# KAEG-I [INTL VERSION 2024]: ISA 540 (Revised) Auditing Accounting Estimates and Related Disclosures

## Contents

## KAEG-I [INTL VERSION]: ISA 540 (Revised) Auditing Accounting Estimates and Related Disclosures [ISA | KAEGISA540]

ISA 540 (Revised) Auditing Accounting Estimates and Related Disclosures

**Introduction, Objective, Definitions**

International Standards on Auditing: ISA 540.01-12

ISA Application and Other Explanatory Material: ISA 540.A1-A18 | ISA 540.A65-A66 | ISA 540.A139-A144

How do we comply with the standards?

1 Obtain sufficient appropriate audit evidence for accounting estimates

**Risk Assessment Procedures and Related Activities**

International Standards on Auditing: ISA 540.13-15

ISA Application and Other Explanatory Material: ISA 540.A19-A63

How do we comply with the standards?

1 Perform risk assessment procedures related to accounting estimates

1.1 Understand the entity and its environment, including the entity's ICFR related to accounting estimates

1.2 Identify accounting estimates in significant accounts and disclosures

1.3 Determine the components of an accounting estimate

1.4 Understand the process by which accounting estimates are developed

1.4.1.C Understand the process by which an accounting estimate is developed

1.4.1.E Perform a walkthrough to understand the process by which an accounting estimate is developed

1.4.2 Identify the requirements of the applicable financial reporting framework related to an accounting estimate

1.4.3 Understand the nature and extent to which management uses the work of specialists or third parties (other than specialists)

1.4.4 Understand how management understands and addresses estimation uncertainty

1.4.5 Understand the elements of an accounting estimate

1.4.5.1 Understand the method, including any models, used to develop an accounting estimate

1.4.5.2 Understand the assumptions used to develop an accounting estimate

1.4.5.3 Understand the data used in an accounting estimate

1.5 Perform and evaluate a retrospective review of accounting estimates

**Identifying and Assessing the Risks of Material Misstatement**

International Standards on Auditing: ISA 540.16-17

ISA Application and Other Explanatory Material: ISA 540.A64-A80

How do we comply with the standards?

1 Identify and assess RMMs related to an accounting estimate

1.1 Identify and assess which RMs related to an accounting estimate are RMMs

1.2 Assess CAR for the selection of the individual methods, assumptions, and data, if applicable

1.2.1 Identify and assess inherent risk for each of the methods, assumptions, and data

1.2.2 Assess control risk for each of the methods, assumptions, and data

1.2.3 Make a preliminary CAR assessment for each of the methods, assumptions, and data

1.3 Assess CAR for the application of the methods, assumptions, and data, if applicable

**Responses to the Assessed Risks of Material Misstatement**

International Standards on Auditing: ISA 540.18-30

ISA Application and Other Explanatory Material: ISA 540.A81-A132

How do we comply with the standards?

1 Design and implement a response to the RMMs related to an accounting estimate

1.1 Identify PRPs related to an accounting estimate and determine which process control activities are relevant to the audit, if applicable

1.2 Determine whether to test an accounting estimate using one or a combination of three substantive approaches

1.2.1 Evaluate events and transactions occurring after the measurement date to test an accounting estimate

1.2.1.1 Evaluate audit evidence from events or transactions occurring after the measurement date

1.2.1.2 Consider changes between the measurement date and the event or transaction date

1.2.2 Test and evaluate the entity's process for developing an accounting estimate

1.2.2.1 Test and evaluate the methods used in the entity's estimation process

1.2.2.1.1 Evaluate whether the method is appropriate in the context of the financial reporting framework or the nature of the account or disclosure and the business, industry, and environment

1.2.2.1.2 Evaluate whether changes to the method used in prior periods are appropriate

1.2.2.1.3 Evaluate, if applicable, whether adjustments to the output of a model are appropriate

1.2.2.1.4 Test and evaluate the application of the methods, assumptions, and data

1.2.2.1.4.1 Test whether the calculations are made in accordance with the method and are mathematically accurate

1.2.2.1.4.2 Test whether the integrity of the relevant assumptions and data has been maintained in applying the method

1.2.2.2 Evaluate the assumptions used in the entity's estimation process

1.2.2.2.1 Identify which assumptions are relevant to an accounting estimate

1.2.2.2.2 Evaluate whether the entity's relevant assumptions are reasonable

1.2.2.3 Evaluate the data used in the entity's estimation process

1.2.2.4 Evaluate whether management has selected an appropriate point estimate

1.2.3 Develop an independent expectation of an accounting estimate

1.2.3.1 Develop a point estimate or range

1.2.3.1.1 Evaluate our own independent methods, assumptions and data, if applicable

1.2.3.1.2 Test the entity's methods, assumptions and data, if applicable

1.2.3.1.3 Evaluate the data and assumptions obtained by us from a third party, if applicable

1.2.3.2 Determine whether the range is appropriate and supported

1.2.3.3 Compare our independent expectation to the entity's estimate

1.3 Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework

**Disclosures Related to Accounting Estimates**

International Standards on Auditing: ISA 540.31

How do we comply with the standards?

1 Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework

**Indicators of Possible Management Bias**

International Standards on Auditing: ISA 540.32

ISA Application and Other Explanatory Material: ISA 540.A133-A136

How do we comply with the standards?

1 Evaluate qualitative aspects of accounting practices, including management bias

2 Evaluate management bias in the preparation of accounting estimates

2.1 Evaluate management bias in accounting estimates 'individually'

2.2 Evaluate management bias in accounting estimates 'in aggregate'

2.3 Evaluate management bias in the effect of changes in estimates from the prior period to the current period

2.4 Evaluate whether the bias is material to the financial statements and/or is the result of fraud

2.5 Evaluate whether our risk assessments and the related audit responses remain appropriate

**Overall Evaluation Based on Audit Procedures Performed**

International Standards on Auditing: ISA 540.33-36

ISA Application and Other Explanatory Material: ISA 540.A137-A144 | ISA 540.A12-A13

How do we comply with the standards?

1 Evaluate and document the audit results

**Written Representations**

International Standards on Auditing: ISA 540.37

ISA Application and Other Explanatory Material: ISA 540.A145

How do we comply with the standards?

1 Obtain written representations for all financial statement periods

**Communication with Those Charged With Governance, Management, or Other Relevant Parties**

International Standards on Auditing: ISA 540.38

ISA Application and Other Explanatory Material: ISA 540.A146-A148

How do we comply with the standards?

1 Communicate our views about significant qualitative aspects of accounting practices

2 Communicate control deficiencies

2.1 Determine what control deficiencies to communicate to whom

2.2 Determine when to communicate control deficiencies

2.3 Determine form of communications about control deficiencies

**Documentation**

International Standards on Auditing: ISA 540.39

ISA Application and Other Explanatory Material: ISA 540.A149-A152

How do we comply with the standards?

1 Understand the entity and its environment, including the entity's ICFR related to accounting estimates

10 Evaluate and document the audit results

2.C Understand the process by which an accounting estimate is developed

2.E Perform a walkthrough to understand the process by which an accounting estimate is developed

3 Understand how management understands and addresses estimation uncertainty

4 Determine whether to test an accounting estimate using one or a combination of three substantive approaches

5 Evaluate management bias in accounting estimates 'individually'

6 Evaluate management bias in accounting estimates 'in aggregate'

7 Evaluate management bias in the effect of changes in estimates from the prior period to the current period

8 Evaluate whether the bias is material to the financial statements and/or is the result of fraud

9 Evaluate whether our risk assessments and the related audit responses remain appropriate

**Appendix 1 - Inherent Risk Factors**

International Standards on Auditing: ISA 540.Appendix 1

**Appendix 2 - Communications with Those Charged with Governance**

International Standards on Auditing: ISA 540.Appendix 2

# ISA 540 (Revised) Auditing Accounting Estimates and Related Disclosures

View the Full Chapter for this Standard

# ISA 540 (Revised) *Auditing Accounting Estimates and Related Disclosures*

(Effective for audits of financial statements for periods beginning on or after December 15, 2019)

# Introduction, Objective, Definitions

## International Standards on Auditing: ISA 540.01-12

## 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 includes requirements and guidance that refer to, or expand on, how ISA 315 (Revised 2019),[1] ISA 330[2], ISA 450,[3] ISA 500[4] and other relevant ISAs are to be applied in relation to accounting estimates and related disclosures. It also includes requirements and guidance on the evaluation of misstatements of accounting estimates and related disclosures, and indicators of possible management bias.

---

[1] ISA 315 (Revised 2019), *Identifying and Assessing the Risks of Material Misstatement*

[2] ISA 330, *The Auditor's Responses to Assessed Risks*

[3] ISA 450, *Evaluation of Misstatements Identified during the Audit*

[4] ISA 500, *Audit Evidence*

# Nature of Accounting Estimates

2. Accounting estimates vary widely in nature and are required to be made by management when the monetary amounts cannot be directly observed. The measurement of these monetary amounts is subject to estimation uncertainty, which reflects inherent limitations in knowledge or data. These limitations give rise to inherent subjectivity and variation in the measurement outcomes. The process of making accounting estimates involves selecting and applying a method using assumptions and data, which requires judgment by management and can give rise to complexity in measurement. The effects of complexity, subjectivity or other inherent risk factors on the measurement of these monetary amounts affects their susceptibility to misstatement. (Ref: Para. A1 - A6, Appendix 1)

3. Although this ISA applies to all accounting estimates, the degree to which an accounting estimate is subject to estimation uncertainty will vary substantially. The nature, timing and extent of the risk assessment and further audit procedures required by this ISA will vary in relation to the estimation uncertainty and the assessment of the related risks of material misstatement. For certain accounting estimates, estimation uncertainty may be very low, based on their nature, and the complexity and subjectivity involved in making them may also be very low. For such accounting estimates, the risk assessment procedures and further audit procedures required by this ISA would not be expected to be extensive. When estimation uncertainty, complexity or subjectivity are very high, such procedures would be expected to be much more extensive. This ISA contains guidance on how the requirements of this ISA can be scaled. (Ref: Para. A7)

# Key Concepts of This ISA

4. ISA 315 (Revised 2019) requires a separate assessment of inherent risk for identified risks of material misstatement at the assertion level.[120] . In the context of ISA 540 (Revised), and depending on the nature of a particular accounting estimate, the susceptibility of an assertion to a misstatement that could be material may be subject to or affected by estimation uncertainty, complexity, subjectivity or other inherent risk factors, and the interrelationship among them. As explained in ISA 200,[5] inherent risk is higher for some assertions and related classes of transactions, account balances and disclosures than for others. Accordingly, the assessment of inherent risk depends on the degree to which the inherent risk factors affect the likelihood or magnitude of misstatement, and varies on a scale that is referred to in this ISA as the spectrum of inherent risk. (Ref: Para. A8 - A9, A65 - A66, Appendix 1)

---

120 ISA 315 (Revised 2019), paragraph 31

5 ISA 200*, Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing* , paragraph A40

5. This ISA refers to relevant requirements in ISA 315 (Revised 2019) and ISA 330, and provides related guidance, to emphasize the importance of the auditor's decisions about controls relating to accounting estimates, including decisions about whether:

- There are controls required to be identified by ISA 315 (Revised 2019), for which the auditor is required to evaluate their design and determine whether they have been implemented.
- To test the operating effectiveness of controls.

6. ISA 315 (Revised 2019) also requires a separate assessment of control risk when assessing the risks of material misstatement at the assertion level. In assessing control risk, the auditor takes into account whether the auditor's further audit procedures contemplate planned reliance on the operating effectiveness of controls. If the auditor does not plan to test the operating effectiveness of controls, or does not intend to rely on the operating effectiveness of controls, the auditor's assessment of control risk is such that the assessment of the risk of material misstatement is the same as the assessment of inherent risk. (Ref: Para. A10)

7. This ISA emphasizes that the auditor's further audit procedures (including, where appropriate, tests of controls) need to be responsive to the reasons for the assessed risks of material misstatement at the assertion level, taking into account the effect of one or more inherent risk factors and the auditor's assessment of control risk.

8. The exercise of professional skepticism in relation to accounting estimates is affected by the auditor's consideration of inherent risk factors, and its importance increases when accounting estimates are subject to a greater degree of estimation uncertainty or are affected to a greater degree by complexity, subjectivity or other inherent risk factors. Similarly, the exercise of professional skepticism is important when there is greater susceptibility to misstatement due to management bias or other fraud risk factors insofar as they affect inherent risk. (Ref: Para. A11)

9. This ISA requires the auditor to evaluate, based on the audit procedures performed and the audit evidence obtained, whether the accounting estimates and related disclosures are reasonable[7] in the context of the applicable financial reporting framework, or are misstated. For purposes of this ISA, reasonable in the context of the applicable financial reporting framework means that the relevant requirements of the applicable financial reporting framework have been applied appropriately, including those that address: (Ref: Para. A12 - A13, A139 - A144)

- The making of the accounting estimate, including the selection of the method, assumptions and data in view of the nature of the accounting estimate and the facts and circumstances of the entity;
- The selection of management's point estimate; 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.

---

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

## Effective Date

10. This ISA is effective for audits of financial statements for periods beginning on or after December 15, 2019.

## Objective

11. The objective of the auditor is to obtain sufficient appropriate audit evidence about whether accounting estimates and related disclosures in the financial statements are reasonable in the context of the applicable financial reporting framework.

# Definitions

12. For purposes of the ISAs, the following terms have the meanings attributed below:

(a) Accounting estimate - A monetary amount for which the measurement, in accordance with the requirements of the applicable financial reporting framework, is subject to estimation uncertainty. (Ref: Para. A14)

(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. A15)

(c) Estimation uncertainty - Susceptibility to an inherent lack of precision in measurement. (Ref: Para. A16, Appendix 1)

(d) Management bias - A lack of neutrality by management in the preparation of information. (Ref: Para. A17)

(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 transaction(s), event(s) or condition(s) addressed by an accounting estimate. (Ref: Para. A18)

# ISA Application and Other Explanatory Material: ISA 540.A1-A18 | 540.A65-A66 | 540.A139-A144

# Application and Other Explanatory Material

## **Nature of Accounting Estimates** (Ref: Para. 2)

### *Examples of Accounting Estimates*

A1. Examples of accounting estimates related to classes of transactions, account balances and disclosures include:

- Inventory obsolescence.
- Depreciation of property and equipment.
- Valuation of infrastructure assets.
- Valuation of financial instruments.
- Outcome of pending litigation.
- Provision for expected credit losses.
- Valuation of insurance contract liabilities.
- Warranty obligations.
- Employee retirement benefits liabilities.
- Share-based payments.
- Fair value of assets or liabilities acquired in a business combination, including the determination of goodwill and intangible assets.
- Impairment of long-lived assets or property or equipment held for disposal.
- Non-monetary exchanges of assets or liabilities between independent parties.

