(i))

A26. A method is a measurement technique used by management to apply the measurement basis in the financial reporting framework. In some cases, the applicable financial reporting framework may prescribe the method to be used for making an accounting estimate. In many cases, however, the applicable financial reporting framework does not prescribe a single method or the required measurement basis prescribes, or allows, the use of alternative methods.

A27. For example, one recognized method used to make accounting estimates relating to share-based payment transactions is to determine a theoretical option call price using the Black Scholes option pricing formula. This method may be applied by modelling the data and assumptions of that formula based on the terms of the transaction and market conditions relevant to the underlying share.

A28. A model is a tool used to make the accounting estimate that applies assumptions and data, and a set of relationships between them as specified by the method.

A29. A model is complex when:

- The method it applies requires specialized skills or knowledge;
- Relevant and reliable data needed for use in the model is difficult to obtain;
- The integrity of the data is difficult to maintain;
- It exhibits a significant degree of complexity in its design or operation, which may, for example, involve more extensive use of information technology or large volumes of data; or

- It uses multiple data sources or assumptions with complex-interrelationships.
- A30. Management may design and implement specific controls around models used for making accounting estimates, whether management's own model or an external model. Controls that address complexity around models are more likely to be relevant to the audit when the model used is complex, such as an expected credit loss model or a model used for the valuation of insurance contract liabilities. Factors that may be appropriate for the auditor to consider in obtaining an understanding of the model and of related control activities include the following:
- How management determines the relevance and accuracy of the model;
 - The validation or back testing of the model, including whether the model is validated prior to use and revalidated at regular intervals to determine whether it remains suitable for its intended use. The entity's validation of the model may include evaluation of:
 - The model's theoretical soundness;
 - The model's mathematical integrity;
 - The accuracy and completeness of the data and appropriate assumptions used in the model; and
 - Whether the appropriate data is used in the model and appropriate assumptions have been made;
 - How the model is appropriately changed or adjusted on a timely basis for changes in market or other conditions and whether there are appropriate change control policies over the model;
 - Whether adjustments, also referred to as overlays in certain industries, are made to the output of the model and whether such adjustments are appropriate under the circumstances and in accordance with the requirements of the applicable financial reporting framework; and
 - Whether the model is adequately documented, including its intended applications, limitations, key parameters, required data and assumptions, the results of any validation performed on it and the nature of, and basis for, any adjustments made to its output.
- A31. Estimates may have greater susceptibility to material misstatement relating to the use of models in certain circumstances. For example, in cases when management has developed a model internally and has relatively little experience in doing so, or uses a model that applies a method that is not established or commonly used in a particular industry or environment.

Assumptions Ref: Para. 10(e)(ii)

- A32. Assumptions are integral components of accounting estimates and may include matters such as the choice of an interest rate, a discount rate, or judgments about future conditions or events. An assumption may be selected by management from a range of possible alternatives for use in applying a method to make accounting estimates.
- A33. Matters that the auditor may consider in obtaining an understanding of the assumptions used in making the accounting estimates include, for example:
- The nature of the assumptions used, the alternatives considered and the basis for management's selection. The applicable financial reporting framework may provide criteria or guidance to be used in the selection of an assumption.

- How management assesses whether the assumptions are relevant and complete.
- When applicable, how management determines that the assumptions are consistent with each other and with those used in other accounting estimates or areas of the entity's business activities.
- How the assumptions are consistent with other matters:
 - Within the control of management (for example, assumptions about the maintenance programs that may affect the estimation of an asset's useful life), and whether they are consistent with the entity's business plans and the external environment; and
 - Outside the control of management (for example, assumptions about interest rates, mortality rates, potential judicial or regulatory actions, or the variability and the timing of future cash flows).
- Management's documentation supporting the assumptions.
- The requirements of the applicable financial reporting framework related to the disclosure of assumptions.
- How management identifies significant assumptions.

Assumptions may be made or identified by a management's expert to assist management in making the accounting estimates. Such assumptions, when used by management, become management's assumptions.

A34. With respect to fair value accounting estimates, assumptions vary in terms of the sources of the data and the basis for the judgments to support them, as follows:

- (a) Those that reflect what marketplace participants would use in pricing an asset or liability, developed based on market data obtained from sources independent of the reporting entity.
- (b) Those that reflect the entity's own judgments about what assumptions marketplace participants would use in pricing the asset or liability, developed based on the best data available in the circumstances.

In practice, however, the distinction between (a) and (b) may not always be apparent and distinguishing between them depends on understanding the sources of data and the basis for the judgments that support the assumption. Further, it may be necessary for management to select from a number of different assumptions used by different marketplace participants.

Significant data and significant assumptions

A35. Data and assumptions used in making an accounting estimate are referred to as significant data or significant assumptions in this ISA if a reasonable variation in the data or assumption would materially affect the measurement of the accounting estimate. For example, an accounting estimate may be determined applying a method that uses several data sets and several assumptions, one or more of which particularly influences the measurement of the accounting estimate because the range of reasonable assumptions may be large or the model may be sensitive to specific data or assumption because of the underlying formulas.

Inactive or illiquid markets

- A36. Some financial reporting frameworks require different accounting treatments depending on the level of activity in the market. Estimation uncertainty increases and valuation is more complex when the markets in which financial instruments or their component parts are traded become inactive. Valuation techniques selected when market information was available may not provide appropriate valuations in times of stress. However, even where markets are inactive, prices achieved may still provide relevant evidence about fair value. In these circumstances, valuations may be developed based on more unobservable inputs, requiring more judgment by management. When markets are inactive, prices quoted may not represent prices at which market participants would trade or may represent forced transactions (such as when disposal of an asset is necessary to meet regulatory or legal requirements).
- A37. Particular difficulties may develop where there is severe curtailment or even cessation of trading in particular financial instruments. In these circumstances, financial instruments that have previously been valued using market prices may need to be valued using a model; or, where they have previously been valued using a model, the model may need to change. Reacting to changes in market conditions may be difficult if management does not possess the specialized skills or knowledge necessary to develop an appropriate model on a timely basis, or to select the valuation technique that may be most appropriate in the circumstances.
- A38. When markets are inactive or illiquid, the auditor's understanding of how management selects assumptions may include understanding whether management has:
- Implemented appropriate policies for adapting the application of the method in such circumstances. Such adaptation may include making model adjustments or developing new models that are appropriate in the circumstances;
 - Resources with the necessary skills or knowledge to adapt or develop a model, if necessary on an urgent basis, including selecting the valuation technique that is appropriate in such circumstances;
 - The resources to determine the range of outcomes, given the uncertainties involved, for example by performing a sensitivity analysis;
 - The means to assess how, when applicable, the deterioration in market conditions has affected the entity's operations, environment and relevant business risks and the implications for the entity's accounting estimates, in such circumstances; and
 - An appropriate understanding of how the price data from particular external information sources may vary in such circumstances.

Data (Ref: Para. 10(e)(iii))

- A39. Data comprises factual data, which can be observed directly, and derived data, which is data obtained through applying analytical or interpretive techniques to factual data. The analytical or interpretive techniques to be used in deriving data have a well-established theoretical basis and do not involve the application of judgment. Examples of data include:
- Prices agreed in market transactions;
 - Operating times or quantities of output from a production machine;

- Historical prices or other terms included in contracts (for example, a loan agreement may include a contracted interest rate, a payment schedule, and term of the loan); or
- Forward looking data such as economic or earnings forecasts made publicly, or a future payment schedule in a loan agreement.

A40. Data can come from a wide range of sources. For example, data can be:

- Generated within the organization or externally;
- Obtained from a system that is either within or outside the general or subsidiary ledgers;
- Observable in contracts; or
- Observable in legislative or regulatory pronouncements.

Understanding the source of the data used to make the accounting estimates may help the auditor in understanding the risks with respect to the relevance and reliability of the data.

A41. Matters that the auditor may consider in obtaining an understanding of the data on which the accounting estimates are based include:

- The nature of the data.
- How management evaluates whether the data is appropriate.
- The accuracy and completeness of the data.
- The consistency of the data used with data used in previous periods.
- The complexity of the information technology systems used to obtain and process the data, including when this involves handling large volumes of data.
- How the data is obtained, transmitted and processed and how its integrity is maintained.

A42. When making an accounting estimate involves large volumes of data or otherwise involves complex processing, management may make extensive use of information technology. In such cases, controls relevant to the audit are likely to include general IT controls and application controls. Such controls may address risks related to:

- The complete and accurate extraction of data from the entity's records or from external information sources; and
- The complete and accurate flow of data through the entity's information systems and the appropriateness of any modification to the data used in making accounting estimates, such as the translation of data into a different currency. Controls to maintain the integrity and security of the data are also likely to be relevant to the audit.

Management's Application of Specialized Skills or Knowledge, Including the Use of Management's Experts (Ref: Para. 10(e)(iv))

A43. Management may have, or the entity may employ individuals with, the skills and knowledge necessary to make the accounting estimates. In some cases, however, management may need to engage an expert to make, or assist in making, them. This need may arise because of, for example:

- The specialized nature of the matter requiring estimation, for example, the accounting estimate may involve measurement of mineral or hydrocarbon reserves in extractive industries or the evaluation of the likely outcome of applying complex contractual terms.
- The complex nature of the models required to apply the relevant requirements of the applicable financial reporting framework, as may be the case in certain measurements, such as level 3 fair values.
- The unusual or infrequent nature of the condition, transaction or event requiring an accounting estimate.

A failure by management to apply the required specialized skills or knowledge, including engaging an expert when management does not otherwise have access to an individual with such skills and knowledge, increases control risk.

Considerations specific to smaller entities

A44. In smaller entities, the circumstances requiring accounting estimates often are such that the owner-manager is capable of making the required point estimate. In some cases, however, an expert will be needed. Discussion with the owner-manager early in the audit process about the nature of any accounting estimates, the completeness of the required accounting estimates, and the adequacy of the estimating process may assist the owner-manager in determining the need to use an expert.

Risk of Management Bias (Ref: Para. 10(e)(v))

A45. Matters that the auditor may consider in obtaining an understanding of how management addresses the risk of management bias in making accounting estimates includes whether, and if so how, management:

- Identifies and pays particular attention to accounting estimates that involve greater levels of subjectivity in related judgments.
- Monitors key performance indicators that may indicate unexpected or inconsistent performance compared with historical or budgeted performance or with other known factors.
- Identifies financial or other incentives that may be a motivation for bias.
- Monitors changes in the methods, or in significant sources of data and significant assumptions, used in making accounting estimates.
- Establishes appropriate oversight and review of models used in making accounting estimates.
- Requires documentation of the rationale for, or an independent review of, significant judgments made in making accounting estimates.

Estimation Uncertainty (Ref: Para. 10(e)(vi))

A46. Matters that may be appropriate for the auditor to consider in obtaining an understanding of whether, and if so, how management has addressed estimation uncertainty include, for example:

- Whether, and if so, how management has identified alternative methods, significant assumptions or sources of significant data that are appropriate in the context of the applicable financial reporting framework.

- Whether, and if so, how management has considered alternative outcomes by, for example, performing a sensitivity analysis to determine the effect of changes in the data or assumptions on the accounting estimate.
- How management selects its point estimate.
- Whether management monitors the outcome of accounting estimates made in previous periods, and how management has appropriately responded to the results of that monitoring.

Changes in Methods, Assumptions or Data Used in Making Accounting Estimates (Ref: Para. 10(e)(vii))

A47. In evaluating how management makes the accounting estimates, the auditor is required to understand the extent to which management has identified and addressed the need for change in the methods, assumptions or data used. If management has changed the method for making an accounting estimate, it is important that management can demonstrate that the new method is more appropriate, or is itself a response to changes in the environment or circumstances affecting the entity, or to changes in the requirements of the applicable financial reporting framework or regulatory environment. It is also important that management can demonstrate, when no change has been made, that the continued use of the previous methods, assumptions and data is appropriate in view of the current environment or circumstances (for example, whether management's assumptions about marketplace transactions or price quotes reflect fair value when there is reduced market activity).

Components of Internal Control Relating To Accounting Estimates (Ref: Para. 10(f))

- A48. Paragraphs 14–24 of ISA 315 (Revised) address the auditor's understanding of the components of internal control and provide useful information for the auditor in considering the components of internal control as they relate to making accounting estimates.
- A49. Some entities may have a wide range of accounting estimates, some of which may be significantly affected by, or subject to, complexity, the need for use of judgment by management, and estimation uncertainty. In such circumstances, there may be an increased need for the application of specialized skills or knowledge, and management may make extensive use of information technology in making the estimates. In such cases, it will likely be more important for the auditor to understand the design and implementation of relevant controls, and also to test their operating effectiveness in addressing the assessed risks of material misstatements.

The Control Environment Relevant To Making Accounting Estimates

- A50. The auditor's understanding of the control environment relevant to making accounting estimates includes consideration of the influence that the elements of the control environment would be expected to have on the risks of material misstatement.⁴² This may include, for example, whether:
- Management, with the oversight of those charged with governance, has created and maintained a culture of transparency and proper ethical behavior; and

⁴² ISA 315 (Revised), paragraph A78

- The strengths in the control environment elements collectively provide an appropriate foundation for the other components of internal control and whether those other components are not undermined by deficiencies in the control environment.

A51. In some industries, such as the banking or insurance industry, the term governance may be used to describe the control environment as described in ISA 315 (Revised).⁴³

Oversight by those charged with governance

A52. With respect to accounting estimates, the control environment may be further influenced by such matters as the extent to which those charged with governance:

- Have the skills or knowledge to understand the characteristics of a particular method or model to make accounting estimates, or the risks related to the accounting estimate, for example, risks related to the method or information technology used in making the accounting estimates;
- Have the skills and knowledge to understand whether management made the accounting estimates in accordance with the applicable financial reporting framework; or
- Are independent from management, have the information required to evaluate on a timely basis how management made the accounting estimates, and the authority to challenge management when those actions appear to be inadequate or inappropriate.

A53. Depending on the nature of the accounting estimates, the auditor may consider obtaining an understanding of the oversight by those charged with governance over matters such as:

- Management's process for making the accounting estimates, including the use of models.
- The monitoring activities undertaken by management. This may include supervision and review of the accounting estimates designed to detect and correct any deficiencies in the design or operating effectiveness of controls over the accounting estimates.