- Revenue recognized for long-term contracts.

## *Methods*

A2. A method is a measurement technique used by management to make an accounting estimate in accordance with the required measurement basis. 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. A method is applied using a computational tool or process, sometimes referred to as a model, and involves applying assumptions and data and taking into account a set of relationships between them.

## *Assumptions and Data*

A3. Assumptions involve judgments based on available information about 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 appropriate alternatives. Assumptions that may be made or identified by a management's expert become management's assumptions when used by management in making an accounting estimate.

A4. For purposes of this ISA, data is information that can be obtained through direct observation or from a party external to the entity. Information obtained by applying analytical or interpretive techniques to data is referred to as derived data when such techniques have a well-established theoretical basis and therefore less need for management judgment. Otherwise, such information is an assumption.

A5. 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, such as a contracted interest rate, a payment schedule, and term included in a loan agreement;
- Forward-looking information such as economic or earnings forecasts obtained from an external information source, or
- A future interest rate determined using interpolation techniques from forward interest rates (derived data).

A6. 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.

## *Scalability* (Ref: Para. 3)

A7. Examples of paragraphs that include guidance on how the requirements of this ISA can be scaled include paragraphs A20 - A22, A63, A67, and A84.

# Key Concepts of This ISA

## *Inherent Risk Factors* (Ref: Para. 4)

A8. Inherent risk factors are characteristics of events or conditions that affect susceptibility to misstatement, whether due to fraud or error, of an assertion about a class of transactions, account balance or disclosures, before consideration of controls.[133] Appendix 1 further explains the nature of these inherent risk factors, and their inter-relationships, in the context of making accounting estimates and their presentation in the financial statements.

133 ISA 315 (Revised 2019), paragraph 12(f)

A9. When assessing the risks of assessing the risks of material misstatement at the assertion level[134], in addition to estimation uncertainty, complexity, and subjectivity, the auditor also takes into account the degree to which inherent risk factors included in ISA 315 (Revised 2019) (other than estimation uncertainty, complexity, and subjectivity), affect susceptibility of assertions to misstatement about the accounting estimate. Such additional inherent risk factors include:

- 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.
- Susceptibility to misstatement due to management bias, or other fraud risk factors insofar as they affect inherent risk, in making the accounting estimate.
- Uncertainty, other than estimation uncertainty.

134 ISA 315 (Revised 2019), paragraph 31

## *Control Risk* (Ref: Para. 6)

A10. In assessing control risk at the assertion level in accordance with ISA 315 (Revised 2019), the auditor takes into account whether the auditor plans to test the operating effectiveness of controls. When the auditor is considering whether to test the operating effectiveness of controls, the auditor's evaluation that controls are effectively designed and have been implemented supports an expectation, by the auditor, about the operating effectiveness of the controls in establishing the plan to test them.

## *Professional Skepticism* (Ref: Para. 8)

A11. Paragraphs A60, A95, A96, A137 and A139 are examples of paragraphs that describe ways in which the auditor can exercise professional skepticism. Paragraph A152 provides guidance on ways in which the auditor's exercise of professional skepticism may be documented, and includes examples of specific paragraphs in this ISA for which documentation may provide evidence of the exercise of professional skepticism.

## *Concept of "Reasonable"* (Ref: Para. 9, 35)

A12. 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.

A13. The term "applied appropriately" as used in paragraph 9 means in a manner that not only complies with the requirements of the applicable financial reporting framework but, in doing so, reflects judgments that are consistent with the objective of the measurement basis in that framework.

# Definitions

## *Accounting Estimate* (Ref: Para. 12(a))

A14. Accounting estimates are monetary amounts that may be related to classes of transactions or account balances recognized or disclosed in the financial statements. Accounting estimates also include monetary amounts included in disclosures or used to make judgments about recognition or disclosure relating to a class of transactions or account balance.

## *Auditor's Point Estimate or Auditor's Range* (Ref: Para. 12(b))

A15. An auditor's point estimate or range may be used to evaluate an accounting estimate directly (for example, an impairment provision or the fair value of different types of financial instruments), or indirectly (for example, an amount to be used as a significant assumption for an accounting estimate). A similar approach may be taken by the auditor in developing an amount or range of amounts in evaluating a non-monetary item of data or an assumption (for example, an estimated useful life of an asset).

## *Estimation Uncertainty* (Ref: Para. 12(c))

A16. Not all accounting estimates are subject to a high degree 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.

## *Management Bias* (Ref: Para. 12(d))

A17. Financial reporting frameworks often call for neutrality, that is, freedom from bias. Estimation uncertainty gives rise to subjectivity in making an accounting estimate. The presence of subjectivity gives rise to the need for judgment by management and the susceptibility to 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 subjectivity in making the accounting estimate.

## *Outcome of an Accounting Estimate* (Ref: Para. 12(f))

A18. 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.

A65. Paragraph A42 of ISA 200 states that the ISAs typically refer to the "risks of material misstatement" rather than to inherent risk and control risk separately. ISA 315 (Revised 2019) requires a separate assessment of inherent risk and control risk to provide a basis for designing and performing further audit procedures to respond to the risks of material misstatement at the assertion level,[140] including significant risks, in accordance with ISA 330.

140 ISA 315 (Revised 2019), paragraphs 31 and 34

A66. In identifying the risks of material misstatement and in assessing inherent risk for accounting estimates in accordance with ISA 315 (Revised 2019),[142] the auditor is required to take into account the inherent risk factors that affect susceptibility to misstatement of assertions, and how they do so. The auditor's consideration of the inherent risk factors may also provide information to be used in:

- Assessing the likelihood and magnitude of misstatement (i.e., where inherent risk is assessed on the spectrum of inherent risk); and
- Determining the reasons for the assessment given to the risks of material misstatement at the assertion level, and that the auditor's further audit procedures in accordance with paragraph 18 are responsive to those reasons.

The interrelationships between the inherent risk factors are further explained in Appendix 1.

142 ISA 315 (Revised 2019), paragraph 31(a)

## Determining Whether the Accounting Estimates are Reasonable or Misstated (Ref: Para. 9, 35)

A139. In determining whether, based on the audit procedures performed and evidence obtained, management's point estimate and related disclosures are reasonable, or are misstated:

- When the audit evidence supports a range, the size of the range may be wide and, in some circumstances, may be multiples of materiality for the financial statements as a whole (see also paragraph A125). Although a wide range may be appropriate in the circumstances, it may indicate that it is important for the auditor to reconsider whether sufficient appropriate audit evidence has been obtained regarding the reasonableness of the amounts within the range.
- The audit evidence may support a point estimate that differs from management's point estimate. In such circumstances, the difference between the auditor's point estimate and management's point estimate constitutes a misstatement.
- The audit evidence may support a range that does not include management's point estimate. In such circumstances, the misstatement is the difference between management's point estimate and the nearest point of the auditor's range.

A140. Paragraphs A110 - A114 provide guidance to assist the auditor in evaluating management's selection of a point estimate and related disclosures to be included in the financial statements.

A141. When the auditor's further audit procedures include testing how management made the accounting estimate or developing an auditor's point estimate or range, the auditor is required to obtain sufficient appropriate audit evidence about disclosures that describe estimation uncertainty in accordance with paragraphs 26(b) and 29(b) and other disclosures in accordance with paragraph 31. The auditor then considers the audit evidence obtained about disclosures as part of the overall evaluation, in accordance with paragraph 35, of whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated.

A142. ISA 450 also provides guidance regarding qualitative disclosures[59] and when misstatements in disclosures could be indicative of fraud.[60]

---

59 ISA 450, paragraph A17

60 ISA 450, paragraph A22

A143. 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 presentation[61] includes the consideration of the overall presentation, structure and content of the financial statements, and whether the financial statements, including the related notes, represent the transactions and events in a manner that achieves fair presentation. For example, when an accounting estimate is subject to a higher degree of estimation uncertainty, the auditor may determine that additional disclosures are necessary to achieve fair presentation. If management does not include such additional disclosures, the auditor may conclude that the financial statements are materially misstated.

---

61 ISA 700 (Revised), paragraph 14

A144. ISA 705 (Revised)[62] 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.

---

62 ISA 705 (Revised), paragraphs 22 - 23

# How do we comply with the Standards?

[ISA | KAEGHDWC]

# 1 Obtain sufficient appropriate audit evidence for accounting estimates [ISA | 7711]

## What do we do?

Obtain sufficient appropriate audit evidence to determine whether accounting estimates in significant accounts and disclosures are properly accounted for and disclosed in the financial statements

## Why do we do this?

Accounting estimates often represent the areas of greatest risk and most complexity in an audit. As a result, we apply a specific approach to obtain audit evidence and apply appropriate professional skepticism.

## Execute the Audit

## What is an accounting estimate? [ISA | 7711.15384]

An accounting estimate (or "estimate") is a measurement or recognition in the financial statements of (or a decision to not recognize) an account, disclosure, transaction, or event that generally involves subjective assumptions and estimation uncertainty.

Accounting estimates vary widely in nature and management makes them when monetary amounts cannot be directly observed.

## How do estimates pose a risk of material misstatement to the financial statements? [ISA | 7711.15369]

By their nature, accounting estimates, and their elements, are subject to factors that inherently drive risks of misstatement, such as estimation uncertainty, complexity and subjectivity. These same factors also make estimates susceptible to management bias.

Estimates can vary in their degree of complexity, but can involve complex processes and methods.

### What is 'estimation uncertainty?' [ISA | 7711.15370]

Estimation uncertainty is the susceptibility of an accounting estimate and related disclosures to an inherent lack of precision in measurement. Estimation uncertainty is an inherent risk factor and arises when there are constraints on the availability of knowledge (or data) necessary to develop an estimate which limits the precision of an estimate.

As estimation uncertainty increases, so too does the risk of material misstatement to the financial statements.

'Estimation uncertainty' is also referred to as 'measurement uncertainty'.

### Are there specific estimates that inherently have higher estimation uncertainty than others? [ISA | 7711.15371]

Yes. An estimate that calls for management to make judgments and assumptions about the long-term future is subject to higher estimation uncertainty.

> For example, estimates related to estimating the recoverability of long-lived assets that are expected to be in use for many years are generally subject to higher estimation uncertainty than estimates related to the recoverability of inventory that may be sold or consumed within 12 months of the reporting date.

In addition, fair value measurements for which observable market prices are not available are inherently more imprecise than those for which observable market prices are available. This is because, among other things, those fair value measurements may be based on assumptions about future conditions, transactions, or events whose outcome is uncertain and will therefore be subject to change over time.

> For example, the existence of published price quotations from a relevant and reliable source is persuasive evidence of fair value for investments that are bought and sold in active markets. The measurement of fair value for these items is simple and has low estimation uncertainty.
>
> Conversely, measuring the fair value for a specific asset that has no observable market price (e.g., a complex derivative financial instrument) may instead be achieved through the use of a valuation

method that relies on selecting different assumptions (e.g., a discounted cash flow model), which results in higher estimation uncertainty.

#### What is 'subjectivity?' [ISA | 7711.15372]

Subjectivity is the quality of being based on or influenced by personal feelings, tastes, or opinions. In accounting estimates, subjectivity is an inherent risk factor and reflects the inherent limitations around the knowledge or data reasonably available related to an accounting estimate.

As subjectivity increases, so does the risk of material misstatement to the financial statements. In some cases, the applicable financial reporting framework reduces the subjectivity by providing requirements for making the judgment (e.g. the minimum amount within a range is recorded for a loss contingency when no amount within a range is a better estimate than any other amount).

Management judgment is generally necessary in determining the appropriateness of the elements used to make an accounting estimate, which can lead to management bias. As subjectivity increases, so does the susceptibility of the elements to management bias.

#### What is 'complexity?' [ISA | 7711.15373]

Complexity is the quality of being intricate or complicated. In accounting estimates, complexity is an inherent risk factor and stems from how an accounting estimate is made.

As complexity increases, so too does the risk of material misstatement to the financial statements.

#### What is 'management bias' and how does it affect our audit of accounting estimates? [ISA | 7711.15374]

Management bias can be thought of as a lack of neutrality by management in preparing an accounting estimate. We evaluate management bias as we think about their selection of the various elements of an estimate, as it relates to an estimate as a whole, and as we consider the aggregate of all accounting estimates.

Management bias can be unintentional or it can be intentional (fraud).

Understanding the likely sources of management bias related to accounting estimates during our risk assessment can affect our audit response to accounting estimates.

### How do we apply the appropriate level of professional skepticism when auditing an accounting estimate? [ISA | 7711.15375]

We maintain professional skepticism by questioning whether the information and audit evidence we obtain suggests that a material misstatement due to error or fraud may exist. It includes considering the reliability of the information to be used as audit evidence and the controls over its preparation and maintenance where relevant.

We exercise professional skepticism in relation to accounting estimates by considering the various factors that can drive inherent risk. The importance of professional skepticism increases when accounting estimates are subject to a greater degree of estimation uncertainty or are affected to a greater degree by complexity, subjectivity, or other inherent risk factors.

We maintain an attitude of professional skepticism throughout the audit, including during our risk assessment procedures.

When we audit an accounting estimate, we can maintain professional skepticism in a variety of ways, such as thinking about:

- the historical reliability of an estimate or judgments made by management
- indicators of management bias
- contradictory audit evidence
- evidence that brings into question the reliability of documents or other information received from management, or responses to inquiries from management or those charged with governance
- conditions that may indicate possible fraud
- circumstances that suggest the need for additional audit procedures in addition to those that we typically perform on accounting estimates

### What are the 'components of an estimate'? [ISA | 7711.15376]

The components of an estimate refers to how we might disaggregate or view the various pieces to an estimate.

We may think of components as 'estimates within an estimate'.

> For example, the policy liability for an insurance entity may be comprised of future policy benefits, unpaid policy benefits, unearned premiums, and other policyholder's funds, all of which may be disaggregated even further into amounts for health and life policies.
>
> Similarly, the allowance for loan losses for a financial institution may be comprised of allowances for products such as credit cards, consumer installment loans, residential and commercial loans. These may be disaggregated even further into general and specific components.
>
> Each of these represents distinctive estimates comprising the highest estimate reported or disclosed in the financial statements. Keeping in mind the highest estimate could also be part of an account or disclosure that is not readily identified as an estimate (e.g. a bonus accrual that is part of the total other current liabilities).

### What are the 'elements' of an estimate? [ISA | 7711.15377]

Estimates have three primary elements: the method, assumptions, and data.

#### What is a 'method'? [ISA | 7711.14027]

A method is a measurement technique used by management or a management's specialist to make an accounting estimate in accordance with the relevant measurement basis. A method may include application of a model or models.

#### What are 'assumptions'? [ISA | 7711.14174]

Assumptions represent judgments, decisions, or assessments made in areas which involve a degree of subjectivity or uncertainty. Assumptions that are important to the recognition or measurement of the related matter, including an accounting estimate, are referred to as 'relevant assumptions.'

#### What is 'data'? [ISA | 7711.14099]

Data, as that term is used in the auditing standards for auditing accounting estimates and using the work of a management's specialist, is equivalent to 'information'(see 'Evaluate the relevance and reliability of information used as audit evidence'). Accordingly, data may be comprised of multiple 'data elements' (see 'What are 'relevant data elements' (RDEs)?').

In the case of accounting estimates, data elements may be used as either a direct input to the method or model or in developing an assumption. Such data can come in many forms, including, for example, standing membership data and pensionable payroll data used in pension liability calculations, warranty/self-insured claims listings used in determining insurance reserves and historical cash flows used to develop projections used in valuing intangible assets.

### How do we obtain sufficient appropriate audit evidence to determine whether accounting estimates in significant accounts and disclosures are properly accounted for and disclosed? [ISA | 7711.15382]

We perform the following activities:

- Perform risk assessment procedures related to accounting estimates;
- Design and implement a response to the RMMs related to an accounting estimate; and
- Evaluate and document the audit results

### What reviews are performed related to accounting estimates? [ISA | 7711.8847]

Reviews for accounting estimates are performed based on activity 'Perform minimum required review'.

# Examples

### What types of estimates might we identify within an entity's financial statements? [ISA | 7711.15383]

Estimates can be found in many different financial statement line items and disclosures within an entity's financial statements. Below are some examples of estimates that may or may not be readily identified simply by reviewing the entity's financial statements and disclosures:

| Financial Statement Line-item | Accounting Estimates - including disclosures |
|---|---|
| **Investments** | • Valuation of:<br>- exchange-traded investments<br>- debt securities classified as trading or available for sale dependent on management's intent and objectives in investing in the securities<br>- debt securities classified as held-to-maturity dependent on management's intent and ability to hold them to maturity<br>- investments not traded regularly or that are traded only in markets without published or quoted market prices<br>- equity method investments dependent on management's ability to significantly influence the investee<br>• Recoverability / impairment - including:<br>- estimates associated with market risk (e.g. price risk or liquidity risk) |

| | |
|---|---|
| | - estimates associated with credit risk |
| **Accounts receivable** | • Allowance for doubtful accounts |
| **Inventory** | • Excess and obsolete inventory<br>• Cost methods - such as retail and last-in-first-out<br>• Determination of lower of cost or market |
| **Property, plant and equipment** | • Internal software<br>• Lease-hold improvements<br>• Capital leases<br>• Useful lives of assets<br>• Salvage value<br>• Recoverability / impairment |
| **Goodwill and intangibles** | • Fair value of assets acquired and liabilities assumed in a business combination - such as:<br>- Customer relationships<br>- Trademarks<br>- Favorable or unfavorable contracts<br>- In process research and development<br>- Goodwill<br>- Legal accruals<br>- Pension liabilities<br>• Fair value of contingent consideration<br>• Fair value of guarantees to seller(s)<br>• Recoverability / impairment<br>• Useful lives of intangible assets |
| **Deferred tax assets** | • Valuation allowance, including scheduling of reversal of deferred taxes<br>• Uncertain tax positions<br>• Assertions and application of indefinite reversal criteria |
| **Accrued liabilities** | • Bonus accrual(s)<br>• Derivative liabilities<br>• Warranty obligations<br>• Product liability reserves |

| | |
|---|---|
| | • Self- insurance reserves, including medical and workers' compensation<br>• Commitments and contingencies<br>• Reserves for insurance contracts<br>• Employee pension obligations |
| **Long-term debt** | • Projected debt compliance<br>• Fair value<br>• Convertible features, if any |
| **Shareholders' equity** | • Share-based payments<br>• Transactions involving non-controlling interests<br>• Non-monetary distributions<br>• Going-concern |
| **Net sales** | • Revenue recognition<br>Step 1:<br>- Collectability of consideration<br>Step 2:<br>- Options for future purchases (e.g. coupon providing a 25% discount on the next purchase made within 30 days)<br>- Customer loyalty programs (e.g. retail, airline, and hospitality)<br>Step 3:<br>- Royalties<br>- Contingent fees (e.g. performance bonuses)<br>- Rights of return (e.g. product returns)<br>- Payment to customers (e.g. rebates in retail and consumer goods industries)<br>Step 4:<br>- Estimating stand-alone selling price and allocation method<br>Step 5:<br>- Customized goods (e.g. product designed to customer specifications)<br>Other |

| | |
|---|---|
| | - Amortization period for capitalized contract costs<br>- Nonrefundable up-front fees<br>- Impairment of contract costs |

# Risk Assessment Procedures and Related Activities

## International Standards on Auditing: ISA 540.13-15

## Requirements

### Risk Assessment Procedures and Related Activities

13. When obtaining an understanding of the entity and its environment, the applicable financial reporting framework and the entity's system of internal control, as required by ISA 315 (Revised 2019),[8] the auditor shall obtain an understanding of the following matters related to the entity's accounting estimates. The auditor's procedures to obtain the understanding shall be performed to the extent necessary to obtain audit evidence that provides an appropriate basis for the identification and assessment of risks of material misstatement at the financial statement and assertion levels. (Ref: Para. A19 - A22)

***Obtaining an Understanding of the Entity and Its Environment and the Applicable Financial Reporting Framework***

(a) The entity's transactions and other events or conditions that may give rise to the need for, or changes in, accounting estimates to be recognized or disclosed in the financial statements. (Ref: Para. A23)

(b) The requirements of the applicable financial reporting framework related to accounting estimates (including the recognition criteria, measurement bases, and the related presentation and disclosure requirements); and how they apply in the context of the nature and circumstances of the entity and its environment, including how the inherent risk factors affect susceptibility to misstatement of assertions. (Ref: Para. A24-A25)

(c) Regulatory factors relevant to the entity's accounting estimates, including, when applicable, regulatory frameworks related to prudential supervision. (Ref: Para. A26)

(d) The nature of the accounting estimates and related disclosures that the auditor expects to be included in the entity's financial statements, based on the auditor's understanding of the matters in 13(a) - (c) above. (Ref: Para. A27)

***Obtaining an Understanding of the Entity ' s System of Internal Control***

(e) The nature and extent of oversight and governance that the entity has in place over management's financial reporting process relevant to accounting estimates. (Ref: Para. A28 - A30).

(f) How management identifies the need for, and applies, specialized skills or knowledge related to accounting estimates, including with respect to the use of a management's expert. (Ref: Para. A31)

(g) How the entity's risk assessment process identifies and addresses risks relating to accounting estimates. (Ref: Para. A32 - A33)

(h) The entity's information system as it relates to accounting estimates, including:

(i) How information relating to accounting estimates and related disclosures for significant classes of transactions, account balances or disclosures flows through the entity's information system; and (Ref: Para. A34 - A35)

(ii) For such accounting estimates and related disclosures, how management:

a. Identifies the relevant methods, assumptions or sources of data, and the need for changes in them, that are appropriate in the context of the applicable financial reporting framework, including how management: (Ref: Para. A36 - A37)

i. Selects or designs, and applies, the methods used, including the use of models; (Ref: Para. A38 - A39)

ii. Selects the assumptions to be used, including consideration of alternatives, and identifies significant assumptions; and (Ref: Para. A40 - A43)

iii. Selects the data to be used; (Ref: Para. A44)

b. Understands the degree of estimation uncertainty, including through considering the range of possible measurement outcomes; and (Ref: Para. A45)

c. Addresses the estimation uncertainty, including selecting a point estimate and related disclosures for inclusion in the financial statements. (Ref: Para. A46 - A49)

(i) Identified controls in the control activities component[124] over management's process for making accounting estimates as described in paragraph 13(h)(ii). (Ref: Para. A50 - A54)

(j) How management reviews the outcome(s) of previous accounting estimates and responds to the results of that review.

---

8 ISA 315 (Revised 2019), paragraphs 19-27

124 ISA 315 (Revised 2019), paragraphs 26(a)(i)-(iv)

14. The auditor shall review the outcome of previous accounting estimates, or, where applicable, their subsequent re-estimation to assist in identifying and assessing the risks 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. A55 - A60)

15. With respect to accounting estimates, the auditor shall determine whether the engagement team requires specialized skills or knowledge to perform the risk assessment procedures, to identify and assess the risks of material misstatement, to design and perform audit procedures to respond to those risks, or to evaluate the audit evidence obtained. (Ref: Para. A61 - A63)

# ISA Application and Other Explanatory Material: ISA 540.A19-A63

## Risk Assessment Procedures and Related Activities

### *Obtaining an Understanding of the Entity and Its Environment, the Applicable Financial Reporting Framework, and the Entity's System of Internal Control (Ref: Para. 13)*

A19. Paragraphs 19-27 of ISA 315 (Revised 2019) require the auditor to obtain an understanding of certain matters about the entity and its environment, the applicable financial reporting framework and the entity's system of internal control. The requirements in paragraph 13 of this ISA relate more specifically to accounting estimates and build on the broader requirements in ISA 315 (Revised 2019).

#### Scalability

A20. The nature, timing and extent of the auditor's procedures to obtain the understanding of the entity and its environment, the applicable financial reporting framework, and the entity's system of internal control, related to the entity's accounting estimates, may depend, to a greater or lesser degree, on the extent to which the individual matter(s) apply in the circumstances. For example, the entity may have few transactions or other events or conditions that give rise to the need for accounting estimates, the applicable financial reporting requirements may be simple to apply, and there may be no relevant regulatory factors. Further, the accounting estimates may not require significant judgments, and the process for making the accounting estimates may be less complex. In these circumstances, the accounting estimates may be subject to or affected by estimation uncertainty, complexity, subjectivity, or other inherent risk factors to a lesser degree and there may be fewer identified controls in the control activities component. If so, the auditor's risk assessment procedures are likely to be less extensive and may be obtained primarily through inquiries of management with appropriate responsibilities for the financial statements such as simple walk-throughs of management's process for making the accounting estimate (including when evaluating whether identified controls in that process are designed effectively and when determining whether the control has been implemented).

A21. By contrast, the accounting estimates may require significant judgments by management, and the process for making the accounting estimates may be complex and involve the use of complex models. In addition, the entity may have a more sophisticated information system, and more extensive controls over accounting estimates. In these circumstances, the accounting estimates may be subject to or affected by estimation uncertainty, subjectivity, complexity or other inherent risk factors to a greater degree. If so, the nature or timing of the auditor's risk assessment procedures are likely to be different, or be more extensive, than in the circumstances in paragraph A20.

A22. The following considerations may be relevant for entities with only simple businesses, which may include many smaller entities:

- Processes relevant to accounting estimates may be uncomplicated because the business activities are simple or the required estimates may have a lesser degree of estimation uncertainty.

- Accounting estimates may be generated outside of the general and subsidiary ledgers, controls over their development may be limited, and an owner-manager may have significant influence over their 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.

## The Entity and Its Environment

### The entity's transactions and other events or conditions (Ref: Para. 13(a))

A23. Changes in circumstances that may give rise to the need for, or changes in, accounting estimates may include, for example, whether:

- The entity has engaged in new types of transactions;
- Terms of transactions have changed; or
- New events or conditions have occurred.

### The requirements of the applicable financial reporting framework (Ref: Para. 13(b))

A24. 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 the requirements of the applicable financial reporting framework 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.[30]

[30] ISA 260 (Revised), paragraph 16(a)

A25. In obtaining this understanding, the auditor may seek to understand whether:

- The applicable financial reporting framework:
    - Prescribes certain criteria for the recognition, or methods for the measurement of accounting estimates;
    - Specifies certain criteria that permit or require measurement at a fair value, for example, by referring to management's intentions to carry out certain courses of action with respect to an asset or liability; or
    - Specifies required or suggested disclosures, including disclosures concerning judgments, assumptions, or other sources of estimation uncertainty relating to accounting estimates; and
- Changes in the applicable financial reporting framework require changes to the entity's accounting policies relating to accounting estimates.

### Regulatory factors (Ref: Para. 13(c))

A26. Obtaining an understanding of regulatory factors, if any, that are relevant to accounting estimates may assist the auditor in identifying applicable regulatory frameworks (for example, regulatory frameworks established by prudential supervisors in the banking or insurance industries) and in determining whether such regulatory framework(s):

- 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;
- Provides an indication of areas for which there may be a potential for management bias to meet regulatory requirements; or
- Contains 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, some regulators may seek to influence minimum levels for expected credit loss provisions that exceed those required by the applicable financial reporting framework.

### The nature of the accounting estimates and related disclosures that the auditor expects to be included in the financial statements (Ref: Para. 13(d))

A27. Obtaining an understanding of the nature of accounting estimates and related disclosures 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 makes the accounting estimates.

### The Entity's System of Internal Control

### The nature and extent of oversight and governance (Ref: Para. 13(e))

A28. In applying ISA 315 (Revised 2019),[31] the auditor's understanding of the nature and extent of oversight and governance that the entity has in place over management's process for making accounting estimates may be important to the auditor's required evaluation of whether:

- Management, with the oversight of those charged with governance, has created and maintained a culture of honesty and ethical behavior;
- The control environment provides an appropriate foundation for the other components of internal control and whether those other components the system of internal control considering the nature and size of the entity; and
- Control deficiencies identified in the control environment undermine the other components of the system of internal control.

---

[31] ISA 315 (Revised 2019), paragraph 21(a)

A29. The auditor may obtain an understanding of whether 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;
- Are independent from management, have the information required to evaluate on a timely basis how management made the accounting estimates, and the authority to call into question management's actions when those actions appear to be inadequate or inappropriate;

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

A30. Obtaining an understanding of the oversight by those charged with governance may be important when there are accounting estimates that:

- Require significant judgment by management to address subjectivity;
- 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 assumptions.

## Management's application of specialized skills or knowledge, including the use of management's experts (Ref: Para. 13(f))

A31. The auditor may consider whether the following circumstances increase the likelihood that management needs to engage an expert:[32]

- 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.[33]
- The unusual or infrequent nature of the condition, transaction or event requiring an accounting estimate.