A54. The oversight by those charged with governance may particularly be important for accounting estimates that:

- Require significant judgment by management, for example in the selection of the method, significant assumptions or significant data;
- Have high estimation uncertainty;
- Are complex to make, for example, because of the extensive use of information technology, large volumes of data or the use of multiple data sources or assumptions with complex interrelationships;
- Had, or ought to have had, a change in the method, assumptions or data compared to previous periods; or
- Involve significant data and significant assumptions.

⁴³ ISA 315 (Revised) paragraph A77

The Entity's Risk Assessment Process

A55. If the entity has a risk assessment process, the auditor is required to obtain an understanding of the process and its results in relation to the entity's accounting estimates, including how management determines the risks to be managed arising from changes in:

- The requirements of the applicable financial reporting framework related to the accounting estimates;
- The availability or nature of data sources that are relevant to making the accounting estimates or that may affect the reliability of the data used;
- The entity's information systems or IT environment; and
- Key personnel.

The Entity's Information Systems

A56. With respect to the entity's information system relevant to making accounting estimates, it may be appropriate for the auditor to obtain an understanding as to whether:

- The information systems have the capability and are appropriately configured to process large volumes of data;
- When diverse systems are required to process complex transactions, regular reconciliations between the systems are made, in particular when the systems do not have automated interfaces or may be subject to manual intervention;
- The design and calibration of models is periodically evaluated;
- Management has controls around access, change and maintenance of individual models to maintain a strong audit trail of the accredited versions of models and to prevent unauthorized access or amendments to those models;
- When using external information sources, management considers and appropriately addresses the risks related to processing or recording the data, recognizing management's responsibility for appropriately reconciling and challenging the data from those sources; and
- There are appropriate controls over the transfer of information relating to accounting estimates into the general ledger, including appropriate controls over related journal entries.

A57. Information systems relevant to financial reporting are an important source for the quantitative and qualitative disclosures in the financial statements. This may include a system developed and maintained by the entity primarily for internal reporting, but which also captures, processes and generates data that may be included in disclosures relating to accounting estimates.

Control Activities

A58. As part of obtaining an understanding of the control activities relating to accounting estimates, the auditor may consider:

- How management determines the appropriateness of the data used to develop the accounting estimates, including when management uses an external information source or data from outside the general and subsidiary ledgers.

- The review and approval of accounting estimates, including the assumptions or data used in their development, by appropriate levels of management and, where appropriate, those charged with governance.
- The segregation of duties between those committing the entity to the underlying transactions and those responsible for making the accounting estimates, including whether the assignment of responsibilities appropriately takes account of the nature of the entity and its products or services. For example, in the case of a large financial institution, relevant segregation of duties may consist of an independent function responsible for estimation and validation of fair value pricing of the entity's financial products staffed by individuals whose remuneration is not tied to such products.
- The control activities included in paragraph A30 and A42.

The Entity's Activities to Monitor Controls over How the Accounting Estimates Are Made

A59. For entities with an internal audit function, its work may be particularly helpful to the auditor in obtaining an understanding of:

- The nature and extent of management's use of accounting estimates;
- The design and implementation of control activities that address the risks related to the data, assumptions and models used to make the accounting estimates;
- The systems that generate the data on which the accounting estimates are based; and
- How new risks relating to accounting estimates are identified, assessed and managed.

Considerations Specific to Smaller Entities

A60. In smaller entities, accounting estimates may be generated outside the general ledger, controls over their development may be limited, and an owner-manager may have significant influence over the determination. The owner-manager's role in making the accounting estimates may need to be taken into account by the auditor both when identifying the risks of material misstatement and when considering the risk of management bias. ISA 315 (Revised)⁴⁴ includes specific considerations to smaller entities that the auditor might find helpful in obtaining an understanding of the components of internal control as it relates to making accounting estimates.

Reviewing the Outcome or Re-Estimation of Previous Period Accounting Estimates (Ref: Para. 11)

A61. A review of the outcome or re-estimation of accounting estimates made in previous periods (retrospective review) assists in identifying and assessing the risks of material misstatement, specifically in circumstances when previous period accounting estimates have an outcome through transfer or realization of the asset or liability, or are re-estimated for the purpose of the current period. Through performing a retrospective review, the auditor may obtain:

- Information regarding the effectiveness of management's previous estimation process, from which the auditor can obtain insight about the likely effectiveness of management's current process.

⁴⁴ ISA 315 (Revised) paragraph A52, A56, A57, A88, A93, A95, A101, A102 and A108

- Audit evidence that is pertinent to the re-estimation, in the current period, of previous period accounting estimates.
 - Audit evidence of matters, such as estimation uncertainty, that may be required to be disclosed in the financial statements.
 - Information regarding the complexity and estimation uncertainty pertaining to the accounting estimates.
 - Information regarding the susceptibility of accounting estimates to, or that may be an indicator of, possible management bias. The auditor's professional skepticism assists in identifying such circumstances or conditions and in determining the nature, timing and extent of further audit procedures.
- A62. A retrospective review may be performed over accounting estimates made for prior period financial statements but also for accounting estimates made over several periods or a shorter period (such as half-yearly or quarterly). When entities make accounting estimates that are realized within a shorter timescale than full financial reporting periods, considering the outcomes of such accounting estimates may also provide important information about management's current effectiveness in making accounting estimates and other factors relevant to making estimates. Considering outcomes of accounting estimates that are realized between the end of the financial reporting period and the end of the audit may be useful for similar reasons.
- A63. A retrospective review of management judgments and assumptions related to significant accounting estimates is required by ISA 240.⁴⁵ As a practical matter, the auditor's review of previous period accounting estimates as a risk assessment procedure in accordance with this ISA may be carried out in conjunction with the review required by ISA 240.
- A64. The auditor may judge that a more detailed review is required for those accounting estimates that have changed significantly from the previous period, or for those accounting estimates for which the inherent risks were not low in the previous periods. As part of the detailed review, the auditor may pay particular attention, when possible, to the effect of significant assumptions used in making the previous estimates. On the other hand, for example, for accounting estimates that arise from the recording of routine and recurring transactions, the auditor may judge that the application of analytical procedures as risk assessment procedures is sufficient for purposes of the review.
- A65. For fair value accounting estimates and other accounting estimates based on current conditions at the measurement date, more variation may exist between the fair value amount recognized in the previous period's financial statements and the outcome or the amount re-estimated for the purpose of the current period. This is because the measurement objective for such accounting estimates deals with perceptions about value at a point in time, which may change significantly and rapidly as the environment in which the entity operates changes. The auditor may therefore focus the review on obtaining information that would be relevant to identifying and assessing risks of material misstatement. For example, in some cases, obtaining an understanding of changes in marketplace participant assumptions that affected the outcome of a previous period's fair value accounting estimates may be unlikely to provide relevant information for audit purposes. If so, then the auditor's consideration of the outcome of previous period's fair value accounting estimates may be directed more towards understanding the effectiveness of management's prior estimation process, that is,

⁴⁵ ISA 240, *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements*, paragraph 32(b)(ii)

management's track record, from which the auditor can judge the likely effectiveness of management's current process.

- A66. A difference between the outcome of an accounting estimate and the amount recognized in the previous period's financial statements does not necessarily represent a misstatement of the previous period's financial statements. However, it may do so if, for example, the difference arises from information that was available to management when the previous period's financial statements were finalized, or that could reasonably be expected to have been obtained and taken into account in the preparation of those financial statements. Many financial reporting frameworks contain guidance on distinguishing between changes in accounting estimates that constitute misstatements and changes that do not, and the accounting treatment required to be followed in each case.

Specialized Skills or Knowledge (Ref: Para. 12, 14)

- A67. In planning the audit, the auditor is required to ascertain the nature, timing and extent of resources necessary to perform the audit engagement.⁴⁶ In some cases, the auditor may determine that specialized skills or knowledge are required in relation to specific areas of accounting or auditing. In addition, ISA 220 requires the engagement partner to be satisfied that the engagement team, and any auditor's external experts, collectively have the appropriate competence and capabilities to perform the audit engagement.⁴⁷ During the course of the audit, the auditor may identify a need for specialized skills or knowledge to be applied in relation to one or more aspects of the accounting estimates.

- A68. Matters that may affect the auditor's determination of whether specialized skills or knowledge is required include, for example:

- The nature of the accounting estimates for a particular business or industry (for example, mineral deposits, agricultural assets, complex financial instruments, insurance contract liabilities).
- The degree of estimation uncertainty.
- The complexity of the method or model used.
- The complexity of the requirements of the applicable financial reporting framework relevant to accounting estimates, including whether there are areas known to be subject to differing interpretation or practice or areas where there are inconsistencies in how accounting estimates are made.
- The procedures the auditor intends to undertake in responding to assessed risks of material misstatement.
- The need for judgment about matters not specified by the applicable financial reporting framework.
- The degree of judgment needed to select data and assumptions.
- The complexity and extent of the entity's use of information technology in making accounting estimates.

⁴⁶ ISA 300, *Planning an Audit of Financial Statements*, paragraph 8(e)

⁴⁷ ISA 220, *Quality Control for an Audit of Financial Statements*, paragraph 14

- A69. Many accounting estimates do not require the application of specialized skills or knowledge. For example, for most audits it is unlikely that specialized skills or knowledge would be necessary for an auditor to evaluate a bonus accrual or inventory obsolescence. However, for expected credit losses of an internationally active banking institution or the insurance contract liability for an insurance entity, the auditor is likely to conclude that it is necessary to apply specialized skills or knowledge.
- A70. The auditor may not possess the specialized skills or knowledge necessary when the matter involved is in a field other than accounting or auditing and may need to use an auditor's expert. ISA 620⁴⁸ establishes requirements and provides guidance in determining the need to employ or engage an auditor's expert and the auditor's responsibilities when using the work of an auditor's expert.

Identifying and Assessing the Risks of Material Misstatement (Ref: Para. 13)

- A71. Paragraph 13 requires the auditor, in identifying and assessing the risks of material misstatement, to take into account the extent to which the accounting estimate is subject to, or affected by relevant factors, including complexity, the need for the use of judgment by management in making the estimate, and estimation uncertainty.
- A72. For some accounting estimates, the auditor's assessment of the risks of material misstatement may be based on low inherent risk. Examples may include:
- Depreciation calculations for an entity using a single depreciation method for property and equipment and a relatively low level of additions or disposals.
 - Accounting estimates based on data that is readily available, such as published interest rate or foreign exchange rate data or exchange-traded prices of securities that are listed and actively traded on a recognized exchange, and has few or no assumptions. An example of such an accounting estimate is the translation of a cash balance that is held in a currency other than the reporting currency.
 - A bonus accrual for management which is based on performance indicators that are clearly identified.
- A73. For some accounting estimates, the auditor's assessment of the risks of material misstatement may be influenced by inherent risk that is not low. Examples may include:
- Accounting estimates relating to the outcome of litigation.
 - Accounting estimates for financial instruments not publicly traded.
 - Accounting estimates for which a complex model is used or for which there are assumptions or data that cannot be observed directly in the marketplace (level 3 fair values).
 - Accounting estimates that collate, weight and integrate assumptions and data from a wide range of internal and external sources, such as an expected credit loss model in a financial institution that is active in different markets.
 - Estimates of the development costs of a new pharmaceutical product.
 - Estimates relating to undeveloped mineral resources.
 - Valuation of goodwill in a business combination.

⁴⁸ ISA 620, *Using the Work of an Auditor's Expert*

- A74. The reasons for the auditor's assessment of the risks of material misstatement may result from one or more of the factors of complexity, judgment and estimation uncertainty. For example:
- (a) Accounting estimates of expected credit losses are likely to be complex because the expected credit losses cannot be directly observed and may require the use of a complex model. The model may use a complex set of historical data and assumptions about future developments in a variety of entity specific scenarios that may be difficult to predict. Accounting estimates for expected credit losses are also likely to involve high estimation uncertainty and significant subjectivity in making judgments about future events or conditions. Similar considerations apply to insurance contract liabilities.
 - (b) An accounting estimate for an obsolescence provision for an entity with a wide range of different inventory types may require complex systems and processes, but may involve little judgment and the estimation uncertainty may be low, depending on the nature of the inventory.
 - (c) Other accounting estimates may not be complex to make but may have high estimation uncertainty and require significant judgment, for example, an accounting estimate that requires a single critical judgment about a liability, the amount of which is contingent on the outcome of the litigation.
- A75. The auditor's assessment of the risks of material misstatement at the assertion level may be informed by events occurring after the date of the financial statements. For example, the outcome of an accounting estimate may become known during the audit. In such cases, the auditor may assess or revise,⁴⁹ when relevant, inherent risk as low, regardless of the extent to which the accounting estimate was subject to, or affected by, complexity, the need for the use of judgment by management or estimation uncertainty at the time management made the estimate.

Significant Risks

- A76. Paragraph 28 of ISA 315 (Revised) and the related application material include factors that are required to be considered when identifying significant risks. If the auditor determines that an accounting estimate gives rise to a significant risk, the auditor is required to obtain an understanding of the entity's controls, including control activities.⁵⁰
- A77. In some cases, the estimation uncertainty relating to an accounting estimate may cast significant doubt about the entity's ability to continue as a going concern. ISA 570 (Revised)⁵¹ establishes requirements and provides guidance in such circumstances.

Other Relevant Factors

- A78. In addition to complexity, judgment and estimation uncertainty, there may be other relevant factors that the auditor may consider in identifying and assessing the risks of material misstatement. These may include the extent to which the accounting estimate is subject to, or affected by:
- A change in the nature or circumstances of the relevant financial statement items, or requirements of the applicable financial reporting framework which may give rise to the need for changes in the method, assumptions or data used to make the accounting estimate;

⁴⁹ ISA 315 (Revised), paragraph 31

⁵⁰ ISA 315 (Revised), paragraph 29

⁵¹ ISA 570, (Revised), *Going Concern*

- The susceptibility of the accounting estimate to the risks of a material misstatement due to fraud; and
- The regulatory environment, including relevant regulatory requirements.

Complexity

Complexity Arising from the Method Used in Making the Accounting Estimate (Ref: Para. 13(a)(i))

A79. Methods vary in the extent to which they involve complex concepts or techniques that require management to apply specialized skills or knowledge.⁵² In addition, the nature of the measurement basis in the applicable financial reporting framework may result in the need for a complex method that requires multiple sources of historical and forward looking data or assumptions, with complex inter-relationships between them.

A80. Complex methods are often applied using a complex model, particularly when the measurement basis requires the use of discounted cash flow techniques, projected or expected future cash flows and historical and forward looking data and assumptions obtained or developed from a combination of internal and external sources. Designing and operating such models often involves specialized skills or knowledge, including in relation to valuation attributes arising from the nature and circumstances of the underlying financial statement items and in the use of information technology.