---

[32] ISA 500, paragraph 8

[33] See, for example, International Financial Reporting Standard (IFRS) 13, *Fair Value Measurement*.

## The entity's risk assessment process (Ref: Para. 13(g))

A32. Understanding how the entity's risk assessment process identifies and addresses risks relating to accounting estimates may assist the auditor in considering 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.

A33. Matters that the auditor may consider in obtaining an understanding of how management identified and addresses the susceptibility to misstatement due to management bias or fraud in making accounting estimates, include whether and, if so, how management:

- Pays particular attention to selecting or applying the methods, assumptions and data used in making accounting estimates.
- 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 the need for changes in the methods, significant assumptions or the data 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.

## The entity's information system relating to accounting estimates (Ref: Para. 13(h)(i))

A34. The significant classes of transactions, events and conditions within the scope of paragraph 13(h) are the same as the significant classes of transactions, events and conditions relating to accounting estimates and related disclosures that are subject to paragraphs 25(a) of ISA 315 (Revised 2019). In obtaining the understanding of the entity's information system as it relates to accounting estimates, the auditor may consider:

- Whether the accounting estimates arise from the recording of routine and recurring transactions or whether they arise from non-recurring or unusual transactions.
- How the information system addresses the completeness of accounting estimates and related disclosures, in particular for accounting estimates related to liabilities.

A35. During the audit, the auditor may identify classes of transactions, events or conditions that give rise to the need for accounting estimates and related disclosures that management failed to identify. ISA 315 (Revised 2019) deals with circumstances where the auditor identifies risks of material misstatement that management failed to identify, including considering the implications for the auditor's evaluation of the entity's risk assessment process.[34]

[34] ISA 315 (Revised), paragraph 17

## Management's identification of the relevant methods, assumptions and sources of data (Ref: Para. 13(h)(ii)(a))

A36. If management has changed the method for making an accounting estimate, considerations may include whether the new method is, for example, more appropriate, 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, or whether management has another valid reason.

A37. If management has not changed the method for making an accounting estimate, considerations may include whether the continued use of the previous methods, assumptions and data is appropriate in view of the current environment or circumstances.

## Methods (Ref: Para. 13(h)(ii)(a)(i))

A38. The applicable financial reporting framework may prescribe the method to be used in 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.

## Models

A39. Management may design and implement specific controls around models used for making accounting estimates, whether management's own model or an external model. When the model itself has an increased level of complexity or subjectivity, such as an expected credit loss model or a fair value model using level 3 inputs, controls that address such complexity or subjectivity may be more likely to be identified as relevant to the audit. When complexity in relation to models is present, controls over data integrity are also more likely to be identified controls in accordance with ISA 315 (Revised 2019). Factors that may be appropriate for the auditor to consider in obtaining an understanding of the model and related identified controls 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; and
  - The accuracy and completeness of the data and the appropriateness of data and assumptions used in the model;
- 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 in the circumstances in accordance with the requirements of the applicable financial reporting framework. When the adjustments are not appropriate, such adjustments may be indicators of possible management bias; 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.

## Assumptions (Ref: Para. 13(h)(ii)(a)(ii))

A40. Matters that the auditor may consider in obtaining an understanding of how management selected the assumptions used in making the accounting estimates include, for example:

- The basis for management's selection and the documentation supporting the selection of the assumption. 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, with those used in other accounting estimates or areas of the entity's business activities, or with other matters that are:

  - 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 or potential judicial or regulatory actions).
- The requirements of the applicable financial reporting framework related to the disclosure of assumptions.

A41. 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.

A42. Assumptions used in making an accounting estimate are referred to as significant assumptions in this ISA if a reasonable variation in the assumption would materially affect the measurement of the accounting estimate. A sensitivity analysis may be useful in demonstrating the degree to which the measurement varies based on one or more assumptions used in making the accounting estimate.

## Inactive or illiquid markets

A43. 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, and the relevance thereof, from particular external information sources may vary in such circumstances.

## Data (Ref: Para. 13(h)(ii)(a)(iii))

A44. Matters that the auditor may consider in obtaining an understanding of how management selects the data on which the accounting estimates are based include:

- The nature and source of the data, including information obtained from an external information source.
- 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 IT applications or other aspects of the entity's IT environment 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.

## How management understands and addresses estimation uncertainty (Ref: Para. 13(h)(ii)(b) - 13(h)(ii)(c))

A45. Matters that may be appropriate for the auditor to consider relating to whether and how management understands the degree of estimation uncertainty include, for example:

- Whether and, if so, how management identified alternative methods, significant assumptions or sources of data that are appropriate in the context of the applicable financial reporting framework.
- Whether and, if so, how management considered alternative outcomes by, for example, performing a sensitivity analysis to determine the effect of changes in the significant assumptions or the data used in making the accounting estimate.

A46. The requirements of the applicable financial reporting framework may specify the approach to selecting management's point estimate from the reasonably possible measurement outcomes. Financial reporting frameworks may recognize that the appropriate amount is one that is appropriately selected from the reasonably possible measurement outcomes and, in some cases, may indicate that the most relevant amount may be in the central part of that range.

A47. For example, with respect to fair value estimates, IFRS 13[35] indicates that, if multiple valuation techniques are used to measure fair value, the results (i.e., respective indications of fair value) shall 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.

---

[35] IFRS 13, Fair Value Measurement, paragraph 63

A48. The applicable financial reporting framework may prescribe disclosures or disclosure objectives related to accounting estimates, and some entities may choose to disclose additional information. These disclosures or disclosure objectives may address, for example:

- The method of estimation used, including any applicable model and the basis for its selection.
- 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 of estimation uncertainty.
- Fair value information.
- Information about sensitivity analyses derived from financial models that demonstrates that management has considered alternative assumptions.

A49. In some cases, the applicable financial reporting framework may require specific disclosures regarding estimation uncertainty, for example:

- The disclosure of information about the assumptions made about the future and other major sources of estimation uncertainty that give rise to a higher likelihood or magnitude of material adjustment to the carrying amounts of assets and liabilities after the period end. Such requirements may be described using terms such as "Key Sources of Estimation Uncertainty" or "Critical Accounting Estimates." They may relate to accounting estimates that require management's most difficult, subjective or complex judgments. Such judgments may be more subjective and complex, and accordingly the potential for a consequential material adjustment to the carrying amounts of assets and liabilities may increase, with the number of items of data and assumptions affecting the possible future resolution of the estimation uncertainty. Information that may be disclosed includes:
    - The nature of the assumption or other source of estimation uncertainty;
    - The sensitivity of carrying amounts to the methods and assumptions used, including the reasons for the sensitivity;
    - The expected resolution of an uncertainty and the range of reasonably possible outcomes in respect of the carrying amounts of the assets and liabilities affected; and
    - An explanation of changes made to past assumptions concerning those assets and liabilities, if the uncertainty remains unresolved.
- 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.

## Identified Controls over management's process for making accounting estimates (Ref: Para 13(i))

A50. The auditor's judgment in identifying controls in the control activities component,, and therefore the need to evaluate the design of those controls and determine whether they have been implemented, relates to management's process described in paragraph 13(h)(ii). The auditor may not identify controls in relation to all aspects of paragraph 13(h)(ii).

A51. As part of identifying the controls, and evaluating their design and determining whether they have been implemented, 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 responsible for making the accounting estimates and those committing the entity to the related transactions, 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 effectiveness of the design of the controls. Generally, it may be more difficult for management to design controls that address subjectivity and estimation uncertainty in a manner that effectively prevents, or detects and corrects, material misstatements, than it is to design controls that address complexity. Controls that address subjectivity and estimation uncertainty may need to include more manual elements, which may be less reliable than automated controls as they can be more easily bypassed, ignored or overridden by management. The design effectiveness of controls addressing complexity may vary depending on the reason for, and the nature of, the complexity. For example, it may be easier to design more effective controls related to a method that is routinely used or over the integrity of data.

A52. When management makes extensive use of information technology in making an accounting estimate, identified controls in the control activities component are likely to include general IT controls and information processing controls. Such controls may address risks related to:

- Whether the IT applications or other aspects of the IT environment has the capability and is appropriately configured to process large volumes of data;
- Complex calculations in applying a method. When diverse IT applications are required to process complex transactions, regular reconciliations between the IT applications are made, in particular when the IT applications do not have automated interfaces or may be subject to manual intervention;
- Whether the design and calibration of models is periodically evaluated;
- The complete and accurate extraction of data regarding accounting estimates from the entity's records or from external information sources;
- Data, including the complete and accurate flow of data through the entity's information system, the appropriateness of any modification to the data used in making accounting estimates, the maintenance of the integrity and security of the data;
- When using external information sources, risks related to processing or recording the data;
- Whether 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; and

- Whether there are appropriate controls over the transfer of information relating to accounting estimates into the general ledger, including appropriate controls over journal entries.

A53. In some industries, such as banking or insurance, the term governance may be used to describe activities within the control environment, the entity's process to monitor the system of internal control, and other components of the system of internal control, as described in ISA 315 (Revised 2019).[36]

[36] ISA 315 (Revised 2019), Appendix 3

A54. 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 controls that address the risks related to the data, assumptions and models used to make the accounting estimates;
- The aspects of the entity's information system that generate the data on which the accounting estimates are based; and
- How new risks relating to accounting estimates are identified, assessed and managed.

## *Reviewing the Outcome or Re-Estimation of Previous Accounting Estimates* (Ref: Para. 14)

A55. A review of the outcome or re-estimation of previous accounting estimates (retrospective review) assists in identifying and assessing the risks of material misstatement when previous accounting estimates have an outcome through transfer or realization of the asset or liability in the current period, 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 audit evidence about the likely effectiveness of management's current process.
- Audit evidence of matters, such as the reasons for changes that may be required to be disclosed in the financial statements.
- Information regarding the complexity or 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.

A56. A retrospective review may provide audit evidence that supports the identification and assessment of the risks of material misstatement in the current period. Such a retrospective review may be performed for accounting estimates made for the prior period's financial statements, or may be performed over several periods or a shorter period (such as half-yearly or quarterly). In some cases, a retrospective review over several periods may be appropriate when the outcome of an accounting estimate is resolved over a longer period.

A57. A retrospective review of management judgments and assumptions related to significant accounting estimates is required by ISA 240.[37] As a practical matter, the auditor's review of previous 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.

---

[37] ISA 240, *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements*, paragraph 33(b)(ii)

A58. Based on the auditor's previous assessment of the risks of material misstatement, for example, if inherent risk is assessed as higher for one or more risks of material misstatement, the auditor may judge that a more detailed retrospective review is required. As part of the detailed retrospective review, the auditor may pay particular attention, when practicable, to the effect of data and significant assumptions used in making the previous accounting 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.

A59. The measurement objective for fair value accounting estimates and other accounting estimates, based on current conditions at the measurement date, 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 may 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 audit evidence. In this case, audit evidence may be obtained by understanding the outcomes of assumptions (such as a cash flow projections) and understanding the effectiveness of management's prior estimation process that supports the identification and assessment of the risk of material misstatement in the current period.

A60. 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, such a difference may represent a misstatement 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 context of the applicable financial reporting framework.[38] Such a difference may call into question management's process for taking information into account in making the accounting estimate. As a result, the auditor may reassess any plan to test related controls and the related assessment of control risk or may determine that more persuasive audit evidence needs to be obtained about the matter. 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.

---

[38] ISA 560, *Subsequent Events*, paragraph 14

## *Specialized Skills or Knowledge* (Ref: Para. 15)

A61. Matters that may affect the auditor's determination of whether the engagement team requires specialized skills or knowledge, include, for example:[39]

- 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.

The nature, timing and extent of the involvement of individuals with specialized skills and knowledge may vary throughout the audit.

---

[39] ISA 220 (Revised), *Quality Management for an Audit of Financial Statements*, paragraph 25-26 and ISA 300, *Planning an Audit of Financial Statements*, paragraph 8(e)

A62. The auditor may not possess the specialized skills or knowledge necessary when the matter involved is in a field other than accounting or auditing (for example, valuation skills) and may need to use an auditor's expert.[40]

---

[40] ISA 620, *Using the Work of an Auditor's Expert*

A63. Many accounting estimates do not require the application of specialized skills or knowledge. For example, specialized skills or knowledge may not be needed for a simple inventory obsolescence calculation. However, for example, for expected credit losses of a banking institution or an insurance contract liability for an insurance entity, the auditor is likely to conclude that it is necessary to apply specialized skills or knowledge.

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Perform risk assessment procedures related to accounting estimates [ISA | 1107]

## What do we do?

Perform risk assessment procedures related to accounting estimates

## Why do we do this?

While risk assessment is the first step in auditing accounting estimates, there is no prescribed sequence in the standards as to how we are to perform our risk assessment procedures. We may take a "topdown" approach starting with what we know about the entity's process in the aggregate or a "bottom-up" approach starting with what we know about each of the methods, assumptions, and data. Regardless of the sequence we choose, we obtain a complete understanding of management's process used to develop the estimate.

Once we have performed our risk assessment procedures, we have a basis to conclude that we've identified all the risks of material misstatement that require an audit response.

# Execute the Audit

What risk assessment procedures do we perform over accounting estimates? [ISA | 1107.1300]

We perform the following activities:

- Understand the entity and its environment, including the entity's ICFR related to accounting estimates;
- Identify accounting estimates in significant account and disclosures;
- Determine the components of an accounting estimate;
- Understand the process by which accounting estimates are developed;
- Perform and evaluate a retrospective review of accounting estimates; and
- Identify and assess RMMs related to an accounting estimate.

While we list and describe our risk assessment procedures sequentially, we continually refine our identification and assessment of risks as we understand more about the entity's process and the individual elements.

# 1.1 Understand the entity and its environment, including the entity's ICFR related to accounting estimates [ISA | 1108]

# What do we do?

Obtain an understanding of the entity and its environment, including the entity's internal control over financial reporting as it relates to accounting estimates

# Why do we do this?

We perform procedures to obtain an understanding of the entity and its environment, the applicable financial reporting framework and the entity's internal control so that we understand the nature and type of accounting estimates included in the entity's financial statements, the measurement basis of such accounting estimates and the nature and extent of disclosures that may be relevant.

This understanding gives us the ability to identify and assess risks of material misstatement so that we can plan an appropriate audit response.