A81. Examples of accounting estimates for which complex models are likely to be used include:

- An impairment loss for goodwill or an intangible asset, which may require expectations about future cash flows from the business, asset or a group of related assets to be developed based on historical data and forward looking assumptions.
- An expected credit loss, which may require expectations of future credit repayments and other cash flows, based on historical experience data and forward looking assumptions.
- An insurance contract liability, which may require expectations about future insurance contract payments to be projected based on historical experience and current and assumed future trends.
- A level 3 fair value based on cash flow projections and historical market related data.

Complexity Arising from the Data on Which the Accounting Estimate Is Based (Ref: Para. 13(a)(ii))

A82. Risks of material misstatement related to complexity in making accounting estimates may arise when such complexity leads to greater difficulty in obtaining, or in maintaining the integrity of, relevant and reliable data, stemming from one or more of the following:

- The reliability of the data source. Data from certain sources may be more reliable than from others. For example, data obtained from internal systems outside the general and subsidiary ledgers may be more susceptible to misstatements because in some entities it may be difficult to determine whether there were appropriate controls and governance over that data.
- Data from an external information source may be less relevant in making a fair value estimate if it is not based on observable market transactions. For example, it may be less relevant when it is based on brokers' quotes that reflect brokers' subjective judgments in the context of an

⁵² See paragraph 8 of Appendix 2 for examples of complex techniques.

inactive market. In addition, for confidentiality or proprietary reasons, some external information sources will not (or not fully) disclose information that may be relevant in considering the relevance and reliability of the data they provide, such as the sources of the underlying data they used or how it was accumulated and processed (including any controls over the process). It may be more difficult to consider the relevance and reliability of such data than in the case of data from more transparent external information sources.

- The integrity of the information systems. Data that is used to make the accounting estimates may be processed by information systems that may require effective general IT controls, and controls over the flow of data through the system.
- A complex organizational structure or a lack of integration between systems in different parts of the entity may give rise to difficulty in reliably and consistently aggregating.
- The volume of data or the source of the data, including data that comes from a wide variety of sources. This may lead to the risk that the data may be inappropriately used, or may be incomplete or from an incorrect data set.

Judgment (Ref: Para. 13(b))

A83. Judgment may be used by management in the selection or application of appropriate methods, the selection or development of appropriate assumptions, and the selection or interpretation of data. The risks of material misstatement related to judgment involved in making accounting estimates may relate to one or a combination of the following:

- A lack of experience or competence by management, including a lack of availability to management of necessary skills or knowledge. These factors may result in risks related to the selection of inappropriate methods, assumptions and data. When management lacks the competence or experience in a certain area and decides not to use a management's expert, there may be a risk that:
 - The method selected may not comply with the applicable financial reporting framework.
 - Management may select a data source that is not relevant and reliable.
- Indicators of management bias.
- The extent to which the applicable financial reporting framework does not specify the appropriate valuation approaches, concepts, techniques and factors to use in the estimation method and therefore may require significant judgment.

A84. Examples of accounting estimates that are likely to be subject to a high degree of judgment include the following:

- Accounting estimates that are based on expected future cash flows for which there is uncertainty regarding the amount or timing.
- Accounting estimates that are based on complex contractual terms. For example, the determination of cash inflows or outflows arising from commercial supplier or customer rebates may depend on very complex contractual terms that require specific expertise or competence.
- Accounting estimates with a long forecast period.

A85. When accounting estimates are subject to a high degree of judgment, the accounting estimate may be more susceptible to the potential for management bias, particularly when this judgment involves greater subjectivity. For example, such judgment may result in a wide range of possible measurement of the accounting estimate. Management may select a point estimate from that range that is inappropriate in the circumstances, or that is inappropriately influenced by unintentional or intentional management bias, and that is therefore misstated. For continuing audits, indicators of possible management bias identified during the audit of the preceding periods influence the planning and risk identification and assessment activities of the auditor in the current period.

Estimation Uncertainty (Ref: Para. 13(c))

A86. Estimation uncertainty arises from factors that give rise to an inherent lack of precision in the measurement of an accounting estimate. The variation in the measurement of an accounting estimate that results from estimation uncertainty is not in itself a misstatement. A risk of material misstatement related to estimation uncertainty arises from variables that increase the likelihood that management's point estimate and related disclosures are not reasonable in the context of the applicable financial reporting framework.

A87. Estimation uncertainty may arise, for example, when it is not possible (or not practical, insofar as permitted by the applicable financial reporting framework) for management:

- To make a precise and reliable prediction about the future realization of a past transaction (for example, the amount that will be paid under a contingent contractual term), or about the incidence and impact of future events or conditions (for example, the amount of a future credit loss or the amount that will be settled for a future insurance claim); or
- To obtain precise and complete information about a present condition (for example, information about valuation attributes that would reflect the perspective of market participants at the date of the financial statements, to develop a fair value estimate).

A88. The risks of material misstatement related to estimation uncertainty may relate to one or a combination of the following:

- The applicable financial reporting framework, which may require:
 - The use of a method to make the accounting estimates that inherently has a high level of estimation uncertainty. For example, the financial reporting framework may require the use of a level 3 fair value.
 - The use of assumptions that inherently have a high level of estimation uncertainty, such as future cash flows for a long-term contract, assumptions that are based on data that is unobservable and are therefore difficult for management to develop or the use of the various assumptions that are interrelated.
 - Disclosures about estimation uncertainty. There may be a risk of material misstatement related to the failure to make a material disclosure about the estimation uncertainty.
- The business environment. An entity may be active in a market that experiences turmoil or possible disruption (for example, from major currency movements or inactive markets) and the accounting estimate may therefore be dependent on data that is not readily observable.

A89. A seemingly immaterial accounting estimate may have the potential to result in a material misstatement due to the estimation uncertainty associated with the accounting estimate; that is, the

size of the amount recognized or disclosed in the financial statements for an accounting estimate is not, in itself, an indicator of its estimation uncertainty.

- A90. In some circumstances, the estimation uncertainty is so high that a reasonable accounting estimate cannot be made. The applicable financial reporting framework may, therefore, preclude recognition of the item in the financial statements, or its measurement at fair value. In such cases, there may be risks of material misstatement that relate not only to whether an accounting estimate should be recognized, or whether it should be measured at fair value, but also to the reasonableness of the disclosures. With respect to such accounting estimates, the applicable financial reporting framework may require disclosure of the accounting estimates and the estimation uncertainty associated with them (see paragraphs A124–A125, A135–A137).
- A91. Not all accounting estimates are affected by high levels of estimation uncertainty. For example, some financial statement items may have an active and open market that provides readily available and reliable information on the prices at which actual exchanges occur. However, estimation uncertainty may exist even when the valuation method and data are well defined. For example, valuation of securities quoted on an active and open market at the listed market price may require adjustment if the holding is significant or is subject to restrictions in marketability. In addition, general economic circumstances prevailing at the time, for example, illiquidity in a particular market, may impact estimation uncertainty.
- A92. A sensitivity analysis may demonstrate that the accounting estimate is sensitive to one or more assumptions that then become the focus of the auditor's attention.
- A93. The degree of estimation uncertainty associated with an accounting estimate may influence its susceptibility to management bias. When the reasons for the assessment given to the risk of material misstatement include estimation uncertainty, the auditor's application of professional skepticism is particularly important.

Responses to the Assessed Risks of Material Misstatement (Ref: Para. 15)

- A94. In designing further audit procedures, ISA 330 requires the auditor to consider the reasons for the assessment given to the risk of material misstatement at the assertion level for each class of transactions, account balance, and disclosure, including the likelihood of material misstatement due to the particular characteristics of the relevant class of transactions, account balance or disclosure (that is, the inherent risk), and whether the risk assessment takes account of relevant controls (that is, control risk), thereby requiring the auditor to obtain audit evidence to determine whether the controls are operating effectively.
- A95. Paragraph A40 of ISA 200⁵³ states that the ISAs do not ordinarily refer to inherent risk and control risk separately. However, the auditor may make separate or combined assessments of inherent and control risk. Although this ISA neither implies nor requires a separate assessment of inherent and control risk, it highlights the importance of the auditor's consideration of both inherent and control risk in designing and performing further audit procedures to respond to the assessed risks of material misstatement, including significant risks, at the assertion level in accordance with ISA 330.

⁵³ ISA 200, *Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing*

When Inherent Risk is Low (Ref. Para: 15(a))

A96. If the further audit procedures in paragraph 15(a) do not provide sufficient appropriate audit evidence, the auditor is required by ISA 330 to design and perform other procedures.

When Inherent Risk is Not Low (Ref. Para: 15(b))

A97. When inherent risk is not low, this ISA does not specify the nature of the further audit procedures to be performed to respond to the assessed risk of material misstatement. Procedures such as obtaining audit evidence about events occurring up to the date of the auditor's report, testing how management made the accounting estimate, developing an auditor's point estimate or range, or performing other types of substantive analytical procedures, may assist the auditor in obtaining audit evidence about the matters in paragraphs 17–19. However, such procedures need to be designed to address the matters in paragraphs 17–19.

When the Auditor Intends to Rely on Relevant Controls or Substantive Procedures Alone Cannot Provide Sufficient Appropriate Audit Evidence (Ref: Para: 16)

A98. In certain circumstances, it may not be possible or practicable for the auditor to design effective substantive procedures that, by themselves, provide sufficient appropriate audit evidence at the assertion level. For example, this may be the case for entities such as large banks, insurers, and telecommunication entities that make extensive use of IT to conduct their business or have a large number of accounting estimates, many of which are highly judgmental or complex. Factors that may indicate that substantive procedures alone may not provide sufficient appropriate audit evidence at the assertion level include:

- The volume of transactions (for example, a high volume of transactions may occur in a large bank, insurer or telecommunication entity, making it more difficult to design substantive procedures that alone provide sufficient appropriate audit evidence at the assertion level).
- Whether significant information supporting one or more relevant assertions is electronically initiated, recorded, processed, or reported. For such assertions, audit evidence may be available only in electronic form. In such cases, the sufficiency and appropriateness of the audit evidence may depend on the effectiveness of controls over the accuracy and completeness of the information. In addition, the potential for improper initiation or alteration of information to occur and not be detected may be greater if information is initiated, recorded, processed, or reported only in electronic form and appropriate controls are not operating effectively.
- The need to combine information from the general and subsidiary ledgers with information obtained from outside the general and subsidiary ledgers (for example, an expected credit loss may require information from the entity's risk management system). In these situations, it may not be possible to design and perform substantive procedures that, by themselves, provide sufficient appropriate audit evidence at the assertion level.

A99. In some jurisdictions, as part of the audit of the financial statements for certain entities (such as a bank or insurer), the auditor also may be required by law or regulation to undertake additional work to provide assurance on internal controls.

Considerations Specific to Smaller Entities

A100. Controls over the process to make an accounting estimate may exist in smaller entities, but the formality with which they operate may vary. Further, smaller entities may determine that certain types of controls are not necessary because of active management involvement in the financial reporting process. In the case of very small entities, however, it is likely that the auditor will identify few controls related to accounting estimates as relevant to the audit. For this reason, the auditor's response to the assessed risks is more likely to be substantive in nature.

Complexity (Ref: Para. 17)

A101. When management uses a complex method, an important factor that the auditor may need to consider regarding the appropriateness of the method, and significant data and significant assumptions, is whether there were other available valuation concepts, techniques or factors, types of assumptions or sources of data that, in the circumstances, might have been more appropriate, or more generally accepted, in the context of the applicable financial reporting framework. The auditor may also consider whether management was able to obtain access to the appropriate skills and knowledge involved in applying the complex method.

Complex Modelling

A102. In some cases, management may use a complex model to make an accounting estimate. Whether the complex model used is appropriate in the context of the applicable financial reporting framework may depend on a number of factors, such as the nature of the entity and its environment, including the industry in which it operates, and the specific item being measured.

A103. The nature and extent of the procedures that may be performed with respect to the complex model depends on the source of the complexity. When complex modelling is needed, the assessed risk of material misstatement is likely to be higher and, therefore, the more persuasive the audit evidence that may need to be obtained.

A104. The extent to which the following considerations are relevant depends on the circumstances, including whether the complex model is obtained from a third party, or is a proprietary model. Depending on the circumstances, matters that the auditor may consider include, for example, whether:

- The model is validated prior to usage, with periodic reviews to ensure it is still suitable for its intended use. The entity's validation process may include evaluation of:
 - The model's theoretical soundness;
 - The model's mathematical integrity;
 - The accuracy and completeness of the model's data and assumptions; and
 - The model's output as compared to actual transactions.
- Appropriate change control policies and procedures exist.

Understanding or Interpreting Data (Ref: Para. 17(c))

A105. An accounting estimate may be based on data that needs to be understood or interpreted. For example, a contract may include complex terms that management needs to understand and interpret

based on the facts and circumstances of the entity. Procedures that the auditor may consider when the accounting estimate is based on complex legal or contractual terms include:

- Considering whether specialized skills or knowledge are needed to understand or interpret the contract;
- Inquiring of the entity's legal counsel regarding the legal or contractual terms; and
- Inspecting the underlying contracts, and:
 - Obtaining an understanding of, and evaluating, the underlying business purpose for the transaction or agreement; and
 - Considering whether the terms of the contracts are consistent with management's explanations.

Integrity of Significant Data and Significant Assumptions (Ref: Para. 17(d))

A106. Data may be developed internally, or may be obtained from an external information source. When obtaining audit evidence about the integrity of data and assumptions, it may be appropriate for the auditor to compare the data and assumptions with an external information source.

Judgment

The Selection of the Method and the Significant Data and Significant Assumptions (Ref: Para. 18(a)(i))

A107. Audit evidence regarding management's selection of methods and significant data and significant assumptions may be obtained from inquiries of management regarding management's continuing processes of strategic analysis and risk management and inspection of relevant documents (such as committee minutes). Even without formal established processes, such as may be the case in smaller entities, the auditor may be able to evaluate the significant data and assumptions through inquiries of, and discussions with, management, along with other audit procedures in order to obtain sufficient appropriate audit evidence.

Changes From Previous Periods in the Method, or the Significant Data or Significant Assumptions (Ref: Para. 18(a)(ii))

A108. The auditor's consideration of a change in an accounting estimate, or in the method for making it from previous periods, is important because a change that is not based on a change in circumstances or new information is unlikely to be reasonable nor in compliance with the applicable financial reporting framework. Arbitrary changes in an accounting estimate result in inconsistent financial statements over time and may give rise to a financial statement misstatement or be an indicator of possible management bias. (see paragraphs A147–A152).

A109. As part of the process of making changes to the methods, assumptions, and data used in previous periods, management may evaluate alternative assumptions or outcomes of the accounting estimates, which can be accomplished through a number of approaches depending on the circumstances. One possible approach is a sensitivity analysis. This might involve determining how the monetary amount of an accounting estimate varies with different assumptions. Even for accounting estimates measured at fair value, there can be variation because different market participants will use different assumptions. A sensitivity analysis could lead to the development of a

number of outcome scenarios, sometimes characterized as a range of outcomes by management, such as “pessimistic” and “optimistic” scenarios.

Considerations Specific To Smaller Entities

A110. Smaller entities may use simple means to assess alternative assumptions or outcomes. In addition to the auditor’s review of available documentation, the auditor may obtain other audit evidence of management’s consideration of alternative assumptions or outcomes by inquiry of management. In addition, management may not have the expertise to consider alternative assumptions or outcomes and, therefore, may need to obtain specialized skills or knowledge from an external party (see also paragraph 10(e)(iv)).

Management’s Intent and Ability (Ref: Para. 18(b))

A111. The reasonableness of the assumptions used may depend on management’s intent and ability to carry out certain courses of action. Management often documents plans and intentions relevant to specific assets or liabilities and the applicable financial reporting framework may require it to do so. Although the extent of audit evidence to be obtained about management’s intent and ability is a matter of professional judgment, the auditor’s procedures may include the following:

- Review of management’s history of carrying out its stated intentions.
- Review of written plans and other documentation, including, when applicable, formally approved budgets, authorizations or minutes.
- Inquiry of management about its reasons for a particular course of action.
- Review of events occurring subsequent to the date of the financial statements and up to the date of the auditor’s report.
- Evaluation of the entity’s ability to carry out a particular course of action given the entity’s economic circumstances, including the implications of its existing commitments and legal, regulatory, or contractual restrictions that could affect the feasibility of management’s actions.
- Consideration of whether management has met the applicable documentation requirements, if any, of the applicable financial reporting framework.

Certain financial reporting frameworks, however, may not permit management’s intentions or plans to be taken into account when making an accounting estimate. This is often the case for fair value accounting estimates because their measurement objective requires that assumptions reflect those used by marketplace participants.

Model Adjustments (Ref: Para. 18(c)(iii))

A112. When management has made adjustments to the output of the model (see paragraph A30) to meet the requirements of the applicable financial reporting framework, consideration of those adjustments is likely to be important in obtaining sufficient appropriate audit evidence over risks of material misstatement related to the need for the use of judgment by management. Several types of methods used for the valuation of accounting estimates that require adjustments are for example, fulfilment value accounting for valuing insurance contracts and overlay adjustments when accounting for expected credit losses. In the case of fair value accounting estimates, it may be relevant to consider

whether adjustments to the output of the model, if any, reflect the assumptions marketplace participants would use in similar circumstances.

Estimation Uncertainty

Management's Steps to Understand and Address Estimation Uncertainty (Ref: Para. 19(a)(i))

A113. To determine an appropriate management point estimate, and related disclosures, it is necessary to understand the sources of inherent variability in the measurement outcomes, the extent of that variability, and the range of reasonably possible measurement outcomes. It also is necessary for management to identify and address the effects of complexity and judgment in the measurement process that increase the susceptibility of the accounting estimate to misstatement. This is important so that the selection of management's point estimate, and the development of related disclosures, is based only on estimation uncertainty.

A114. There is no particular method of addressing estimation uncertainty that is more suitable than another. For example, management may employ sensitivity analysis, scenario analysis, or, when more robust evaluation is considered necessary (for example, in the banking or insurance industries), stress testing and reverse stress testing. Management's consideration of alternative assumptions or outcomes may not need to be conducted through a detailed process supported by extensive documentation. What is important is whether management has appropriately assessed how estimation uncertainty may affect the accounting estimate, not the specific manner in which it is done. Accordingly, where management has not considered alternative assumptions or outcomes, it may be necessary for the auditor to discuss with management, and request support for, how it has addressed estimation uncertainty.

A115. Paragraph A46 includes a list of matters that may be appropriate for the auditor to consider in obtaining an understanding of whether, and if so, how management has addressed estimation uncertainty.

Management's Determination of a Point Estimate and Related Disclosures of Estimation Uncertainty (Ref: Para 19(a)(ii))

A116. When preparing the financial statements, it also is important for management to determine that the estimation uncertainty has been properly depicted. This includes the selection of an appropriate point estimate and the related disclosures in the financial statements that describe the estimation uncertainty. For this purpose, an appropriate management point estimate is an amount that appropriately represents the range of reasonably possible outcomes, and appropriate related disclosures describe the extent of the variability in reasonably possible measurement outcomes.

A117. The requirements of the applicable financial reporting framework may specify the method that should be applied in selecting an amount from the reasonably possible measurement outcomes. Financial reporting frameworks may recognize that the appropriate amount is one that is representative of the range of reasonably possible measurement outcomes and, in some cases, may indicate that the most relevant amount may be in the central part of that range.

A118. For example, with respect to fair value estimates, IFRS⁵⁴ indicates that, if multiple valuation techniques are used to measure fair value, the results (i.e., respective indications of fair value) shall

⁵⁴ IFRS 13, Fair Value Measurement, paragraph 63

be evaluated considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances. In other cases, the applicable financial reporting framework may specify the use of a probability-weighted average of the reasonably possible measurement outcomes, or of the measurement amount that is most likely or that is more likely than not.

A119. In other cases, the framework may not specify a particular selection method and judgment will be required, having regard to the requirements of the applicable financial reporting framework, including, when applicable, requirements relating to fair presentation and faithful representation.

A120. The applicable financial reporting framework may require disclosures that describe the amount as an estimate and explain the nature and limitations of the process for making it, including the variability in reasonably possible measurement outcomes. The framework also may require additional disclosures to meet a disclosure objective.⁵⁵ In addition, in certain circumstances, it may be necessary for management to provide additional disclosures beyond those specifically required by the financial reporting framework in order to achieve fair presentation, or in the case of a compliance framework, for the financial statements not to be misleading.

A121. The applicable financial reporting framework may require disclosures about significant accounting policies related to accounting estimates. Depending on the circumstances, relevant accounting policies may include matters such as the specific principles, bases, conventions, rules and practices applied in preparing and presenting accounting estimates in the financial statements.

A122. The applicable financial reporting framework also may include requirements to disclose significant or critical judgments (for example, those that had the most significant effect on the amounts recognized in the financial statements) as well as significant forward-looking assumptions or other sources of estimation uncertainty.

A123. Paragraph A2 of this ISA describes considerations that may be relevant to the auditor's evaluation of whether the accounting estimate, and related disclosures, are reasonable in the context of the applicable financial reporting framework. Matters that may be relevant in obtaining sufficient appropriate audit evidence about the reasonableness of management's point estimate and related disclosures include, when applicable:

- Alternative methods for making the accounting estimate and alternative sources of data were available, and the methods and data used were selected appropriately from those alternatives.
- Valuation attributes used were appropriate and complete.
- The assumptions used were selected from a range of reasonably possible amounts and were supported by appropriate data that is relevant and reliable.
- The data used in the measurement process was appropriate, relevant and reliable, and the integrity of that data was maintained.
- The calculations applied in developing the outputs from the measurement process were mathematically accurate.
- Management's point estimate is appropriately representative of the range of reasonably possible measurement outcomes.

⁵⁵ IFRS 13, *Fair Value Measurement*, paragraph 92

- The related disclosures appropriately describe the amount as an estimate and explain the nature and limitations of the estimation process, including the variability of the reasonably possible measurement outcomes.

A124. The auditor may conclude that the disclosure of estimation uncertainty is not reasonable in light of the circumstances and facts involved, even when the disclosures are in accordance with the applicable financial reporting framework. The auditor's evaluation of the reasonableness of disclosures about estimation uncertainty increases in importance the greater the range of possible outcomes of the accounting estimate (see paragraphs A133–A134).

A125. In some cases, the auditor may consider it appropriate to encourage management to describe, in the notes to the financial statements, the circumstances relating to the estimation uncertainty. ISA 705 (Revised)⁵⁶ provides guidance on the implications for the auditor's opinion when the auditor believes that management's disclosures in the financial statements are inadequate or misleading, including, for example, with respect to estimation uncertainty. If the auditor's consideration of estimation uncertainty associated with an accounting estimate, and its related disclosure, is a matter that required significant auditor attention, then this may constitute a key audit matter (see ISA 701).⁵⁷

When Management Has Not Appropriately Understood or Addressed Estimation Uncertainty (Ref: Para. 19(b))

A126. When the auditor believes that management has not appropriately understood or addressed estimation uncertainty, the auditor may consider requesting management to consider alternative assumptions or to provide additional disclosure relating to the estimation uncertainty.

A127. If, in the auditor's judgment, management has not appropriately understood or addressed the estimation uncertainty, the auditor is required, to the extent possible, to develop a point estimate or a range to enable the auditor to evaluate the reasonableness of management's point estimate and the related disclosures in the financial statements that describe the estimation uncertainty. The appropriate methods, assumptions and data for the auditor to use depend on the requirements of the applicable financial reporting framework.

Developing an Auditor's Point Estimate or Using an Auditor's Range

A128. Whether the auditor develops a point estimate or uses an auditor's range, the auditor is designing and performing a substantive analytical procedure. ISA 520⁵⁸ provides requirements and guidance regarding the auditor's use of substantive analytical procedures.

A129. The approach taken by the auditor in developing either a point estimate or a range may vary based on what is considered most effective in the circumstances. For example, the auditor may initially develop a point estimate, and then assess its sensitivity to changes in assumptions to ascertain a range with which to evaluate management's point estimate. Alternatively, the auditor may begin by developing a range for purposes of determining, when possible, a point estimate.

A130. The ability of the auditor to develop a point estimate, as opposed to a range, depends on several factors, including the method used, the nature and extent of data available and the estimation

⁵⁶ ISA 705 (Revised), *Modifications to the Opinion in the Independent Auditor's Report*

⁵⁷ ISA 701, *Communicating Key Audit Matters in the Independent Auditor's Report*

⁵⁸ ISA 520, *Analytical Procedures*

uncertainty involved with the accounting estimate. Further, the decision to develop a point estimate or range may be influenced by the applicable financial reporting framework, which may prescribe the point estimate that is to be used after consideration of the alternative outcomes and assumptions, or prescribe a specific measurement method (for example, the use of a discounted probability-weighted expected value, or the most likely outcome).

A131. The auditor may develop a point estimate or a range in a number of ways, for example, by:

- Using a model, for example, one that is commercially available for use in a particular sector or industry, or a proprietary or auditor-developed model.
- Using management's model and selecting alternative assumptions or data sources to develop a point estimate or range.
- Developing a point estimate or range for only part of the accounting estimate (for example, when only a certain part of the accounting estimate is giving rise to the risk of material misstatement).
- Developing alternative assumptions to those used by management.
- Employing or engaging a person with specialized expertise to develop or execute the model, or to provide relevant assumptions.
- Making reference to other comparable conditions, transactions or events, or, where relevant, markets for comparable assets or liabilities.

A132. It is important for the auditor to obtain a sufficient understanding of the data, assumptions and method used by management in making the accounting estimate as this understanding also may be relevant to the auditor's development of an appropriate point estimate or range and the evaluation of whether the accounting estimate is reasonable or is misstated.

A133. The auditor also may need to consider whether there is an indication of management bias in the selection of the assumptions, data or method. For example, for a particular accounting estimate, if management has developed an appropriate range for three different assumptions, and in each case the assumption used in making the accounting estimate was from the same end of the range, the auditor may need a further discussion with management and may need to reconsider whether sufficient appropriate audit evidence has been obtained that the assumptions selected were appropriate and supportable in the circumstances.

A134. In certain circumstances, the auditor's range for an accounting estimate may be multiples of materiality for the financial statements as a whole, particularly when materiality is based on operating results (for example, pre-tax income) and this measure is relatively small in relation to assets or other balance sheet measures. In these circumstances, the auditor's evaluation of the reasonableness of the disclosures about estimation uncertainty becomes increasingly important. Considerations such as those included in paragraphs A133, A144 and A145 may also be appropriate in these circumstances.

Disclosures Related to Accounting Estimates (Ref: Para. 21)

A135. Paragraph 21 applies regardless of whether the auditor is required to perform procedures under paragraph 19.

A136. The presentation of financial statements in accordance with the applicable financial reporting framework includes disclosure of relevant matters. The applicable financial reporting framework may permit, or prescribe, disclosures related to accounting estimates, and some entities may disclose voluntarily additional information in the notes to the financial statements. These disclosures may include, for example:

- The method of estimation used, including any applicable model.
- The basis for the selection of the method of estimation.
- Information that has been obtained from models, or from other calculations used to determine estimates recognized or disclosed in the financial statements, including information relating to the underlying data and assumptions used in those models, such as:
 - Assumptions developed internally; or
 - Data, such as interest rates, that are affected by factors outside the control of the entity.
- The effect of any changes to the method of estimation from the prior period.
- The sources and implications of estimation uncertainty.
- Fair value information, including when produced by management's experts.
- Information about sensitivity analyses derived from financial models that demonstrates that management has considered alternative assumptions.

Such disclosures are relevant to users in understanding the accounting estimates recognized or disclosed in the financial statements, and sufficient appropriate audit evidence needs to be obtained about whether the disclosures are reasonable in the context of the applicable financial reporting framework.

A137. In some cases, the applicable financial reporting framework may require specific disclosures regarding uncertainties. For example, some financial reporting frameworks prescribe:

- The disclosure of key assumptions and other sources of estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities. Such requirements may be described using terms such as “Key Sources of Estimation Uncertainty” or “Critical Accounting Estimates.”
- The disclosure of the range of possible outcomes, and the assumptions used in determining the range.
- The disclosure of specific information, such as:
 - Information regarding the significance of fair value accounting estimates to the entity's financial position and performance; and
 - Disclosures regarding market inactivity or illiquidity.
- Qualitative disclosures such as the exposures to risk and how they arise, the entity's objectives, policies and procedures for managing the risk and the methods used to measure the risk and any changes from the previous period of these qualitative concepts.