# Execute the Audit

## What do we understand about the entity and its environment that is relevant to us identifying and assessing risks related to accounting estimates? [ISA | 1108.1400]

As part of our understanding of the entity and its environment, we specifically understand the following matters that can impact accounting estimates:

- the entity's transactions or other events and conditions that may give rise to the need for, or changes in, accounting estimates to be recognized or disclosed in the financial statements,
- 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,
- the requirements of the applicable financial reporting framework related to accounting estimates (including the recognition criteria, measurement bases, and the related presentation and disclosure requirements) and how they apply in the context of the nature and circumstances of the entity and its environment, and
- regulatory factors relevant to the entity's accounting estimates, including, when applicable, regulatory frameworks.

### What specific inquiries do we make that are relevant to understanding the entity and its environment related to accounting estimates? [ISA | 1108.15221]

We make inquires of management about changes in circumstances that may give rise to new, or the need to revise existing, accounting estimates.

### How do we use what we learned from our understanding about the entity and its environment? [ISA | 1108.15224]

We use our understanding of the entity and its environment, specifically our understanding of those matters that impact estimates, to develop an expectation of the nature of the accounting estimates and related disclosures that we expect to see in the entity's financial statements.

Ultimately, our expectations and what we learn about the estimates will help us to better identify and assess RMMs related to estimates.

The following are examples of what we might learn from our understanding:

| Topic | What we might learn |
|---|---|
| **Transactions or other events and conditions that may give rise to the need for, or changes in, accounting estimates** | That the entity has engaged in new types of transactions this year that give rise to new accounting estimates or the need to change processes for developing accounting estimates within the financial statements, such as:<br>• introduction of a new product line<br>• completion of a business combination<br>• introduction of a workforce incentive plan<br>• that the terms of transactions have changed, such as re-negotiation of contract terms with significant suppliers and/or vendors<br>• that new events or conditions have occurred |
| **Requirements of the applicable** | That the financial reporting framework may prescribe certain things that could impact accounting estimates, such as: |

| | |
|---|---|
| **financial reporting framework related to accounting estimates** | • the criteria or conditions that must be met for recognition<br>• the basis of measurement, such as amortized cost or fair value<br>• the method used for the measurement<br>• the requirements that are permitted for presentation and disclosure related to estimation uncertainty<br>• other elements of an accounting framework (e.g. hedge accounting)<br>• changes in the applicable financial reporting framework that require a change to the entity's accounting policies<br>• regulatory factors<br>• providing guidance for management on determining point estimates where alternatives exist.<br>• requiring the disclosure of information concerning the relevant assumptions to which an accounting estimate is particularly sensitive,<br>• not permitting recognition where there is a high degree of measurement uncertainty, and instead requiring certain disclosures. |
| **Regulatory factors relevant to the entity's accounting estimates** | That the regulatory factors allow us to identify the applicable regulatory framework(s) which helps us determine whether the applicable regulatory framework(s):<br>• specify the criteria for recognition or require use of a particular method of measurement,<br>• specify or provide guidance about disclosures in addition to the requirements of the financial reporting framework,<br>• provide an indication of areas for which there may be possible management bias to meet regulatory requirements.<br>• requirements are not consistent with the requirements of the financial reporting framework.<br><br>For example, regulators may seek to influence the minimum levels for expected credit loss provisions, providing pressure for them to be higher. This may affect the degree to which management bias impacts the estimate and our assessment of the RMM. |

What do we understand about accounting estimates when obtaining an understanding of ICFR? [ISA | 1108.11958]

As part of understanding ICFR, we specifically understand the following matters related to estimates:

- How the entity's board of directors exercises oversight over management's process for making accounting estimates
- How management identifies the need for, and applies, specialized skills or knowledge related to accounting estimates, including with respect to the use of a specialist
- How the entity's risk assessment process identifies and addresses risks related to accounting estimates, including susceptibility to management bias

## How do we use what we learned about accounting estimates when obtaining an understanding of ICFR? [ISA | 1108.15226]

We use our understanding of ICFR, specifically our understanding of those matters that impact estimates, to better identify and assess RMMs related to estimates.

The following are examples of what we might learn from our understanding:

| Topic | What we might learn |
|---|---|
| **How the entity's board of directors exercises oversight over management's process for making accounting estimates** | There is information that impacts our evaluation of whether:<br>• a culture of honesty and ethical behavior has been created<br>• strengths in the control environment collectively provide an appropriate foundation for the other elements of ICFR<br><br>For example, we may seek certain information about those charged with governance that impacts our evaluation such as information about whether they:<br>• have the skills or knowledge to understand the characteristics of a particular method or the model to make the estimate, or the risks related to the estimate;<br>• are independent from management, have the necessary information required to evaluate on a timely basis how management made the estimate, and the authority to call into question management's actions;<br>• oversee managements process for making the accounting estimate, including the use of models; and<br>• oversee the monitoring activities undertaken by management |
| **How management identifies the need for, and applies, specialized skills or knowledge related to accounting estimates, including with respect to the use of a specialist** | Whether management has the appropriate skills or knowledge to develop the estimates within their financial statements. In cases where they don't have the appropriate skills or knowledge that they have engaged the proper specialists to assist them with the preparation of an accounting estimate.<br><br>For example, we may learn about:<br>• the specialized nature of a matter requires the skills of a specialist, such as:<br>- Mineral or hydrocarbon reserves in extractive industries<br>- Complex contractual terms |

| | |
|---|---|
| | • the complex nature of the models used to apply the requirements of the financial reporting framework requires the skills of a specialist or service provider, such as fair value models used for Level 3 investments<br>• the unusual or infrequent nature of the condition, transaction or event requiring the accounting estimate |
| **The entity's risk assessment process relating to accounting estimates, including susceptibility to management bias** | Information that helps us understand how management identifies and addresses risks related to estimates. We consider the evidence obtained from obtaining an understanding of the entity's risk assessment process when we identify and assess RMMs related to estimates.<br><br>For example, this information may provide us with an understanding of, or changes in, the following:<br>• The requirements of the applicable financial reporting framework related to accounting estimates<br>• the availability or nature of data sources relevant to making the accounting estimate or that may affect the reliability of the data used<br>• the entity's information systems or IT environment<br>• key personnel in the process to monitor or develop estimate<br>• aspects of the process that are most susceptible to management bias |

## How do we understand the entity and its environment, including the entity's ICFR related to accounting estimates? [ISA | 1108.15227]

We obtain this understanding while we are performing our risk assessment procedures, which include:

- Obtain an understanding of the entity and its environment,
- Obtain an understanding of ICFR,
- Discuss the potential for material misstatement due to fraud, which includes brainstorming among the key engagement team members about how the financial statements could be manipulated through management bias in accounting estimates in significant accounts and disclosures; and,
- Consider other information relevant to identifying and assessing RMMs
- Perform analytical procedures
- Inquire of those charged with governance, management and others about RMMs

### What might we learn about accounting estimates from our other risk assessment procedures? [ISA | 1108.15228]

We learn about matters such as:

- Risks raised in client and engagement acceptance or continuance "CEAC"
- Prior audit adjustments related to estimates
- Prior indicators of management bias
- Fluctuations in accounting estimates and the reasons for them
- The need for, or changes in, accounting estimates

Similar to our other risk assessment procedures we learn about information that gives us the ability to *identify* and *assess* risks of material misstatement so that we can plan an appropriate audit response.

# 1.2 Identify accounting estimates in significant accounts and disclosures [ISA | 7706]

## What do we do?

Identify accounting estimates in significant accounts and disclosures with a reasonable possibility of containing a risk of material misstatement

## Why do we do this?

Once we understand the entity and its environment, within each account and disclosure we identify accounting estimates with a reasonable possibility of containing a risk of material misstatement.

## Execute the Audit

### How do we identify estimates in significant accounts and disclosures? [ISA | 7706.15271]

We identify estimates in significant accounts and disclosures as we perform our risk assessment procedures. See activity 'Perform risk assessment procedures related to accounting estimates'.

#### How do we identify significant accounts and disclosures? [ISA | 7706.15272]

We perform the activity 'Identify significant accounts and disclosures and their relevant assertions'. However, we consider additional risk factors when identifying significant accounts and disclosures involving accounting estimates.

#### Do we identify all estimates that may exist in a business process? [ISA | 7706.8801]

No. Within each business process, we only identify the accounting estimates with a reasonable possibility of containing a risk of material misstatement. For example, the estimate may be clearly inconsequential to the financial statements such that it is clear to us that there is not a risk of material misstatement associated with it.

In some cases, our general risk assessment procedures, previous client or audit experience and other walkthroughs within the business process, may be sufficient for us to initially conclude about whether there is an RMM related to an estimate. For example, an estimate may be complex and material enough that it is clear to us that there is a risk of material misstatement associated with it. In other situations, we may not have enough information to reach an initial conclusion and may obtain an understanding of the process to develop an estimate, as well as think about the risks related to each of the elements of the estimate - i.e., the selection and application of methods, assumptions, and data - to help us identify and assess the RMMs related to an accounting estimate.

#### What are the additional risk factors that we evaluate when identifying significant accounts and disclosures involving accounting estimates? [ISA | 7706.15273]

We evaluate additional risk factors when identifying significant accounts and disclosures involving accounting estimates with a reasonable possibility of containing a risk of material misstatement, which include:

- the degree of uncertainty associated with the future occurrence or outcome of events and conditions underlying the relevant assumptions;
- the complexity of the process for developing the accounting estimate;
- the number and complexity of methods and relevant assumptions associated with the process;
- the degree of subjectivity associated with the methods, relevant assumptions, and data;
- if forecasts are important to the estimate, the length of the forecast period and degree of uncertainty regarding trends affecting the forecast; and
- the degree of subjectivity associated with the selection of management's point estimate and related disclosures for inclusion in the financial statements.

These are the same risk factors we evaluate to assess which RMs related to an accounting estimate are RMMs. See activity 'Identify and assess which RMs related to an accounting estimate are RMMs' for further information.

# 1.3 Determine the components of an accounting estimate [ISA | 7705]

## What do we do?

Determine the components of an accounting estimate and whether they are subject to significantly differing risks

## Why do we do this?

An accounting estimate may consist of more than one component. These components can have differing risks of misstatement, which we may not identify if we define the estimate too broadly. Breaking down the estimate into its various components allows us to differentiate the risks of misstatement associated with each of the components so that we may design an appropriate audit response.

## Execute the audit

#### What are the 'components of an estimate'? [ISA | 7705.15376]

The components of an estimate refers to how we might disaggregate or view the various pieces to an estimate.

We may think of components as 'estimates within an estimate'.

> For example, the policy liability for an insurance entity may be comprised of future policy benefits, unpaid policy benefits, unearned premiums, and other policyholder's funds, all of which may be disaggregated even further into amounts for health and life policies.

Similarly, the allowance for loan losses for a financial institution may be comprised of allowances for products such as credit cards, consumer installment loans, residential and commercial loans. These may be disaggregated even further into general and specific components.

Each of these represents distinctive estimates comprising the highest estimate reported or disclosed in the financial statements. Keeping in mind the highest estimate could also be part of an account or disclosure that is not readily identified as an estimate (e.g. a bonus accrual that is part of the total other current liabilities).

### How do we determine the components of an estimate? [ISA | 7705.15482]

We determine the components by considering whether an estimate is comprised of separate identifiable estimates that differ significantly. Components of an estimate may differ in their measurement objective and/or inherent risk, as a result of differences in their measurement uncertainty, complexity and / or subjectivity. These components of an estimate are often distinguished when the entity has separate identifiable processes and controls in place to address the risks unique to a particular component of an estimate.

#### Can separate components of an estimate be determined using the same methods, assumptions, or data? [ISA | 7705.15483]

Yes, the entity may use some of the same methods, assumptions, or data for separate components of an estimate.

#### To what extent do we determine the components of an estimate? [ISA | 7705.15484]

The extent to which we 'componentize' an estimate is a matter of professional judgment. Generally, the more we disaggregate the estimate, the better we are able to differentiate the risks and appropriately tailor our audit response.

For example, in warranty reserves, differing risks of material misstatement may arise from the claim history of multiple types of products or differences in warranty terms, which may drive differing responses for the components of the reserve.

### When do we determine the components of an accounting estimate, before or after we have obtained an understanding of the process to determine an estimate? [ISA | 7705.8771]

In some cases, our general risk assessment procedures, previous client or audit experience and other walkthroughs within the business process, may be sufficient for us to initially identify the components of an estimate. In other situations, we may not have enough information and may have to modify our initial determination after we obtain an understanding of the process and become aware that there are differing risks.

# 1.4 Understand the process by which accounting estimates are developed [ISA | 1112]

## What do we do?

Obtain an understanding of the process by which accounting estimates are developed

# Why do we do this?

As part of our risk assessment procedures, we obtain an understanding of the process by which accounting estimates are developed. This provides information to identify and assess risks of material misstatement (RMMs) and design further audit procedures

# Execute the Audit

### Enhanced | How do we understand the process by which an accounting estimate is developed? [ISA | 1112.157053]

We perform the following activities:

- Perform a walkthrough to understand the process by which an accounting estimate is developed when we apply the:
  - International-Enhanced PIE methodology, or
  - International-Enhanced Non-PIE methodology where we evaluate D&I of process control activities that address RMMs.
- Understand the process by which an accounting estimate is developed when we apply the International-Enhanced Non-PIE methodology where we do not evaluate D&I of process control activities that address RMMs;
- Identify the requirements of the applicable financial reporting framework related to an accounting estimate;
- Understand the nature and extent to which management uses the work of specialists or third parties (other than specialists);
- Understand how management understands and addresses estimation uncertainty; and
- Understand the elements of an accounting estimate.

### Core and Less Complex | How do we understand the process by which an accounting estimate is developed? [ISA | 1112.157306]

We perform the following activities:

- Understand the process by which an accounting estimate is developed;
- Identify the requirements of the applicable financial reporting framework related to an accounting estimate;
- Understand the nature and extent to which management uses the work of specialists or third parties (other than specialists);
- Understand how management understands and addresses estimation uncertainty; and
- Understand the elements of an accounting estimate.

# 1.4.1.C Core and Less Complex | Understand the process by which an accounting estimate is developed [ISA | 7702]

# What do we do?

Perform a walkthrough or perform inquiry and observation or inspection procedures to obtain an understanding of the process by which an accounting estimate is developed, including identifying the elements of an accounting estimate (method(s), assumptions and data)

# Why do we do this?

Performing a walkthrough or performing inquiry and observation or inspection procedures allows us to obtain an understanding of the entity's process used to develop an estimate and helps us identify and assess the potential risks inherent in an estimate. Once we understand the process, we are able to identify the various elements of an estimate and ultimately evaluate the risk associated with each element.