- Quantitative disclosures such as the extent to which the entity is exposed to risk, based on information provided internally to the entity's key management personnel, including credit risk, liquidity risk and market risk.

A138. When the financial statements are prepared in accordance with a fair presentation framework, the auditor's evaluation as to whether the financial statements achieve fair presentation⁵⁹ include the consideration of the overall presentation, structure and content of the financial statements, and whether the financial statements, including the related notes, represent the underlying transactions and events in a manner that achieves fair presentation. Depending on the facts and circumstances, given the importance of accounting estimates to the overall financial statements, the auditor may determine that additional disclosures related to accounting estimates are necessary to achieve fair presentation. This may be the case, for example, when an accounting estimate is subject to significant estimation uncertainty (see paragraphs A124–A125).

Overall Evaluation Based on Audit Procedures Performed (Ref: Para. 22)

A139. ISA 330⁶⁰ notes that 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. In relation to accounting estimates, information may come to the auditor's attention through performing procedures to obtain audit evidence about the matters in paragraphs 17–19, when applicable, that differs significantly from the information on which the risk assessment was based.

A140. For example, the auditor may have identified that the only reason for an assessed risk of material misstatement is the need for the use of judgment by management in making the accounting estimate. However, while performing procedures to address the matters in paragraph 18, as applicable, the auditor may discover that the accounting estimate is more complex than originally contemplated, indicating that the assessment of the risk of material misstatement may need to be revised (that is, the reasons for the assessment now include complexity). Therefore, the auditor needs to perform additional audit procedures to address the matters in paragraph 17, as applicable. ISA 315 (Revised) contains further guidance on revising the auditor's risk assessment.⁶¹

A141. With respect to accounting estimates that have not been recognized, the focus of the auditor's evaluation may be on whether the recognition criteria of the applicable financial reporting framework have in fact been met. When an accounting estimate has not been recognized, and the auditor concludes that this treatment is appropriate, some financial reporting frameworks may require disclosure of the circumstances in the notes to the financial statements.

Misstatements (Ref: Para.23)

A142. ISA 450⁶² provides guidance on distinguishing misstatements for purposes of the auditor's evaluation of the effect of uncorrected misstatements on the financial statements. In relation to accounting estimates, a misstatement, whether caused by fraud or error, may arise as a result of:

- Misstatements about which there is no doubt (factual misstatements).

⁵⁹ ISA 700 (Revised), paragraph 14

⁶⁰ ISA 330, paragraph A60

⁶¹ ISA 315 (Revised), paragraph 31

⁶² ISA 450, *Evaluation of Misstatements Identified during the Audit*

- Differences arising from the judgments of management, including those concerning recognition, measurement, presentation and disclosure of accounting estimates (including the selection or application of accounting policies) that the auditor considers unreasonable or inappropriate (judgmental misstatements).
- The auditor's best estimate of misstatements in populations, involving the projection of misstatements identified in audit samples to the entire populations from which the samples were drawn (projected misstatements).

A143. Paragraphs A113 to A118 provide guidance to assist the auditor in evaluating management's selection of a point estimate to be included in the financial statements. Based on the audit evidence obtained, the auditor may conclude that there is sufficient appropriate audit evidence supporting a point estimate that does not differ from management's point estimate. When the auditor uses a range, and provided that the auditor's range only includes amounts that are supported by audit evidence obtained and the auditor has evaluated to be reasonable as required by paragraph 20 of this ISA, the auditor may determine that management's point estimate falls within the auditor's range. In either of these situations, the auditor may conclude that the accounting estimate is reasonable in the context of the applicable financial reporting framework.

A144. In some cases, management may have determined an amount or a range of amounts that it believes are reasonable, and that the auditor also may have determined are reasonable, based on the audit evidence obtained, in developing an auditor's point estimate or range. In other circumstances, the audit evidence obtained may support other amounts or another range of amounts as being reasonable. In each of these circumstances, the variation in such amounts or the auditor's range may be significant. Such variation does not necessarily mean that any of the amounts identified or supported or any amount in the auditor's range is not reasonable. Nonetheless, if the variation is significant it may be important for the auditor to reconsider whether sufficient appropriate audit evidence has been obtained regarding the reasonableness of the amounts within the range.

A145. The audit evidence may support a point estimate that differs from management's point estimate, or a range that does not include management's point estimate. When the audit evidence supports an auditor's point estimate that differs from management's point estimate, the difference between the auditor's point estimate and management's point estimate constitutes a misstatement. When the audit evidence supports a range that does not encompass management's point estimate, the misstatement is the difference between management's point estimate and the nearest point of the auditor's range.

A146. Evaluating whether sufficient appropriate audit evidence has been obtained, and whether the accounting estimate is misstated, for accounting estimates and related disclosures included in the notes to the financial statements involves essentially the same types of considerations applied when auditing an accounting estimate recognized in the financial statements.

Indicators of Possible Management Bias (Ref: Para. 24)

A147. Examples of indicators of possible management bias with respect to accounting estimates include:

- Changes in an accounting estimate, or the method for making it, when management has made a subjective assessment that there has been a change in circumstances.
- Selection or construction of significant assumptions that yield a point estimate favorable for management objectives.

- Selection of a point estimate that may indicate a pattern of optimism or pessimism.

A148. Indicators of possible management bias themselves do not constitute misstatements for purposes of drawing conclusions on the reasonableness of individual accounting estimates. However, in some cases the audit evidence may point to a misstatement rather than simply an indicator of bias. For example, when management has changed an accounting estimate, or the method of making it, from the prior period based on a subjective assessment that there has been a change in circumstances, the auditor may conclude based on the audit evidence obtained that the accounting estimate is misstated as a result of an arbitrary change by management, or may regard it as an indicator of possible management bias.

A149. Management bias may be more difficult to detect at an account level than when considering groups of accounting estimates or all accounting estimates, or when observed over a number of accounting periods. Although some form of management bias is inherent in subjective decisions, in making such judgments there may be no intention by management to mislead the users of financial statements. When, however, there is intention to mislead, management bias is fraudulent in nature.

A150. For example, if each accounting estimate included in the financial statements was individually reasonable but each management point estimate trends toward one end of the auditor's range, such circumstances may indicate possible bias by management in making the estimates. Bias may also be evident from the cumulative effect of changes in multiple accounting estimates. For example, if the estimates in the financial statements are grouped at one end of the range of reasonable outcomes in the prior year and are grouped at the other end of the range of reasonable outcomes in the current year, such changes may be an indicator of possible bias in seeking to achieve an expected or desired outcome, e.g., to offset higher or lower than expected earnings.

A151. Indicators of management bias may affect the auditor's conclusion as to whether the auditor's risk assessment and related responses remain appropriate, and the auditor may need to consider the implications for the rest of the audit. Further, they may affect the auditor's evaluation of whether the financial statements as a whole are free from material misstatement, as discussed in ISA 700 (Revised).

A152. In addition, in applying ISA 240, the auditor is required to evaluate whether management's judgments and decisions in making the accounting estimates included in the financial statements indicate a possible bias that may represent a material misstatement due to fraud. Fraudulent financial reporting is often accomplished through intentional misstatement of accounting estimates, which may include intentionally understating or overstating accounting estimates. Possible indicators of management bias that may also be indicators of a fraud risk may cause the auditor to reassess whether the auditor's risk assessments, in particular the assessment of fraud risks, and related responses remain appropriate.

Written Representations (Ref: Para. 25)

A153. ISA 580⁶³ discusses the use of written representations. In obtaining written representations that management and, where appropriate, those charged with governance, believe the methods and significant data and significant assumptions used in making the accounting estimates and their related disclosures are appropriate, the auditor is required to consider the need to obtain representations about specific accounting estimates. These representations may address accounting

⁶³ ISA 580, *Written Representations*

estimates recognized or disclosed, or about decisions not to recognize or disclose an accounting estimate, in the financial statements and may include representations:

- That management's point estimate is reasonable in the context of the applicable financial reporting framework.
- About the appropriateness of the method selected and, when applicable, the model used for making the accounting estimate in the context of the applicable financial reporting framework.
- That the significant judgments made in making the accounting estimate have been taken into account all relevant information of which management is aware.
- About the consistency in the selection or application of the method, assumptions, and data used by management in making the accounting estimates in the context of the applicable financial reporting framework.
- That the assumptions appropriately reflect management's intent and ability to carry out specific courses of action on behalf of the entity, when relevant to the accounting estimates and disclosures.
- That disclosures related to accounting estimates, including disclosures describing estimation uncertainty, are complete and reasonable in the context of the applicable financial reporting framework.
- That appropriate specialized skills or expertise, when necessary, has been applied in making the accounting estimates.
- That no subsequent event requires adjustment to the accounting estimates and related disclosures included in the financial statements.

A154. For those accounting estimates not recognized or disclosed in the financial statements, written representations may also include representations about the appropriateness of the basis used by management for determining that the recognition or disclosure criteria of the applicable financial reporting framework have not been met.

Communication with Those Charged With Governance or Management (Ref: Para 26)

A155. In applying ISA 260 (Revised), the auditor communicates with those charged with governance the auditor's views about significant qualitative aspects of the entity's accounting practices relating to accounting estimates and related disclosures. This may include, when applicable, why the auditor considers a significant accounting practice, which include management's judgments in making the accounting estimates, although acceptable under the applicable financial reporting framework, not to be most appropriate to the particular circumstances of the entity. In communicating those views, matters specific to the accounting estimates that the auditor may consider communicating to those charged with governance include:

- (a) The nature and consequences of significant assumptions used in accounting estimates and the degree of subjectivity involved in the development of the assumptions;
- (b) The relative materiality of the accounting estimates to the financial statements as a whole;
- (c) Management's understanding (or lack thereof) regarding the nature and extent of, and the risks associated with, accounting estimates, particularly financial instruments;

- (d) Significant difficulties encountered when obtaining sufficient appropriate audit evidence relating to data obtained from an external information source or valuations performed by management or a management's expert;
- (e) Significant differences in judgments between the auditor and management or a management's expert regarding valuations;
- (f) The auditor's views about differences between the auditor's point estimate or range and management's point estimate;
- (g) The auditor's views about the appropriateness of the selection of accounting policies and presentation of accounting estimates in the financial statements;
- (h) The auditor's views about the qualitative aspects of the entity's accounting practices and financial reporting for accounting estimates; and
- (i) The potential effects on the entity's financial statements of material risks and exposures required to be disclosed in the financial statements, including the estimation uncertainty associated with accounting estimates.

A156. In applying ISA 265, the auditor communicates significant deficiencies in internal control to those charged with governance or management, including significant deficiencies regarding accounting estimates. For example, significant deficiencies may be identified related to controls over:

- (a) The selection and application of significant accounting policies related to accounting estimates, and the selection and application of methods, assumptions, and data;
- (b) Risk management and related systems;
- (c) Data integrity, including when data is obtained from an external information source; and
- (d) The use, development and validation of models, including third-party models, and any adjustments that may be required.

A157. In addition to communicating with those charged with governance, the auditor may be permitted or required to communicate directly with regulators or prudential supervisors. Such communication may be useful throughout the audit or at particular stages, such as when planning the audit or when finalizing the auditor's report. For example, in some jurisdictions, financial institution regulators seek to cooperate with auditors to share information about the operation and application of controls over financial instrument activities, challenges in valuing financial instruments in inactive markets, expected credit losses, and insurance reserves while other regulators may seek to understand the auditor's views on significant aspects of the entity's operations including the entity's costs estimates. This communication may be helpful to the auditor in identifying risks of material misstatement.

Documentation (Ref: Para. 27)

A158. Paragraph 8 of ISA 230 requires the auditor to prepare audit documentation that is sufficient to enable an experienced auditor, having no previous connection with the audit, to understand, among other things, significant professional judgments. In the context of auditing accounting estimates, these professional judgments include the basis for the auditor's evaluation of whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework. The auditor's judgments are likely to be supported by the documentation of the procedures performed to address the matters in paragraphs 17–21 including the auditor's judgment

about management's selection of methods, significant data, and significant assumptions, as well as the overall evaluation required by paragraphs 22–23, of this ISA. In addition, the auditor's judgments about the assessed risk of material misstatement related to accounting estimates, and the auditor's response, may likely be further supported by documentation of communications with those charged with governance and management, particularly for accounting estimates for which the assessed risk of material misstatement is based on inherent risk that is not low.

A159. Documentation of indicators of possible management bias identified during the audit assists the auditor in concluding whether the auditor's risk assessment and related responses remain appropriate, and in evaluating whether the financial statements as a whole are free from material misstatement. See paragraph A147 for examples of indicators of possible management bias.

Appendix 1

(Ref: Para. 2)

Measurement Bases of Accounting Estimates

1. The purpose of this appendix is to explain the range of different types of measurement bases that may be relevant in making an accounting estimate. It is intended to provide context for the auditor's consideration of the extent to which the factors of complexity, the need for the use of judgment by management, and estimation uncertainty may be inherent in the use of a particular measurement basis.
2. Measurement bases are the measurement objectives for determining the required monetary amounts for financial statement items. They may be either historical cost or current value measurement bases. Monetary amounts for financial statement items measured at historical cost provide information derived from the transaction or event that created them and those measured at current value provide information that is updated to reflect conditions at the measurement date. A current value measurement basis may reflect either an entity-specific or a market-based perspective of value.
3. Depending on the measurement basis and on the nature, condition and circumstances of a financial statement item, the monetary amount required to be measured for the item may be a cost or price for the item at initial recognition, which thereafter may be re-measured, or adjusted to reflect certain subsequent changes in the condition and circumstances of the item. A cost or price may be directly observable in actual transactions (either of the entity or between market participants) or may need to be estimated using other valuation techniques. Adjustments to reflect subsequent changes often also require estimation. Examples of circumstances in which accounting estimates may be required, when applying a range of common measurement bases, are discussed below.
4. The nature, condition and circumstances of financial statement items vary widely and give rise to quantitative and qualitative attributes of those items that would influence the monetary amount of the item on the relevant measurement basis (valuation attributes).
5. The nature of a financial statement item may give rise to valuation attributes relating to the rights, obligations or other claims relating to resources, or changes therein, which the item embodies. The circumstances and condition of a financial statement item may give rise to valuation attributes. These may relate to general economic, regulatory, technological and market conditions. They may also relate to conditions of more specific relevance to the item, including the nature of the business, how the items are used in the business and how the risks and uncertainties inherent in the business activities affect the item.
6. Valuation attributes may affect how the item contributes to the timing and amounts of cash flows, and related risks and uncertainties, and may reflect other risks and uncertainties inherent in the item. Valuation attributes may influence the cost or price of the item on initial recognition, or on re-measurement, or may influence the monetary amount relating to subsequent changes for which adjustment is required.
7. When accounting estimates need to be made, other than by direct observation of the cost or price, valuation techniques may be used to model the cost or price of the item, or the effects of any subsequent changes for which adjustments are required. Using such techniques involves measuring or estimating relevant valuation attributes and applying functions to the resulting amounts. Amounts

may be measured or estimated for valuation attributes based on observable data, where available, or otherwise based on assumptions that take into account the best available data or other information. The selection and application of appropriate valuation techniques, including the measurement or estimation of such attributes and the application of functions to the resulting amounts, are undertaken in a manner that reflects the objectives of the measurement basis and takes into account the nature, circumstances and conditions of the item.

8. Making an accounting estimate for a financial statement item, by modelling the amount to be measured in this way, may therefore involve determining:
- The relevant quantitative and qualitative valuation attributes;
 - The extent to which observable data is available to measure relevant valuation attributes;
 - If such data is available to measure relevant valuation attributes, the sources of data that would provide appropriate measures of those attributes;
 - If such data is not available to measure relevant valuation attributes, or is not sufficiently precise or comprehensive, the types of assumptions that need to be made in estimating appropriate values for those attributes and the sources of data that would provide appropriate support in making those assumptions;
 - The method (valuation technique or combination of valuation techniques) by which such data and assumptions would be used to make the estimate, and to develop information about the sensitivity of that amount to reasonably possible variations in the data and assumptions used; and
 - Where applicable, the nature and extent of any adjustments that may be made to the estimated measurement arising from the application of that method, for example to reflect practical limitations in the validity of the valuation technique(s) used in measuring what it purports to measure.

Examples of Circumstances in Which Accounting Estimates May Be Required in Applying Certain Measurement Bases

Historical Cost Measurement Bases

9. Some measurement bases require the use of monetary amounts at initial recognition that reflect the cost paid or consideration given (and transaction costs) for a statement asset acquired or built, and the consideration received (less transaction costs) for a liability incurred or assumed, based on the terms of the transactions that gave rise to them (historical cost). Such amounts may be directly observable (for example, they may be observed in invoices, remittance or payment advices or contract notes or other primary transaction records).
10. When such amounts are not directly observable, it may be necessary to estimate a deemed cost for the item(s) using a proxy such as fair value (see paragraph 19). For example, the deemed cost of an item may be the fair value of the other assets or liabilities exchanged for the item or may be the fair value of the item itself when no other assets or liabilities are exchanged for it. That deemed cost may not be known at the measurement date and may depend on the outcome of future events or circumstances (such as would be the case when part or all of the amount payable for the acquisition of a business depends on the future earnings of the business). Deemed cost may therefore be difficult to determine.

Adjustments of Historical Cost Measures after Initial Recognition

11. Historical cost measurement bases require adjustments to reflect changes after initial recognition of the item, other than changes in prices. Such changes may occur over several reporting periods. For non-financial assets and liabilities, these changes may reflect the consumption or impairment of an asset or the fulfilment of, or the onset of onerous conditions relating to, a liability. The historical cost of a financial asset or a financial liability may be referred to as amortized cost.
12. For financial assets and financial liabilities measured using amortized cost, adjustments are made to reflect changes after initial recognition such as the accrual of interest, changes in the estimates of cash flows (including the impairment of financial assets) and payments or receipts, but not to reflect subsequent changes in prices caused by other factors.
13. The monetary amounts of adjustments to historical costs measured at initial recognition will often not be directly observable and will need to be estimated. Estimating consumption and identifying impairment losses or onerous liabilities can be subjective. Hence, the historical cost of an asset or a liability can sometimes be as difficult to estimate as a current value.

Impairment of an Asset

14. Impairment adjustments are made when the amount recoverable from disposal or use of an asset is less than its carrying amount, after taking account of adjustments for depreciation or amortization. Impairment may be caused by a number of factors, depending on the nature of the asset, such as obsolescence, physical damage, a reduction in creditworthiness (financial assets), a reduction in market value or a reduction in the operational use of the asset. The monetary amount of the impairment, if any, of a historical cost measure of an asset at the balance sheet date is not ordinarily directly observable, and may depend on future realizations from the use or sale of the item.
15. The amount recoverable from disposal may be required to be determined based on a fair value measurement or at net realizable value, and may require estimation. Similarly the amount recoverable from use (value in use) will ordinarily require estimation. There can also be complex considerations relating to the appropriate unit of account.
16. Even if the amount of the impairment of the asset is confirmed in transactions subsequent to the balance sheet date at a monetary amount that is then observable, that amount may not reflect the level of impairment at the balance sheet date. This is because the level of impairment at the balance sheet date may have been subject to the effects of changes in circumstances between that date and the date of such transactions.

Depreciation or Amortization

17. The depreciation or amortization of an asset's historical cost reflects the consumption of the underlying economic resource that constitutes the asset, during its useful life. The capacity of the economic resource (useful life of the asset), the progress of its consumption and the residual value of the asset are all uncertain. These amounts may not be known with certainty until the asset's total economic capacity and its consumption have been observed over its useful life and the asset at the residual stage has been disposed of. Ordinarily, therefore, none of these amounts would be directly observable when accounting estimates for depreciation or amortization are required to be made during the asset's useful life. They would all therefore ordinarily require estimation.

Current Value Measurement Bases

18. Some measurement bases require the use of monetary amounts that reflect information about conditions at the measurement date rather than information based on historical transactions. Such measurement bases require the use of either a market-participant or an entity-specific perspective.

Fair Value

19. The fair value measurement basis requires measurement of the price for which an asset would have been sold, or a liability transferred, in an orderly transaction (or, if no such transaction has occurred, in an assumed transaction) between market participants in an active market at the measurement date. The objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions.
20. Financial reporting frameworks often establish a 'fair value hierarchy' that categorises the inputs used to measure fair value into three levels and gives priority to using those in the higher levels over using those in lower levels. The purpose of doing so is to increase consistency and comparability in fair value measurements and related disclosures. Quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date and that are not subject to adjustment, provide the most relevant evidence of fair value and are included in the highest level of the hierarchy (these are level 1 inputs).
21. If a level 1 input is not available or accessible, it may be possible to measure the fair value using other observable inputs, such as quoted prices for similar items in an active market or quoted prices for identical items in a non-active market or other inputs observed in or corroborated with active markets (e.g., interest rates, yield curves, implied volatilities or credit spreads) (such other observable inputs are level 2 inputs).
22. Otherwise, it may be necessary to measure the fair value, sometimes using discounted cash flow techniques, based on the best information available in the circumstances, including unobservable inputs to the extent observable inputs are not available, and taking into account all information about market participant assumptions that is reasonably available (unobservable inputs are level 3 inputs).
23. In some circumstances, fair value may be measured using inputs from more than one level of the hierarchy, or using a level 1 input that has been adjusted. Fair value measurements are categorized in their entirety in the same level of the hierarchy as the lowest level of input that is significant for the entire measurement. If so, their categorizations are ordinarily based on the lowest level of input used that is significant to the measurement as a whole, and on categorizing a fair value measurement that uses an adjusted level 1 input into a level lower than level 1.

Value in Use and Fulfilment Value

24. Some measurement bases require the use of monetary amounts that reflect the present value of the future cash flows that the entity will obtain from using and disposing of an asset (value in use) or will incur in fulfilling its obligations inherent in a liability (fulfilment value). For example, value in use is frequently used to test for impairment (see paragraph 15). Certain types of provisions may be measured using fulfilment value, such as provisions for pension obligations, product warranties, reinstatement obligations, or legal disputes. The monetary amounts required by such measurement bases cannot be observed directly and are estimated using discounted cash flow techniques. In

principle, accounting estimates measured using value in use and fulfilment value, reflect an entity-specific perspective but some valuation attributes used in making them may be required to reflect a market-participant perspective, such as market interest rates.

Valuation Techniques Commonly Used in Making Current Value Measurements

Valuation Techniques

25. Valuation techniques can be categorized within three different approaches: the market approach; the cost approach; and the income approach.

Market Approach

26. Valuation techniques within the market approach typically use prices and other relevant information generated by market transactions involving identical or similar assets, liabilities or groups of assets and liabilities, such as businesses. Examples include the use of valuation techniques for measuring fair value that use level 1 and level 2 inputs and valuation techniques for measuring fair value of real estate by reference to comparable properties.

Cost Approach

27. Valuation techniques within the cost approach typically reflect the amount that would be required to replace the service capacity of an asset at the measurement date (often referred to as current replacement cost). For example, current replacement cost is used to measure the fair value of tangible assets used in combination with other assets or liabilities.

Income Approach

28. Valuation techniques within the income approach typically convert future amounts, such as cash flows, or income and expenses, to a single discounted current amount. Valuation techniques that apply this approach include, for example, present value techniques and option pricing models. For example, discounted cash flow is a valuation technique within the income approach, which applies present value techniques to cash flows that are commonly used in measuring value in use and fulfilment value and sometimes used in measuring fair value.

Discounted Cash Flow

29. Measurement bases that involve the use of discounted cash flow in making accounting estimates generally require valuation attributes such as the following to be addressed:
- Estimates of the amount and timing of future cash flows arising from the item;
 - Possible variations in the amount and timing of those cash flows, resulting from uncertainty inherent in those cash flows;
 - Time value of money;
 - Price (a risk premium or discount) for bearing the uncertainty inherent in the cash flows;
 - Other attributes, such as liquidity, that would be taken into account in the circumstances; and
 - If used to measure fair value of a liability, the price for bearing the entity's own credit risk.

PROPOSED INTERNATIONAL STANDARD ON AUDITING 540 (REVISED)
AUDITING ACCOUNTING ESTIMATES AND RELATED DISCLOSURES

30. The assumptions reflected in the discount rate should be consistent with the assumptions inherent in the cash flows – if uncertainty about future defaults is reflected in the discount rate, then the cash flows should be the contractual flows. If the cash flows are probability-weighted and therefore already reflect assumptions about uncertainty of future default, then the discount rate should not double-count that risk.
31. Assumptions about cash flows and discount rates should also be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation and after-tax cash flows should be discounted using after-tax discount rates.

Appendix 2

(Ref: Para. 2, A6)

Factors That May be Indicators of Risks of Material Misstatement for Accounting Estimates

1. Paragraphs 2, 3 and 13 of this ISA, respectively, introduce the factors of complexity, judgement and estimation uncertainty and require the auditor to take them, and any other relevant factors, into account in the identification and assessment of the risks of material misstatement related to an accounting estimate. Accordingly, these factors are referred to throughout this ISA and this appendix provides additional background information in relation to them. In responding to the assessed risks of material misstatement the auditor is required, in accordance with paragraph 15(b) of this ISA, to perform procedures to obtain sufficient appropriate audit evidence about certain matters, when specified circumstances are applicable, related to each of these factors.

Circumstances Where the Three Factors Are Likely To Be More Prevalent

2. As explained in Appendix 1, the nature of the measurement basis applied and the nature and circumstances of the financial statement item will also influence the extent to which these factors are present and need to be taken into account by management, when applicable, in:
 - (a) Making an accounting estimate of the required monetary amount;
 - (b) Understanding the sensitivity of the accounting estimate to variation in those factors; and
 - (c) Considering the related disclosures that may be required.
3. Estimates are more likely to be affected by the interrelationship of these three factors, and to a greater extent, when the method by which they are made involves complex modelling.

Estimation Uncertainty

4. Estimation uncertainty is the inherent uncertainty that makes accounting estimates susceptible to a lack of precision in their measurement. Depending on the nature of the measurement basis applied and on the nature and circumstances of the financial statement item, the monetary amount of the item may be directly observable before the financial statements are finalized or may only be directly observable at a later date or, in some cases, may not be directly observable at all. Estimation uncertainty arises when the required monetary amount for a financial statement item cannot be determined with precision and the outcome of the estimate is not known before the date the financial statements are finalized.
5. Estimation uncertainty may give rise to variation in the possible methods, data sources and types of assumptions that could be used to make the accounting estimate and therefore may give rise to the need for the use of judgment in making estimates. This in turn may give rise to variation in the possible outcomes of the estimation process (both in the amount of the accounting estimate and in information developed about the sensitivity of that amount to variations in the data or assumptions used). Such variation is relevant in considering how to depict accounting estimates in the financial statements, in accordance with the recognition, measurement, presentation and disclosure requirements of the applicable financial reporting framework.

6. As a result of inherent limitations in information, it is not possible to reduce estimation uncertainty beyond certain limits. Furthermore, most accounting frameworks acknowledge that the information that should be taken into account may also be limited (and that it is therefore not practical to reduce estimation uncertainty beyond this limit) when the cost of obtaining it would exceed the benefits (the cost constraint).
7. The extent to which there is residual estimation uncertainty is reflected in the sensitivity of the amount of the accounting estimate to the use of different methods, to variations in the available data, or in the values for the assumptions that could be used, in making the accounting estimate. Although an estimate subject to higher levels of estimation uncertainty may be less precisely measurable than one subject to lower levels, the accounting estimate may still have significant relevance for users of the financial statements if the description of the nature and extent of the estimation uncertainty in the financial statements is reasonable in the context of the applicable financial reporting framework. Addressing the estimate in the financial statements is accomplished by selecting a reasonable point estimate to use in the financial statements and describing the extent, nature and measurement effect of the estimation uncertainty i.e., the range of possible outcomes. In some cases, estimation uncertainty associated with an accounting estimate may be so great that the recognition criteria in the applicable financial reporting framework are not met and the accounting estimate cannot be recognized in the financial statements, though there may still be relevant disclosure requirements.

Complexity

8. Complexity in making accounting estimates arises when there are multiple valuation attributes and multiple or non-linear relationships between them. Management may require specialized skills or knowledge may, for example, be needed in relation to:
 - Available valuation concepts and techniques that could be used in the context of the measurement basis and objectives or other requirements of the applicable financial reporting framework and how to apply those concepts or techniques;
 - Experience of the underlying valuation attributes that may be relevant given the nature and circumstances of the financial statement items for which accounting estimates are being made; or
 - Identifying available appropriate sources of data (including data relevant to the development of appropriate assumptions) from internal sources (including from sources outside the general or subsidiary ledgers) or from external information sources, or how to address difficulties in obtaining data from such sources or in maintaining its integrity in applying the method.
9. Complexity in applying valuation concepts or techniques may exist when concepts or techniques involve the use of, for example probability-based methods, option pricing formulae or simulation techniques to predict uncertain future outcomes or hypothetical behaviors. Complexity in relation to the method may also exist when multiple sources of data, assumptions or valuation concepts or techniques need to be used in determining the output(s) of the estimation process, including when such items need to be interpreted or processed to be appropriate for use or to support the development of assumptions.