# Execute the audit

### Core and Less Complex | How do we obtain an understanding of the process for developing an accounting estimate? [ISA | 7702.15275]

We obtain an understanding of the entity's process for developing an accounting estimate, either by:

- performing a walkthrough; or
- performing inquiry and observation or inspection.

See activity 'Understand business processes'.

### Core and Less Complex | What incremental items do we understand when obtaining our understanding of the process for estimates? [ISA | 7702.15276]

In addition to those items we normally understand, we also understand a few additional items for accounting estimates, including how management:

- Identifies the relevant methods, assumptions, or data, the sources of the relevant methods, assumptions, and data (including IT systems and IT layers), and the changes to them, that are appropriate in the context of the applicable financial reporting framework, including how management:
  - selects or designs, and applies, the methods used, including the use of models;
  - selects the assumptions to be used, including consideration of alternatives, and identifies relevant assumptions; and
  - selects the data to be used;
- Performs a retrospective review of the estimate and responds to the results of the retrospective review;
- Understands the degree of estimation uncertainty, including through considering the range of possible measurement outcomes;
- Addresses the estimation uncertainty, including selecting a point estimate and related disclosures for inclusion in the financial statements; and
- Identifies when to use, and apply, specialized skills or knowledge related to accounting estimates.

### Core and Less Complex | Financial Instruments | Is there anything incremental we might understand specific to investments? [ISA | 7702.15277]

Our understanding of process activities regarding investments may include the following considerations:

- management's process to determine the estimated value of the investments, including the selection and consistent application of the relevant accounting principles and valuation methods (e.g. cost, investee financial results (including equity method investments that are a significant component), or fair value measurement);
- the availability of information used in determining the estimated value (e.g. including any details of underlying investments of a hedge fund or investment partnership that may be available to the entity, the use of the investee's unaudited financial information in determining value);
- the frequency of management interaction with the fund manager and the nature of such interactions, including the extent to which they enable management to estimate value as of the balance sheet date;
- the competence and experience of the entity's personnel assigned to monitor and estimate the value of the entity's investments, particularly alternative investments or securities using complex valuation methods;
- the availability of a service auditor's report on the service organization surrounding the controls and procedures in place at a service provider, in the determination of unit values and shareholder transactions such as for common/collective trust funds;
- the use of an investment advisor to monitor the valuation of investments, including underlying investments, and/or to monitor markets or market indicators and their effect on the estimated values of the entity's investment;
- the availability of audited financial statements of the investee entity and whether such statements are as of the same date as the investor entity's financial statements, the timing of when such audited financial statements of the investee entity become available, and whether the audits of the investee entity are conducted by qualified and reputable independent auditors; and
- the use of management's specialists to assist in estimating fair value.

### Core and Less Complex | What else might we do to help us better prepare and plan for obtaining our understanding of the process for developing accounting estimates? [ISA | 7702.15278]

To better prepare for and plan for obtaining our understanding of the process for developing accounting estimates, we also think about the following:

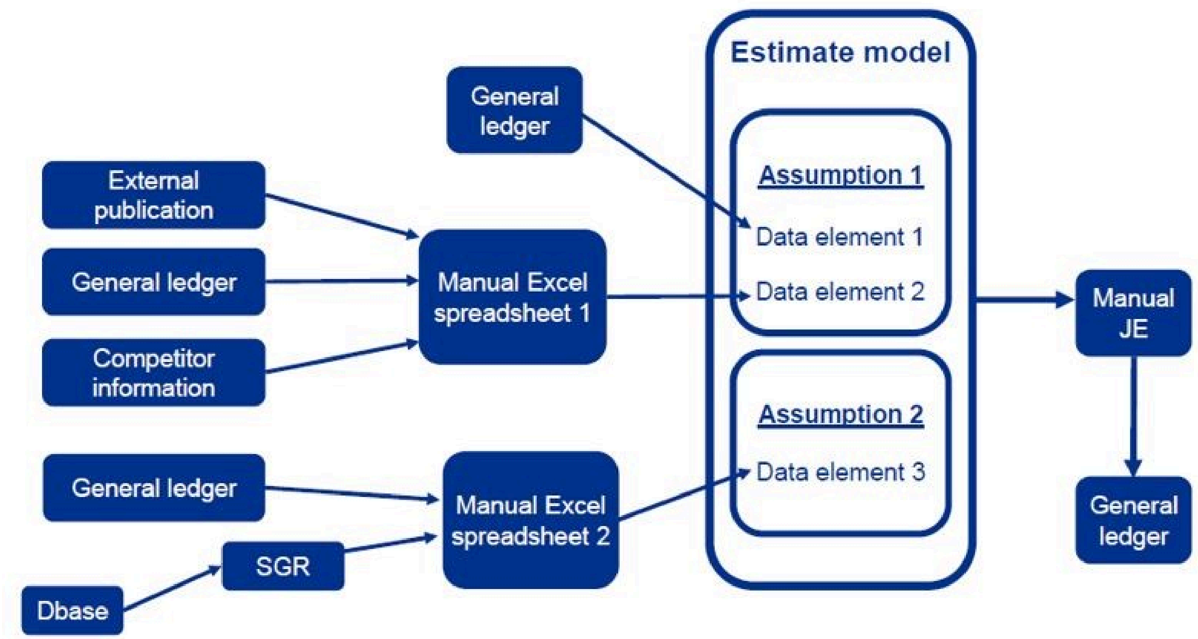
- deconstruct the accounting estimate into the different elements so that we identify 100% of the elements. One practicable way of accomplishing this is by "walking backwards" through an accounting estimate, from the general ledger back to all of the individual elements that led to it being recorded; and
- disaggregate an accounting estimate so that either our walkthrough or inquiry and observation or inspection cover the individual components of the estimate.

### Core and Less Complex | What if a new accounting estimate has arisen in the current period? [ISA | 7702.15279]

When a new accounting estimate has arisen in the current year it may not be possible to perform such robust planning early in the audit process. In these instances, having discussions with management as early as possible can help us plan better and efficiently and effectively obtain our understanding of the process by which the new accounting estimate is developed.

## Core and Less Complex | How might we document our understanding of the process for developing accounting estimates? [ISA | 7702.15280]

We may choose to include a diagram of the method/model, assumptions, and data that are used to develop an accounting estimate similar to the following:




A diagram can help summarize the key aspects of how management develops and records an accounting estimate.

## Core and Less Complex | What is management's responsibility to perform a retrospective review? [ISA | 7702.15281]

Management is responsible for monitoring the reasonableness of its accounting estimates on an on-going basis. Management's process will likely vary depending on the degree of complexity, subjectivity and estimation uncertainty related to an estimate and may include performing a retrospective review related to the estimate as whole or focused on the elements of an estimate.

### Core and Less Complex | What if management does not perform a retrospective review? [ISA | 7702.15282]

When management does not prepare a retrospective review, we evaluate the implications on our audit - primarily whether it impacts our assessment of inherent risk or our ability to rely on the entity's controls.

In situations where certain assumptions or data could be reasonably determined without using hindsight, the lack of a retrospective review may have no implications on our audit related to those assumption or data. Conversely, in situations where we would expect an assumption or data to be adjusted based on the historical experience of the entity, the lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the assumption or data.

Similarly, in situations where the entity's model(s) are not complex or dependent on updates being made in the future, the lack of a retrospective review may have no implications on our audit. However, other models call for the design and calibration to be periodically evaluated and a lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the model.

# 1.4.1.E Enhanced | Perform a walkthrough to understand the process by which an accounting estimate is developed [ISA | 7712]

## What do we do?

Perform a walkthrough to obtain an understanding of the process by which an accounting estimate is developed, including identifying the elements of an accounting estimate (method(s), assumptions and data)

## Why do we do this?

Performing a walkthrough allows us to obtain an understanding of the entity's process used to develop an estimate and helps us identify and assess the potential risks inherent in an estimate. Once we understand the process, we are able to identify the various elements of an estimate and ultimately evaluate the risk associated with each element.

## Execute the Audit

Enhanced | How do we obtain an understanding of the process for developing an accounting estimate? [ISA | 7712.15455]

We obtain an understanding of the entity's process for developing an accounting estimate that may have an RMM (where there is a reasonable possibility that an RMM exists) within the process based on the applicable International-Enhanced methodology as follows:

| Applicable International-Enhanced methodology | Processes | Obtain an understanding of the process by: |
|---|---|---|
| International-Enhanced PIE methodology | All processes and sub-processes | Performing a walkthrough |
| International-Enhanced Non-PIE methodology | Processes, or sub-processes, where we evaluate D&I of process | Performing a walkthrough |

| | | |
|---|---|---|
| | control activities that address RMMs | |
| | Processes, or sub-processes, where we do not evaluate D&I of process control activities that address RMMs | Either performing (i) a walkthrough or (ii) through inquiry and observation or inspection. Walkthroughs are encouraged. |

See question 'Which control activities do we obtain an understanding of and are relevant to the audit?' for guidance on when we evaluate D&I of process control activities that address RMMs.

See activity 'Perform a walkthrough to understand the business processes' for guidance on performing a walkthrough.

See activity 'Understand the process by which an accounting estimate is developed' for guidance on understanding the process by which an accounting estimate is developed through inquiry and observation or inspection.

### Enhanced | When do we perform and document our walkthrough of the entity's process for developing an accounting estimate? [ISA | 7712.15461]

We perform and document our walkthrough in conjunction with our walkthrough of the entity's business process.

## Enhanced | What incremental items do we understand when performing our walkthrough for estimates? [ISA | 7712.15469]

In addition to those items we normally understand as part of our walkthrough, we also understand a few additional items for accounting estimates, including how management:

- Identifies the relevant methods, assumptions, or data, the sources of the relevant , assumptions, and data (including IT systems and IT layers), and changes to them, that are appropriate in the context of the applicable financial reporting framework, including how management:
  - selects or designs, and applies, the methods used, including the use of models;
  - selects the assumptions to be used, including consideration of alternatives, and identifies relevant assumptions; and
  - selects the data to be used;
- Performs a retrospective review of the estimate and responds to the results of the retrospective review;
- Understands the degree of estimation uncertainty, including through considering the range of possible measurement outcomes;
- Addresses the estimation uncertainty, including selecting a point estimate and related disclosures for inclusion in the financial statements; and
- Identifies when to use, and apply, specialized skills or knowledge related to accounting estimates.

### Enhanced | Financial Instruments | Is there anything incremental we might understand specific to investments? [ISA | 7712.15473]

Our understanding of process activities regarding investments may include additional considerations, such as:

- management's process to determine the estimated value of the investments, including the selection and consistent application of the relevant accounting principles and valuation methods (e.g. cost, investee financial results, or fair value measurement);
- the availability of information used in determining the estimated value (e.g. including any details of underlying investments of a hedge fund or investment partnership that may be available to the entity, the use of the investee's unaudited financial information in determining value);
- the frequency of management interaction with the fund manager and the nature of such interactions, including the extent to which they enable management to estimate value as of the balance sheet date;
- the competence and experience of the entity's personnel assigned to monitor and estimate the value of the entity's investments, particularly alternative investments or securities using complex valuation methods;
- the availability of a service auditor's report on the service organization surrounding the controls and procedures in place at a service provider, in the determination of unit values and shareholder transactions such as for common/collective trust funds;
- the use of an investment advisor to monitor the valuation of investments, including underlying investments, and/or to monitor markets or market indicators and their effect on the estimated values of the entity's investment;
- the availability of audited financial statements of the investee entity and whether such statements are as of the same date as the investor entity's financial statements, the timing of when such audited financial statements of the investee entity become available, and whether the audits of the investee entity are conducted by qualified and reputable independent auditors; and
- the use of management's specialists to assist in estimating fair value.

### Enhanced | What else might we do to help us better prepare for and plan our walkthrough of the process for developing accounting estimates? [ISA | 7712.15474]

To better prepare for and plan our walkthrough for estimates, we may find it helpful to:

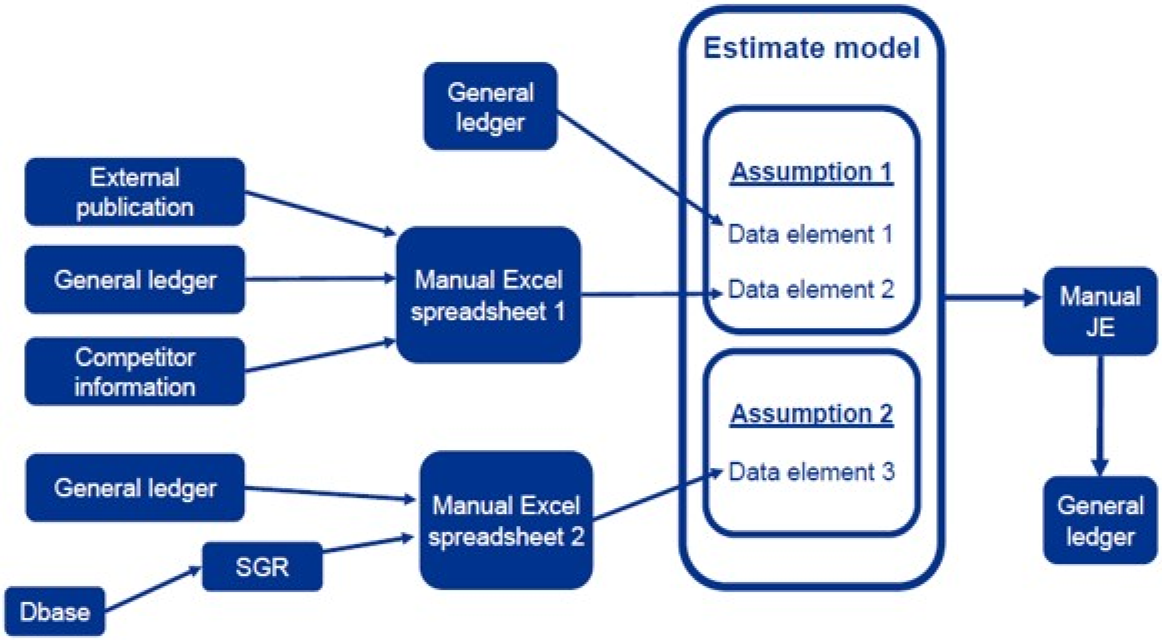
- deconstruct the accounting estimate into the different elements so that we identify 100% of the elements. One practicable way of accomplishing this is by "walking backwards" through an accounting estimate, from the general ledger back to all of the individual elements that led to it being recorded; and
- disaggregate the accounting estimate so that our walkthrough(s) covers the individual components of the estimate.