10. Complexity in applying valuation concepts or techniques may also relate to data (including data relevant to the development of appropriate assumptions), including when the data is inherently difficult to identify, capture, access or understand. For example:
- (a) Data may be difficult to obtain when it relates to transactions that are not generally transparent to the public at large. Even when such data is accessible through an external information source, it may be difficult to understand unless the external information source discloses adequate information about the underlying data sources it has used and about any data processing that has been performed.
 - (b) Data reflecting an external information source's views about future conditions or events, which may be relevant in developing support for an assumption, may be difficult to understand without transparency about the rationale and information taken into account in developing those views.
 - (c) Certain types of data may be inherently difficult to understand because they require an understanding of technically complex business or legal concepts, such as may be required to properly understand data that comprises the terms of legal agreements about transactions involving complex financial instruments or insurance products.

Judgment

11. When an accounting estimate is required, the applicable financial reporting framework may not fully specify, for each type of financial statement item and in each possible circumstance, the most appropriate approach to make that accounting estimate. It is also generally not practical for the applicable financial reporting framework to specify all the particular valuation attributes, concepts and techniques that should be used to determine an accounting estimate and related disclosures. As a result, consideration of these matters generally requires the need for the use of judgment by management in making the accounting estimate.
12. Judgments are generally also needed to address the inherent limitations in available information. In some cases, the level or nature of the inherent limitations in available information may introduce a high degree of subjectivity in making some judgments.
13. The applicable financial reporting framework may provide a basis for making certain judgments, such as explicit or implied objectives relating to measurement, disclosure, the unit of account, or the application of a cost constraint. The applicable financial reporting framework may also highlight the importance of such judgments through requirements for related disclosures.
14. Judgments are generally needed in determining some or all of the following:
- To the extent not specified under the requirements of the applicable financial reporting framework, the appropriate valuation approaches, concepts, techniques and factors to use in the estimation method, having regard to available knowledge;
 - To the extent valuation attributes are observable but there are various potential sources of data available, the appropriate sources of data to use;
 - To the extent valuation attributes are not observable, the appropriate assumptions or range of assumptions to use, having regard to the limited data available, including, for example, market views;
 - The range of point estimates that could be reasonable to use in the financial statements and the relative likelihood that certain points within the range would be consistent with the

objectives of the measurement basis required by the applicable financial reporting framework; and

- The reasonable amount to use for the accounting estimate, and the reasonable related disclosures to be made, in the financial statements.
15. Management may also need to make judgments about cost constraints, including valuation attributes that need to be taken into account but are not directly observable and about the best information available in the circumstances.
 16. Making assumptions about future events or conditions involves the use of judgment, the difficulty of which varies with the extent to which those events or conditions are uncertain. The precision with which it is possible to predict uncertain future events or conditions depends on the extent to which those events or conditions are determinable based on available knowledge, including knowledge of past conditions, events and related outcomes. The lack of precision also contributes to estimation uncertainty, as described above.
 17. Not all features of a future outcome may be uncertain and assumptions will only need to be made in respect of those features of the outcome that are uncertain. For example, in considering the measurement of a possible impairment of a receivable for a sale of goods at the balance sheet date, the amount of the receivable may be unequivocally established and directly observable in the related transaction documents. What may be uncertain is the amount, if any, for loss due to impairment. In this case, assumptions may only be required about the likelihood of loss and about the amount and timing of any such loss.
 18. However, in other cases, the amounts of cash flows embodied in the rights relating to an asset may be uncertain (for example, the amount of compensation for loss claimed in an ongoing litigation may be highly uncertain). In those cases, assumptions may have to be made about both the amounts of the underlying rights to cash flows and about potential losses due to impairment depending on the creditworthiness of the party against whom the claim is made.
 19. Some uncertain outcomes may be relatively easy to predict with a high level of precision for an individual item. For example, the useful life of a production machine may be easily predicted if sufficient technical information is available about its average useful life. When it is not possible to predict a future outcome, such as an individual's life expectancy based on actuarial assumptions, with reasonable precision, it may still be possible to predict that outcome for a group of individuals with greater precision. Measurement bases may, in some cases, indicate a portfolio level as the relevant unit of account for measurement purposes, which may reduce inherent estimation uncertainty.
 20. In other cases, it may be necessary to consider information about past conditions and events, together with current trends and expectations about future developments. Past conditions and events provide historical information from which repeating historical patterns of behavior relating to uncertain valuation attributes may be discerned and extrapolated in evaluating future outcomes. Such historical information may also indicate changing patterns of such behavior over time (cycles or trends). These may suggest that the underlying historical patterns of behavior have been changing in somewhat predictable ways that may also be extrapolated in evaluating future outcomes. Other types of information may also be available that indicate possible changes in historical patterns of such behavior or in related cycles or trends. Difficult judgments may be needed about the predictive value of such information.

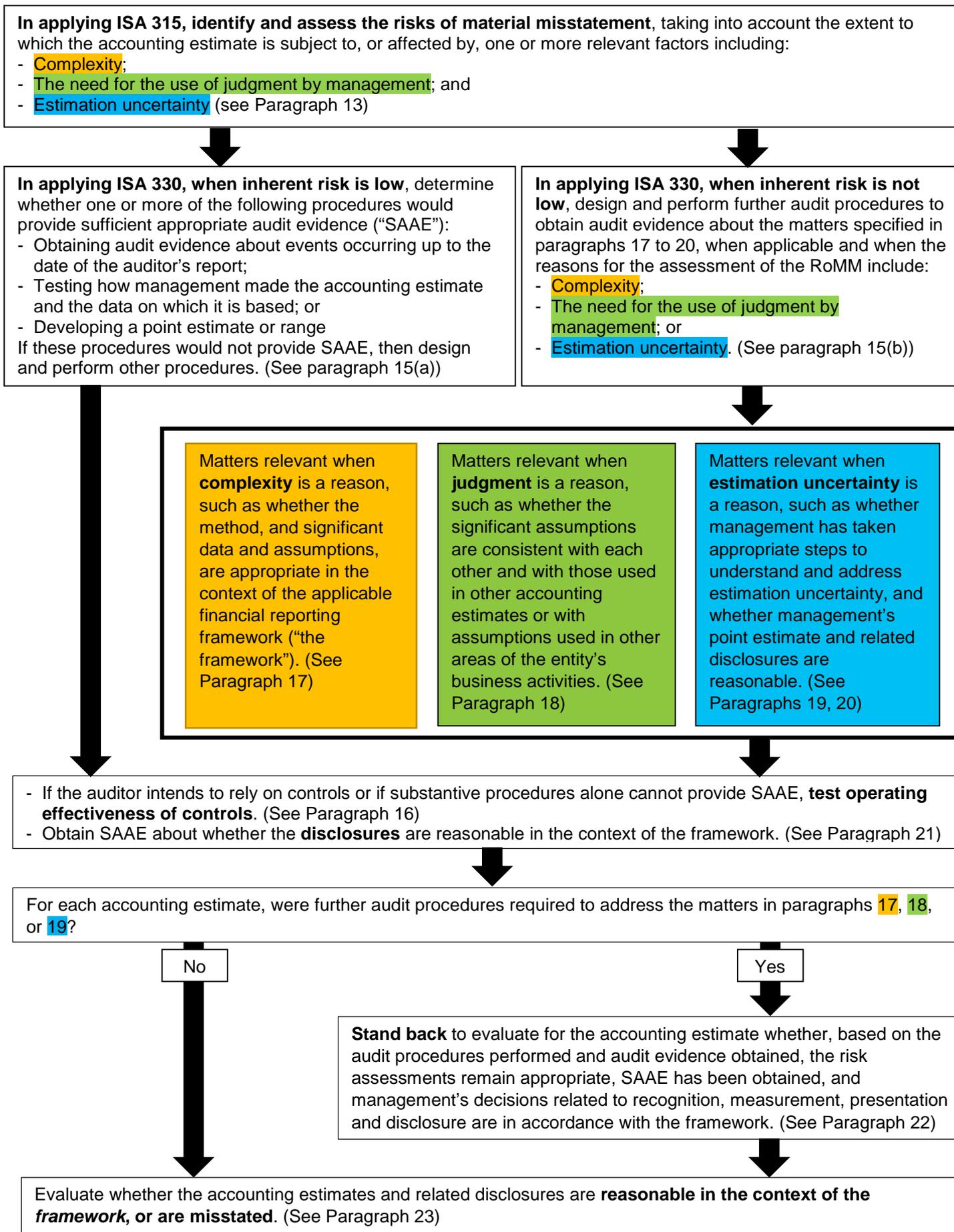
PROPOSED INTERNATIONAL STANDARD ON AUDITING 540 (REVISED)
AUDITING ACCOUNTING ESTIMATES AND RELATED DISCLOSURES

21. The extent and nature (including the degree of subjectivity involved) of the judgments taken in making the accounting estimates may create opportunity for management bias in making decisions about the course of action that, according to management, is appropriate in making the accounting estimate. When there is also a high level of complexity or a high level of estimation uncertainty, or both, the risk of, and opportunity for, management bias and the ability to conceal it may also be increased.

Supplement to Proposed ISA 540 (Revised)

Illustration of Work Effort Requirements

Note: This chart summarizes key aspects of paragraphs 13, 15-23 of ED 540. It is not a substitute for reading the ED.



**CONFORMING AND CONSEQUENTIAL AMENDMENTS ARISING
FROM DRAFT PROPOSED ISA 540 (REVISED)**
ISA 260 (Revised), Communication with Those Charged with Governance

Requirements

...

Matters to Be Communicated

...

<i>Note: Paragraph 18 is provided for reference purposes only.</i>
--

Significant Findings from the Audit

16. The auditor shall communicate with those charged with governance: (Ref: Para. A17–A18) [
- a) The auditor’s views about significant qualitative aspects of the entity’s accounting practices, including accounting policies, accounting estimates and financial statement disclosures. When applicable, the auditor shall explain to those charged with governance why the auditor considers a significant accounting practice, that is acceptable under the applicable financial reporting framework, not to be most appropriate to the particular circumstances of the entity; (Ref: Para. A19–A20)
 - b) Significant difficulties, if any, encountered during the audit; (Ref: Para. A21)
 - c) Unless all of those charged with governance are involved in managing the entity:
 - (i) Significant matters arising during the audit that were discussed, or subject to correspondence, with management; and (Ref: Para. A22)
 - (ii) Written representations the auditor is requesting;
 - d) Circumstances that affect the form and content of the auditor’s report, if any; and (Ref: Para. A23–A25)
 - e) Any other significant matters arising during the audit that, in the auditor’s professional judgment, are relevant to the oversight of the financial reporting process. (Ref: Para. A26–A28)

Application and Other Explanatory Material

...

Matters to Be Communicated

...

Significant Findings from the Audit

...

Significant Qualitative Aspects of Accounting Practices (Ref: Para. 16(a))

- A19. Financial reporting frameworks ordinarily allow for the entity to make accounting estimates, and judgments about accounting policies and financial statement disclosures, for example, in relation to the use of ~~key~~ assumptions in the development of accounting estimates ~~for which there is significant measurement uncertainty~~. In addition, law, regulation or financial reporting frameworks may require disclosure of a summary of significant accounting policies or make reference to “critical accounting estimates” or “critical accounting policies and practices” to identify and provide additional information to users about the most difficult, subjective or complex judgments made by management in preparing the financial statements.
- A20. As a result, the auditor’s views on the subjective aspects of the financial statements may be particularly relevant to those charged with governance in discharging their responsibilities for oversight of the financial reporting process. For example, in relation to the matters described in paragraph A19, those charged with governance may be interested in the auditor’s evaluation of the ~~adequacy~~reasonableness of disclosures of the estimation uncertainty and significant judgments relating to accounting estimates that give rise or are affected by, or subject to significant risks, estimation uncertainty, complexity, the need for the use of judgment by management, or other relevant factors. Open and constructive communication about significant qualitative aspects of the entity’s accounting practices also may include comment on the acceptability of significant accounting practices and the quality of the disclosures. Appendix 2 identifies matters that may be included in this communication.

Appendix 1

(Ref: Para. 3)

Specific Requirements in ISQC 1 and Other ISAs that Refer to Communications with Those Charged With Governance

This appendix identifies paragraphs in ISQC 1⁶⁴ and other ISAs that require communication of specific matters with those charged with governance. The list is not a substitute for considering the requirements and related application and other explanatory material in ISAs.

- ISQC 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements* – paragraph 30(a)
- ISA 240, *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* – paragraphs 21, 38(c)(i) and 40-42
- ISA 250, *Consideration of Laws and Regulations in an Audit of Financial Statements* – paragraphs 14, 19 and 22–24
- ISA 265, *Communicating Deficiencies in Internal Control to Those Charged with Governance and Management* – paragraph 9
- ISA 450, *Evaluation of Misstatements Identified during the Audit* – paragraphs 12-13
- ISA 505, *External Confirmations* – paragraph 9
- ISA 510, *Initial Audit Engagements—Opening Balances* – paragraph 7
- ISA 540 (Revised), *Auditing Accounting Estimates and Related Disclosures* – paragraph 22A
- ISA 550, *Related Parties* – paragraph 27
- ISA 560, *Subsequent Events* – paragraphs 7(b)-(c), 10(a), 13(b), 14(a) and 17
- ISA 570 (Revised), *Going Concern* – paragraph 25
- ISA 600, *Special Considerations—Audits of Group Financial Statements (Including the Work of Component Auditors)* – paragraph 49
- ~~ISA 610 (Revised), *Using the Work of Internal Auditors* – paragraph 18~~; ISA 610 (Revised 2013), *Using the Work of Internal Auditors* – paragraphs 20 and 31
- ISA 700 (Revised), *Forming an Opinion and Reporting on Financial Statements* – paragraph 46
- ISA 701, *Communicating Key Audit Matters in the Independent Auditor's Report* – paragraph 17
- ISA 705 (Revised), *Modifications to the Opinion in the Independent Auditor's Report* – paragraphs 12, 14, 23 and 30
- ISA 706 (Revised), *Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report* – paragraph 12
- ISA 710, *Comparative Information—Corresponding Figures and Comparative Financial Statements* – paragraph 18
- ISA 720 (Revised), *The Auditor's Responsibilities Relating to Other Information* – paragraph 17—19

⁶⁴ ISQC 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements*

Appendix 2

(Ref: Para. 16(a), A19–A20)

Qualitative Aspects of Accounting Practices

The communication required by paragraph 16(a), and discussed in paragraphs A19–A20, may include such matters as:

Accounting Policies

...