### Enhanced | What if a new accounting estimate has arisen in the current period? [ISA | 7712.15475]

When a new accounting estimate has arisen in the current year, it may not be possible to perform such robust planning early in the audit process. In these instances, having discussions with management as early as possible can help us plan better and efficiently and effectively obtain our understanding of the process by which the new accounting estimate is developed.

### Enhanced | How might we document our understanding of the process for developing accounting estimates? [ISA | 7712.15478]

We may choose to include a diagram of the method/model, assumptions, and data that are used to develop an accounting estimate similar to the following:




A diagram can help summarize the key aspects of how management develops and records an accounting estimate.

## Enhanced | What is management's responsibility to perform a retrospective review? [ISA | 7712.15479]

Management is responsible for monitoring the reasonableness of its accounting estimates on an on-going basis. Management's process will likely vary depending on the degree of complexity, subjectivity and estimation uncertainty related to an estimate and may include performing a retrospective review related to the estimate as whole or focused on the elements of an estimate.

### Enhanced | What if management does not perform a retrospective review? [ISA | 7712.15480]

When management does not prepare a retrospective review, we evaluate the implications on our audit - primarily whether it impacts our assessment of inherent risk or our ability to rely on the entity's controls.

In situations where certain assumptions or data could be reasonably determined without using hindsight, the lack of a retrospective review may have no implications on our audit related to those assumption or data. Conversely, in situations where we would expect an assumption or data to be adjusted based on the historical experience of the entity, the lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the assumption or data.

Similarly, in situations where the entity's model(s) are not complex or dependent on updates being made in the future, the lack of a retrospective review may have no implications on our audit. However, other models call for the design and calibration to be periodically evaluated and a lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the model.

# 1.4.2 Identify the requirements of the applicable financial reporting framework related to an accounting estimate [ISA | 7709]

## What do we do?

We identify the requirements of the applicable financial reporting framework related to an estimate. We link these to the individual methods, assumptions, and data, and to the application of the methods, assumptions, and data, if applicable.

## Why do we do this?

We identify the requirements of the applicable financial reporting framework related to an estimate, and link to each of the methods, assumptions, and data, and to the application of the methods, assumptions, and data, if applicable. This allows us to understand the additional requirements from the applicable financial reporting framework that are relevant and assists us in our assessment of the RMMs associated with the selection and the application of the elements, and CAR for each of the methods, assumptions, and data and the application of methods, assumptions, and data.

## Execute the Audit

### How do we identify and link the requirements of the applicable financial reporting framework? [ISA | 7709.15363]

We consider whether there are requirements from the applicable financial reporting framework that apply to the estimate as a whole, or directly apply to the individual elements of an estimate (e.g., requirements from the fair value measurement, revenue recognition, and leasing accounting topics) or to the application of the elements. When identified, we link the requirement of the applicable financial reporting framework to the method, assumption, or data, or to the application of the methods, assumptions, and data.

#### Can a requirement of the applicable financial reporting framework be linked to more than one method, assumption, and data? [ISA | 7709.15367]

Yes. In some instances a requirement of the applicable financial reporting framework may relate and therefore be linked to one or more method, assumption, data, and the application of the methods, assumptions, and data.

#### Do the requirements of the applicable financial reporting framework always directly apply to a method, assumption, and data or to the applicable of the methods, assumptions, and data? [ISA | 7709.8803]

No, there may be instances where a requirement of the applicable financial reporting framework does not directly apply to a method, assumption, or data, or to the application of the methods, assumptions, and data. In this situation, the requirement relates only to the estimate as a whole and is not linked to any individual method, assumption, or data or to the application of the methods, assumptions, and data.

What do we do if there are no requirements of the applicable financial reporting framework that apply to a method, assumption, or data, or application of the methods, assumptions, or data? [ISA | 7709.15368]

If there are no relevant requirements of the applicable financial reporting framework applicable to an individual method, assumption, or data, or to the application of the methods, assumptions, and data, we still identify the requirements from the applicable financial reporting framework for the estimate as a whole.

# 1.4.3 Understand the nature and extent to which management uses the work of specialists or third parties (other than specialists) [ISA | 1114]

## What do we do?

Obtain an understanding of the nature and extent to which management uses the work of specialists or third parties (other than specialists) to develop an accounting estimate.

## Why do we do this?

We understand how management uses specialists or third parties (other than specialists) in developing an accounting estimate as it may have an impact on our identification and assessment of risk related to an accounting estimate and on the nature, timing, and extent of the audit procedures that we perform.

When management uses the work of specialist or third parties to assist in developing an accounting estimate, we consider that work in determining whether we involve KPMG specialists or third parties with specialized skills or knowledge in our audit.

## Execute the Audit

Enhanced | How do we obtain an understanding about management's use of specialists or third parties (other than specialists) in developing an accounting estimate? [ISA | 1114.157054]

We understand how management uses specialists or third parties (other than specialists) as part of performing either (i) a walkthrough or (ii) inquiry *and* observation or inspection of the process based on the applicable International-Enhanced methodology as follows:

| Applicable International-Enhanced methodology | Processes | Obtain an understanding of the process by: |
|---|---|---|
| International-Enhanced PIE methodology | All processes and sub-processes | Performing a walkthrough |
| International-Enhanced Non-PIE methodology | Processes, or sub-processes, where we evaluate D&I of process | Performing a walkthrough |

| | | |
|---|---|---|
| | control activities that address RMMs | |
| | Processes, or sub-processes, where we do not evaluate D&I of process control activities that address RMMs | Either performing (i) a walkthrough or (ii) through inquiry and observation or inspection. Walkthroughs are encouraged. |

See question "Which control activities do we obtain an understanding of and are relevant to the audit?" for guidance on when we evaluate D&I of process control activities that address RMMs.

These specialists or third parties (other than specialists) may be involved in a specific portion of the process, or they may be involved throughout the development of an estimate. So, when we identify that management is using a specialist or third parties (other than specialist) for an accounting estimate, we understand where management is using them in the process to develop an estimate and whether those specialists or third parties are using data and assumptions that come from the entity.

### Core and Less Complex | How do we obtain an understanding about management's use of specialists or third parties (other than specialists) in developing an accounting estimate? [ISA | 1114.15476]

We understand how management uses specialists or third parties (other than specialists) as part of performing either (i) a walkthrough or (ii) inquiry *and* observation or inspection of the process.

These specialists or third parties (other than specialists) may be involved in a specific portion of the process, or they may be involved throughout the development of an estimate. So, when we identify that management is using a specialist or third parties (other than specialists) for an accounting estimate, we understand where management is using them in the process to develop an estimate and whether those specialists or third parties are using data and assumptions that come from the entity.

### When might management use specialists or third parties (other than specialists) in developing an accounting estimate? [ISA | 1114.1400]

Management may choose to involve specialists or third parties (other than specialists) when they lack the knowledge or skills necessary. Especially when:

- the matter requiring estimation is very specialized;
- the financial reporting framework requires a method/model that is very technical by nature; or
- the transaction or event requiring an accounting estimate doesn't occur frequently or is unusual.

### Are there additional activities we perform when management uses specialists or third parties (other than specialists) to develop an accounting estimate? [ISA | 1114.15193]

Yes. When we intend to use the work of management's specialist, we perform the activities in the chapter on using the work of specialists (ISA 500).

Management may also use a service organization to provide fair value measurements or the data that supports the measurement of an estimate. When this is the case, and the service organization is part of the entity's information system over financial reporting, we perform the activities in the chapter on service organizations (ISA 402).

### Can management's failure to use specialists or third parties to develop an accounting estimate impact our risk assessment? [ISA | 1114.15197]

Yes. Where management does not appear to have the necessary competence or experience and has not engaged specialists or third parties, it may increase our assessment of the risk of material misstatement associated with the estimate, or our assessment of CAR for individual methods, assumptions, and/or data. It can also alter our overall audit approach, including whether and how we involve our own specialists in the audit.

### How does management's use of a specialist impact our use of a KPMG specialist in the audit? [ISA | 1114.15201]

In situations where management involves a specialist, it may indicate situations where we could benefit from involving KPMG specialists to assist us with our risk assessment activities and/or response.

Whenever the audit team does not possess the specialized skills or knowledge to properly identify, assess, and respond to risks of material misstatement related to an accounting estimate, we involve an individual or KPMG specialists who possesses the appropriate competencies (see activity 'Involve specific team members and specialists as appropriate').

# 1.4.4 Understand how management understands and addresses estimation uncertainty [ISA | 1118]

## What do we do?

Obtain an understanding of how management understands and addresses the degree of estimation uncertainty for an accounting estimate

## Why do we do this?

Risk assessment is essential to our ability to properly audit accounting estimates. The appropriateness and sufficiency of our audit response depend on our ability to identify and assess the relevant risks related to accounting estimates.

We cannot perform a proper risk assessment without understanding how management understands and addresses estimation uncertainty, which impacts both the elements of an accounting estimate and the accounting estimate as a whole.

## Execute the Audit

### What is 'estimation uncertainty?' [ISA | 1118.15263]

Estimation uncertainty is the susceptibility of an accounting estimate and related disclosures to an inherent lack of precision in measurement. Estimation uncertainty is an inherent risk factor and arises when there are constraints on the availability of knowledge (or data) necessary to develop an estimate which limits the precision of an estimate.

As estimation uncertainty increases, so too does the risk of material misstatement to the financial statements.

'Estimation uncertainty' is also referred to as 'measurement uncertainty'.

#### Where does estimation uncertainty arise in accounting estimates? [ISA | 1118.1400]

Estimation uncertainty is commonly associated with the assumptions used to develop an accounting estimate, however, the other elements of an accounting estimate can also give rise to estimation uncertainty.

> For example, there may be subjectivity or judgement in determining an appropriate method/model to use in determining an accounting estimate leading to estimation uncertainty. There also may be subjectivity and judgement in selecting a data set or deciding if it is appropriate for certain data to be excluded from the population, which can lead to estimation uncertainty.

Estimation uncertainty can also be related to an accounting estimate as a whole through the aggregate effect of the uncertainty that arises through the individual elements.

### How might management understand the degree of estimation uncertainty related to an accounting estimate? [ISA | 1118.1500]

As part of management's process for developing an accounting estimate, management may understand the degree of estimation uncertainty in a variety of ways, such as considering:

- alternative methods, relevant assumptions or sources of relevant data that are appropriate in the context of the applicable financial reporting framework,
- possible alternative outcomes - for example, performing a sensitivity analysis to determine the effect of changes in the data or assumptions on an accounting estimate, and
- the outcome of accounting estimates made in previous periods, and how management has appropriately responded to differences.

### How might management address estimation uncertainty? [ISA | 1118.1600]

Management addresses estimation uncertainty by 1) selecting an appropriate point estimate and 2) making appropriate disclosures in their financial statements regarding estimation uncertainty.

#### What is a point estimate? [ISA | 1118.1700]

The point estimate is the amount selected by management for recognition or disclosure in the financial statements.

Said another way, the point estimate is the output of management's process to record or disclose an estimate in the financial statements after all data and assumptions have been selected and applied to the method/model, including any adjustments to the output method/model. This process likely includes management considering where estimation uncertainty, subjectivity and/or complexity impacts the elements of an estimate and the resulting range of measurement outcomes.

#### What methods are there for selecting an appropriate point estimate? [ISA | 1118.1800]

To select a point estimate, management may:

- Record the output of a model directly in the financial statements; or
- Prior to recording the point estimate in the financial statements;
  - Make adjustments to the output of the model;

- Weight the outputs of multiple models; or
- Select from within a range of possible outcomes

These same options are available to us when we test management's estimate by developing our own independent expectation.

#### How might the applicable financial reporting framework impact the point estimate selected by management? [ISA | 1118.15206]

The applicable financial reporting framework may:

- Prescribe the point estimate that is to be used after consideration of the alternative outcomes and assumptions
- Prescribe a specific measurement method

#### How might the applicable financial reporting framework impact the related disclosures regarding estimation uncertainty? [ISA | 1118.15208]

The applicable financial reporting framework may prescribe disclosures or disclosure objectives related to accounting estimates that:

- Describe the amount as an estimate
- Explain the nature and limitations of the process for making an estimate, including the variability in reasonably possible outcomes
- Describe significant accounting policies related to an accounting estimate
- Describe significant or critical judgments, including significant forward-looking assumptions or other sources of estimation uncertainty
- Describe the method of estimation used, including any applicable model and the basis for its selection.
- Describe the 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.

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. In certain circumstances, additional disclosures beyond those explicitly required by the financial reporting framework may be necessary in order to achieve fair presentation, or in the case of a compliance framework, for the financial statements not to be misleading.

### How do we obtain an understanding about whether management has taken appropriate steps to understand and address estimation uncertainty? [ISA | 1118.15210]

We understand estimation uncertainty as part of understanding management's process for developing an accounting estimate, as well as through our retrospective review. As we do this, we discuss with management elements of an accounting estimate that are impacted by estimation uncertainty - i.e. those elements that are subjective and/or complex such that they require management to make judgments.

#### What do we understand about how management understands the degree of estimation uncertainty related to an accounting estimate? [ISA | 1118.15211]

We understand estimation uncertainty as part of understanding management's process for developing an accounting estimate. This includes understanding how management considered the range of possible outcomes, as well as other specific matters, such as:

- alternative methods, relevant assumptions or sources of relevant data that are appropriate in the context of the applicable financial reporting framework
- possible alternative outcomes - for example, performing a sensitivity analysis to determine the effect of changes in the data or assumptions on an accounting estimate
- the outcome of accounting estimates made in previous periods, and how management has appropriately responded to differences

#### What does our understanding about how management addresses estimation uncertainty entail? [ISA | 1118.15212]

Our understanding entails how management selects its point estimate from a range of possible measurement outcomes. This may require management to make adjustments to the output of the model.

We also understand management's disclosures related to estimation uncertainty. Management's disclosures are another way in which management addresses estimation uncertainty within their financial statements. For example, management may disclose the amount that they accrued related to potential litigation AND additional disclosures about the range of potential losses and why they selected their point estimate.

### What if management has not taken appropriate steps to understand or address estimation uncertainty? [ISA | 1118.15214]

If based on the evidence obtained and our judgement, we determine that management has not taken the appropriate steps to understand or address the estimation uncertainty, we:

- Request management to perform additional procedures to understand estimation uncertainty or to address it by reconsidering the selection of their point estimate or considering providing additional disclosures relating to the estimation uncertainty; and
- Evaluate management's response.