Accounting Estimates

- For items for which estimates are significant, issues discussed in ISA 540 (Revised), including, for example:
 - How management identifies those transactions, events and conditions that may give rise to the need for accounting estimates to be recognized or disclosed in the financial statements.
 - Changes in circumstances that may give rise to new, or the need to revise existing, accounting estimates.
 - Whether management's ~~decision~~decisions relating to recognize, or to not recognize, the recognition, measurement, presentation and disclosure of the accounting estimates in the financial statements ~~is~~are in accordance with the applicable financial reporting framework.
 - Whether there has been or ought to have been a change from the prior period in the methods for making the accounting estimates and, if so, why, as well as the outcome of accounting estimates in prior periods.
 - ~~Management's process~~Whether management's method for making the accounting estimates (e.g., including when management has used a model), including whether the selected measurement basis for the accounting estimate, is in accordance with the applicable financial reporting framework.
 - Whether the significant data and assumptions used by management in ~~developing~~making the accounting estimate are reasonable in the context of the measurement objectives and other requirements of the applicable financial reporting framework.
 - Where relevant to the reasonableness of the significant assumptions used by management or the appropriate application of the applicable financial reporting framework, management's intent to carry out specific courses of action and its ability to do so.
 - Risks of material misstatement.
 - Indicators of possible management bias.
 - How management has considered alternative assumptions or outcomes and why it has rejected them, or how management has otherwise addressed estimation uncertainty in making the accounting estimate.
 - The ~~adequacy~~reasonableness of disclosure of estimation uncertainty in the financial statements.

ISA 500, *Audit Evidence*

Definitions

5. For purposes of the ISA, the following terms have the meanings attributed below:
- (a) Accounting records – The records of initial accounting entries and supporting records, such as checks and records of electronic fund transfers; invoices; contracts; the general and subsidiary ledgers, journal entries and other adjustments to the financial statements that are not reflected in journal entries; and records such as work sheets and spreadsheets supporting cost allocations, computations, reconciliations and disclosures.
 - (b) Appropriateness (of audit evidence) – The measure of the quality of audit evidence; that is, its relevance and its reliability in providing support for the conclusions on which the auditor’s opinion is based.
 - (c) Audit evidence – Information used by the auditor in arriving at the conclusions on which the auditor’s opinion is based. Audit evidence includes both information contained in the accounting records underlying the financial statements and information obtained from other sources.
 - (cA) External information source – An individual or organization, other than a management’s expert, that provides publicly available information used by the entity in preparing the financial statements. (Ref: Para. A1A–A1C)
 - (d) Management’s expert – An individual or organization possessing expertise in a field other than accounting or auditing, whose work in that field is used by the entity to assist the entity in preparing the financial statements.
 - (e) Sufficiency (of audit evidence) – The measure of the quantity of audit evidence. The quantity of the audit evidence needed is affected by the auditor’s assessment of the risks of material misstatement and also by the quality of such audit evidence.

...

Requirements

...

Information to Be Used as Audit Evidence

7. When designing and performing audit procedures, the auditor shall consider the relevance and reliability of the information to be used as audit evidence, including information obtained from an external information source. (Ref: Para. A26–A33J)

Application and Other Explanatory Material

External Information Source (Ref: Para 5(cA))

A1A. In preparing the financial statements, management may make use of information obtained from an external information source. An important consideration in determining whether an individual or organization is acting as an external information source is whether the individual or organization meets the definition of a management’s expert with respect to that information. Indicators that an

external organization may be acting as an external information source rather than as a management's expert include the following:

- The information is not specifically generated for the entity; and
- The information is available to the public.

When such indicators are present, it is less likely that management will be able to influence the external information source. Whether or not management pays a fee to access information from an external information source is not relevant in considering whether an individual or organization is acting as an external information source.

A1B. External information sources may include pricing services, governmental organizations, central banks or recognized stock exchanges. Examples of information that may be obtained from external information sources include:

- Prices and pricing related data;
- Macro-economic data such as historical and forecast unemployment rates and economic growth rates, or census data;
- Credit history data;
- Industry specific data such as an index of reclamation costs for certain extractive industries or viewership information or ratings used to determine advertising revenue in the entertainment industry; and
- Mortality tables used to determine liabilities in the life insurance and pension sectors.

A1C. Depending on the facts and circumstances, an individual or organization may, in respect of any particular set of information, be either an external information source or a management's expert but not both. Professional judgment may be needed to determine whether a specific organization is acting as an external information source or as a management's expert with respect to a particular set of information. For example:

- An external organization may be acting as an external information source with respect to data about real estate prices for a particular geographical region that it makes generally available to the public and that management uses in preparing the financial statements. The same external organization may at the same time be acting as a management's expert for the same entity in providing management with a valuation service with respect to the entity's real estate portfolio.
- Some actuarial organizations publish mortality tables for general use which, when used by an entity, may be information from an external information source, while the same actuarial organization may be a management's expert when helping management to calculate the pension liability for several of its pension plans.
- An individual or organization may possess expertise in the application of models to estimate the fair value of securities for which there is no observable market. If the individual or organization applies that expertise in making an estimate specifically for the entity and which the entity uses in preparing its financial statements, the individual or organization is a management's expert. If, on the other hand, that individual or organization merely provides price data regarding private transactions to the public, and the entity uses that information in its own estimation methods, the individual or organization is an external information source.

...

Information to Be Used as Audit Evidence

...

External Information Sources

A33A. Obtaining an understanding of why management uses an external information source, and how management considered the relevance and reliability of the information for use in preparing its financial statements, helps to inform the auditor's consideration of the relevance and reliability of that information.

A33B. Depending on the circumstances, the following factors may be important considerations about the relevance and reliability of information obtained from an external information source:

- The nature and authority of the external information source used by the entity. For example, a central bank or government statistics office with a legislative mandate to provide industry information to the public is likely to be an authority for certain types of information;
- The ability of management to influence the information obtained from the external information sources;
- The competence and reputation of the external information source with respect to that particular type of information;
- Past experience of the auditor with the reliability of the information provided by the external information source;
- When available, information about the methods used in preparing the information, how the methods are being applied including, where applicable, how models have been used in such application, and the controls over the methods;
- The entity's controls over the information obtained from external information sources;
- Whether the information was developed taking into account the applicable financial reporting framework;
- The nature and extent of disclaimers or other restrictive language relating to the information obtained; and
- Whether information is available regarding the appropriateness of techniques, assumptions and inputs applied by the external information sources in developing the information obtained.

A33C. The auditor's consideration of the reliability of the information from the external information source, including its accuracy and completeness, may depend on the nature of the external information source and the circumstances. In many circumstances, the auditor may not be able to consider the accuracy and completeness of the information received from an external information source as there may be no contractual relationship between the external information source and the entity that requires the provision of information, or the external information source may refuse to provide information considered to be intellectual property. For example, when an entity uses a central bank's inflation rate to make an accounting estimate, as part of considering the accuracy and completeness of the information, the auditor may, depending on the significance of the information, consider the nature and authority of the source or, the auditor may obtain information from a different information source, when available.

A33D. The availability of information to understand the methods and assumptions used by the external information source may influence the auditor's consideration of the nature, timing and extent of procedures to test management's use of the sources. For example, pricing services often provide information about their methods and assumptions by asset class rather than individual securities. Brokers often provide only limited information about their inputs and assumptions when providing broker indicative quotes for individual securities.

A33E. The observability of inputs and complexity of methods used to generate the information from the external information source may also influence the auditor's considerations related to the reliability of information from the external information source, including considerations related to the nature and extent of procedures to perform to test the reliability of that information.

A33F. As part of the consideration of the relevance and reliability of information from external information sources, one or more of the following may be relevant:

- Performing procedures at the external information source to understand and, where relevant, test the controls and processes, techniques, and assumption used.
- Performing procedures, including when relevant, tests of the operating effectiveness of controls management has in place to assess the reliability of the information from external information sources.
- Considering whether the information is intended to be used in the manner management is using it.
- When the information received from the external information source relates to security prices, obtaining an independent price from another information source.

A33G. For fair value measurement, additional considerations of the relevance and reliability of information obtained from external information sources may also include the following:

- (a) Whether fair values are based on trades of the same instrument or active market quotations;
- (b) When the fair values are based on transactions of comparable assets or liabilities, how those transactions are identified and considered comparable;
- (c) When there are no transactions either for the asset or liability or comparable assets or liabilities, how the information was developed including whether the inputs developed and used represent the assumptions that market participants would use when pricing the asset or liability, if applicable. and
- (d) When the fair value measurement is based on a broker quote, whether the broker quote:
 - (i) Is from a market maker who transacts in the same type of financial instrument;
 - (ii) Is binding or nonbinding, with more weight placed on quotes based on binding offers; and
 - (iii) Reflects market conditions as of the date of the financial statements, when required by the applicable financial reporting framework.

A33H. In some situations, management and the auditor may use the same information source, for example, because there is only one provider of certain information. When the information obtained from that information source is used to make an accounting estimate, the auditor may consider whether using the same information source as management is appropriate, or whether additional audit evidence is

needed. In such cases, additional consideration may need to be given to whether the information is accurate and complete (see also A33C for additional considerations related to the nature and authority of an external information source). This may include accessing a different information source, when available, from that used by management to evaluate the external information source used by management.

ISA 580, *Written Representations*

Appendix 1

(Ref: Para. 2)

List of ISAs Containing Requirements for Written Representations

This appendix identifies paragraphs in other ISAs that require subject-matter specific written representations. The list is not a substitute for considering the requirements and related application and other explanatory material in ISAs.

- ISA 240, *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* – paragraph 39
- ISA 250, *Consideration of Laws and Regulations in an Audit of Financial Statements* – paragraph 16
- ISA 450, *Evaluation of Misstatements Identified during the Audit* – paragraph 14
- ISA 501, *Audit Evidence—Specific Considerations for Selected Items* – paragraph 12
- ISA 540 (Revised), *Auditing Accounting Estimates, ~~Including Fair Value Accounting Estimates~~, and Related Disclosures* – paragraph 22
- ISA 550, *Related Parties* – paragraph 26
- ISA 560, *Subsequent Events* – paragraph 9
- ISA 570 (Revised), *Going Concern* – paragraph 16(e)
- ISA 710, *Comparative Information—Corresponding Figures and Comparative Financial Statements* – paragraph 9
- ISA 720 (Revised), *The Auditor's Responsibilities Relating to Other Information* – paragraph 13(c)

Appendix 2

(Ref: Para. A21)

Illustrative Representation Letter

The following illustrative letter includes written representations that are required by this and other ISAs. It is assumed in this illustration that the applicable financial reporting framework is International Financial Reporting Standards; the requirement of ISA 570 (Revised)⁶⁵ to obtain a written representation is not relevant; and that there are no exceptions to the requested written representations. If there were exceptions, the representations would need to be modified to reflect the exceptions.

(Entity Letterhead)

(To Auditor)

(Date)

This representation letter is provided in connection with your audit of the financial statements of ABC Company for the year ended December 31, 20XX⁶⁶ for the purpose of expressing an opinion as to whether the financial statements are presented fairly, in all material respects, (or *give a true and fair view*) in accordance with International Financial Reporting Standards.

We confirm that (, *to the best of our knowledge and belief, having made such inquiries as we considered necessary for the purpose of appropriately informing ourselves*):

Financial Statements

- We have fulfilled our responsibilities, as set out in the terms of the audit engagement dated [insert date], for the preparation of the financial statements in accordance with International Financial Reporting Standards; in particular the financial statements are fairly presented (or *give a true and fair view*) in accordance therewith.
- ~~Significant~~ The methods, the significant data, and the significant assumptions used by us in making the accounting estimates, including those measured at fair value, and their related disclosures are appropriate to achieve recognition, measurement or disclosure that is reasonable, in the context of the applicable financial reporting framework. (ISA 540) (Revised)
- Related party relationships and transactions have been appropriately accounted for and disclosed in accordance with the requirements of International Financial Reporting Standards. (ISA 550)

⁶⁵ ISA 570 (Revised), *Going Concern*

⁶⁶ Where the auditor reports on more than one period, the auditor adjusts the date so that the letter pertains to all periods covered by the auditor's report.

The structures and processes that support the operations of the IAASB are facilitated by the International Federation of Accountants® or IFAC®.

The IAASB and IFAC do not accept responsibility for loss caused to any person who acts or refrains from acting in reliance on the material in this publication, whether such loss is caused by negligence or otherwise.

International Standards on Auditing, International Standards on Assurance Engagements, International Standards on Review Engagements, International Standards on Related Services, International Standards on Quality Control, International Auditing Practice Notes, Exposure Drafts, Consultation Papers, and other IAASB publications are published by, and copyright of, IFAC.

Copyright © April 2017 by IFAC. All rights reserved. Permission is granted to make copies of this work to achieve maximum exposure and feedback provided that each copy bears the following credit line: *“Copyright © April 2017 by the International Federation of Accountants® or IFAC®. All rights reserved. Used with permission of IFAC. Permission is granted to make copies of this work to achieve maximum exposure and feedback.”*

The ‘International Auditing and Assurance Standards Board’, ‘International Standards on Auditing’, ‘International Standards on Assurance Engagements’, ‘International Standards on Review Engagements’, ‘International Standards on Related Services’, ‘International Standards on Quality Control’, ‘International Auditing Practice Notes’, ‘IAASB’, ‘ISA’, ‘ISAE’, ‘ISRE’, ‘ISRS’, ‘ISQC’, ‘IAPN’, and IAASB logo are trademarks of IFAC, or registered trademarks and service marks of IFAC in the US and other countries.

For copyright, trademark, and permissions information, please go to [permissions](#) or contact permissions@ifac.org.



**International Auditing
and Assurance
Standards Board**

529 Fifth Avenue, New York, NY 10017
T + 1 (212) 286-9344 F +1 (212) 286-9570
www.iaasb.org