#### What do we do if we determine that management's response to our request does not sufficiently address estimation uncertainty? [ISA | 1118.15215]

We:

- 'Develop an independent expectation of an accounting estimate,' to the extent possible; and
- Evaluate whether a deficiency in internal control exists and, if so, communicate to TCWG in accordance with the applicable communication requirements.

# 1.4.5 Understand the elements of an accounting estimate [ISA | 1119]

## What do we do?

Obtain an understanding of the elements used to develop an accounting estimate

# Why do we do this?

If we don't understand all elements of an accounting estimate we may fail to identify - and respond to - the relevant risks related to an accounting estimate. Different elements within an accounting estimate can be subject to differing risks.

# Execute the Audit

### What are the 'elements' of an estimate? [ISA | 1119.1300]

An estimate has three elements: methods, assumptions and data.

#### What is a 'method'? [ISA | 1119.14027]

A method is a measurement technique used by management or a management's specialist to make an accounting estimate in accordance with the relevant measurement basis. A method may include application of a model or models.

#### What are 'assumptions'? [ISA | 1119.14174]

Assumptions represent judgments, decisions, or assessments made in areas which involve a degree of subjectivity or uncertainty. Assumptions that are important to the recognition or measurement of the related matter, including an accounting estimate, are referred to as 'relevant assumptions.'

#### What is 'data'? [ISA | 1119.14099]

Data, as that term is used in the auditing standards for auditing accounting estimates and using the work of a management's specialist, is equivalent to 'information'(see 'Evaluate the relevance and reliability of information used as audit evidence'). Accordingly, data may be comprised of multiple 'data elements' (see 'What are 'relevant data elements' (RDEs)?').

In the case of accounting estimates, data elements may be used as either a direct input to the method or model or in developing an assumption. Such data can come in many forms, including, for example, standing membership data and pensionable payroll data used in pension liability calculations, warranty/self-insured claims listings used in determining insurance reserves and historical cash flows used to develop projections used in valuing intangible assets.

### How do we obtain an understanding of the elements used to develop an accounting estimate? [ISA | 1119.15490]

We perform the following activities to understand the elements used to develop an accounting estimate:

- Understand the method, including any models, used to develop an accounting estimate;
- Understand the assumptions used to develop an accounting estimate; and
- Understand the data used in an accounting estimate.

### Enhanced | How do we identify and obtain an understanding of the methods, assumptions and data used to develop an accounting estimate? [ISA | 1119.157102]

We identify and obtain an understanding of the method(s), assumptions and data used to develop an accounting estimate by performing ither (i) a walkthrough or (ii) inquiry and observation or inspection of the process based on the applicable International-Enhanced methodology as follows:

| Applicable International-Enhanced methodology | Processes | Obtain an understanding of the process by: |
|---|---|---|
| International-Enhanced PIE methodology | All processes and sub-processes | Performing a walkthrough |
| International-Enhanced Non-PIE methodology | Processes, or sub-processes, where we evaluate D&I of process control activities that address RMMs | Performing a walkthrough |
| | Processes, or sub-processes, where we do not evaluate D&I of process control activities that address RMMs | Either performing (i) a walkthrough or (ii) through inquiry and observation or inspection. Walkthroughs are encouraged. |

See question "Which control activities do we obtain an understanding of and are relevant to the audit?"for guidance on when we evaluate D&I of process control activities that address RMMs.

We also perform the other risk assessment procedures described in this chapter.

One practicable way of accomplishing this is by "walking backwards" through an accounting estimate from the general ledger back through the method(s), assumptions and data used to develop an estimate.

#### Core and Less Complex | How do we identify and obtain an understanding of the methods, assumptions and data used to develop an accounting estimate? [ISA | 1119.15492]

We identify and obtain an understanding of the method(s), assumptions and data used to develop an accounting estimate by performing either (i) a walkthrough or (ii) inquiry and observation or inspection of the process. We also perform the other risk assessment procedures described in this chapter.

One practicable way of accomplishing this is by "walking backwards" through an accounting estimate from the general ledger back through the method(s), assumptions and data used to develop an estimate.

# 1.4.5.1 Understand the method, including any models, used to develop an accounting estimate [ISA | 1120]

## What do we do?

Obtain an understanding of the method, including any models, used to develop an accounting estimate

## Why do we do this?

We obtain an understanding of the method, including any models, in sufficient detail so that we are able to identify and assess the differing risks of misstatement associated with the method and design an appropriate audit response.

## Execute the Audit

### When performing our risk assessment, what do we understand about each of the methods used in the estimate? [ISA | 1120.1300]

For each method, we understand:

- the requirements of the financial reporting framework and how the method is appropriate in the context of the applicable financial reporting framework
- whether the method relies on IT systems, and if so, identify the applicable IT system layer and understand how it applies to the method
- whether a service organization is used, and if so, understand how it impacts the method
- the assumptions and data used in the method
- the frequency at which an estimate is calculated i.e., annually, every quarter, every quarter on a one month lag, one week lag
- other matters that may impact our risk assessment, including whether:
  - Alternative methods or models exist
  - Adjustments are made to the output of the model
  - There is a lag period between the calculation of an estimate and the reporting date in the applicable financial reporting framework
  - Management uses a specialist or third party (other than a specialist)
  - There has been a change from the prior period, or we expect there to be a change

#### How might this information impact our risk assessment? [ISA | 1120.15403]

To the extent that each matter is applicable, we consider its impact on our identification and assessment of RMs related to the estimate.

# 1.4.5.2 Understand the assumptions used to develop an accounting estimate [ISA | 1121]

## What do we do?

Obtain an understanding of the assumptions used to develop an accounting estimate

## Why do we do this?

We obtain an understanding of each assumption in sufficient detail so that we are able to identify and assess the differing risks of misstatement associated with each of the assumptions and design an appropriate audit response.

# Execute the Audit

## When performing our risk assessment, what do we understand about each of the assumptions used in the estimate? [ISA | 1121.1300]

For each assumption, we understand:

- the requirements of the financial reporting framework and how the assumption is appropriate in the context of the applicable reporting framework
- whether the method relies on IT systems, and if so, identify the applicable IT system layer and understand how it applies to the assumption
- whether a service organization is used, and if so, understand how it impacts the assumption
- data used to derive the assumption
- other matters that may impact our risk assessment, including whether:
  - Alternatives to the assumption exist and should be considered
  - The assumption is sensitive to variation
  - The assumption involves unobservable data or adjustments to observable data
  - The assumption relies on the entity's intent or ability to carry out specific course of action
  - Management uses a specialist or third party (other than a specialist)
  - There has been (or should have been) a change from the prior period
  - The assumption is internally consistent with others used to develop the estimate, with similar assumptions used in other estimates, or those used in other areas of the entity's business activities

### How might this information impact our risk assessment? [ISA | 1121.15403]

To the extent that each matter is applicable, we consider its impact on our identification and assessment of RMs related to the estimate.

### Is there anything different about assumptions used in fair value measurements from assumptions used in other estimates? [ISA | 1121.1400]

Assumptions used in fair value measurements are similar in nature to those required when developing other accounting estimates. However, if observable market prices are not available, the applicable financial reporting framework guidance requires the valuation methods to incorporate assumptions that marketplace participants would use in their estimates of fair value whenever that information is available without undue cost and effort. If information about market assumptions is not available, an entity may use its own assumptions as long as there is no contrary data indicating that marketplace participants would use different assumptions. These concepts generally are not relevant for accounting estimates made under measurement bases other than fair value.

### Do we evaluate all assumptions? [ISA | 1121.15229]

Not necessarily. Although we understand and identify assumptions, we wouldn't necessarily evaluate an assumption where there is a remote chance of a material misstatement occurring, even if the assumption used was wrong.

### What is a relevant assumption? [ISA | 1121.15230]

Relevant assumptions are those that give rise to a risk of material misstatement.

We assign relevant assumptions inherent risk of base, elevated, or significant. See activity 'Assess CAR for the selection of individual methods, assumptions and data'.

How do we identify relevant assumptions used in an accounting estimate? [ISA | 1121.15245]

We consider the likelihood that a material misstatement could occur, either individually or in combination, if that particular assumption is incorrect. Typically that means that we test most assumptions unless we can clearly demonstrate why a risk of material misstatement is not present.

# 1.4.5.3 Understand the data used in an accounting estimate [ISA | 1122]

## What do we do?

Obtain an understanding of the data used to develop an accounting estimate

## Why do we do this?

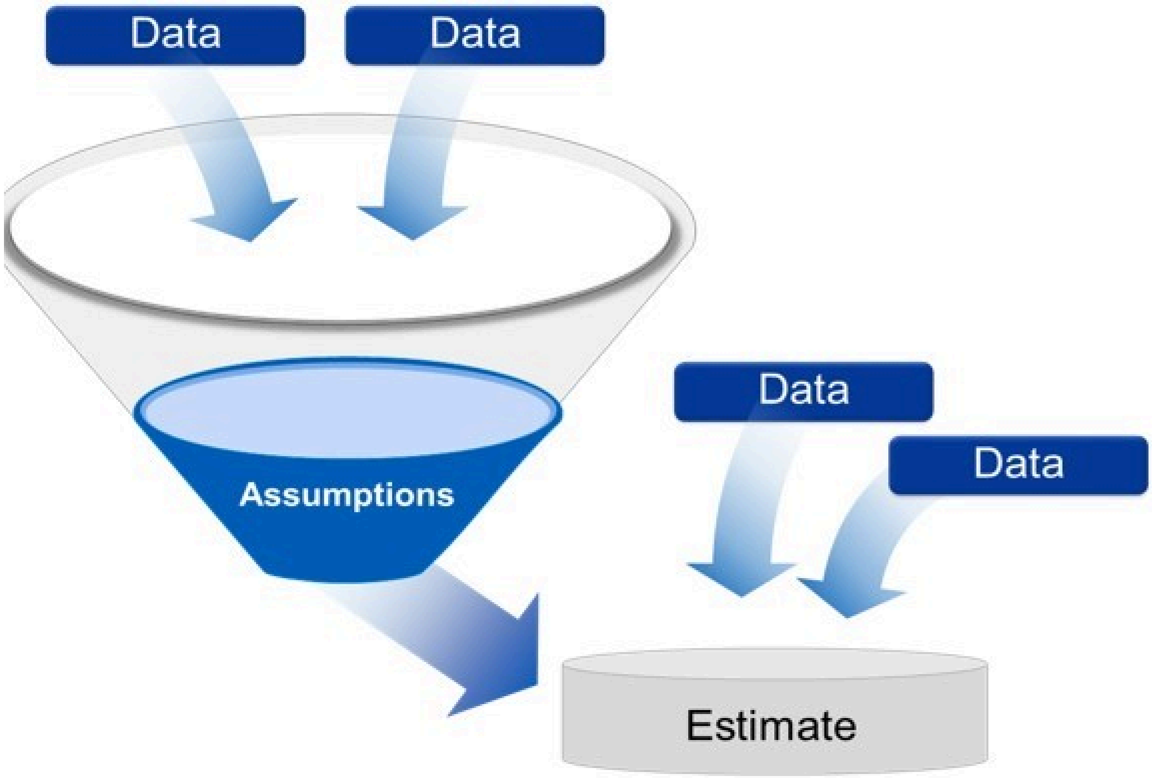
We obtain an understanding of the data in sufficient detail so that we are able to identify and assess the differing risks of misstatement associated with the data and design an appropriate audit response. A complete identification of the data used in an estimate helps us to develop an appropriate audit response.

## Execute the Audit

How is data used in an accounting estimate? [ISA | 1122.1300]

Data can be used within an accounting estimate in two ways: (1) as a direct input to the method/model and (2) as an input to develop assumptions within an accounting estimate.

This difference is depicted in the illustration below:




### When we perform our risk assessment, what do we understand about management's process relative to the data used to develop an estimate? [ISA | 1122.15249]

We understand how management:

- identifies the relevant data, and whether changes in the data are necessary in the context of the financial reporting framework; and
- selects the data to be used, including consideration of alternatives, and identifies relevant data.

#### Do we evaluate all data used in the entity's estimation process?

We evaluate data that is important to an estimate. We wouldn't necessarily test data where there is a remote chance of a material misstatement occurring, even if the data used was completely wrong.  In other words, the risk that the particular data element represents a risk of material misstatement is, in that case, remote.

### When we perform our risk assessment, what do we understand about each of the data used in an estimate? [ISA | 1122.15251]

For data used in an estimate, we understand:

- the requirements of the financial reporting framework and how the data used is appropriate in the context of the applicable reporting framework
- how the data and data elements are used, including understanding the source of the data and how management addresses the risks over completeness and accuracy
- whether the method relies on IT systems, and if so, identify the applicable IT system layer and understand how it applies to the data

- whether a service organization is used, and if so, understand how it impacts the data
- other matters that may impact our risk assessment, including whether:
  - Alternative data or sources exist
  - The data is sufficiently precise and detailed for its use in the audit
  - Management uses a specialist or third party (other than a specialist)
  - There has been (or should have been) a change from the prior period
  - The data is internally consistent with other the data used in other estimates

How might this information impact our risk assessment?

To the extent that each matter is applicable, we consider its impact on our identification and assessment of RMs related to the estimate.

# 1.5 Perform and evaluate a retrospective review of accounting estimates [ISA | 1115]

## What do we do?

Perform a retrospective review of accounting estimates with a reasonable possibility of a risk of material misstatement in the current year or where there was a risk of material misstatement in the prior year. Evaluate the results of our retrospective review to identify and assess the risks of material misstatement in the current period, including fraud risks, identify indicators of possible management bias and address the risk of management override of controls.

## Why do we do this?

Our retrospective review serves multiple purposes, including assisting us in identifying and assessing the risks of material misstatement in the current period, assessing the risk of management override of controls and other possible fraud risks and assessing the susceptibility of the estimate to indicators of possible management bias.

## Execute the Audit

What is a retrospective review of an accounting estimate? [ISA | 1115.1300]

A retrospective review is the comparison of the entity's prior year estimate to the outcome of an estimate or is a review of the re-estimation of the prior year accounting estimate.

What is the 'outcome' of an estimate? [ISA | 1115.15174]

The 'outcome' of an estimate represents the transfer or realization of the asset or liability in the current year that was estimated in the prior year.

> For example, prior year bonus or legal accruals that have been paid in the current year allow us to compare the amount paid or the 'outcome' to the prior year accrual or 'estimate'.

What is meant by 're-estimation' of the previous accounting estimate? [ISA | 1115.15175]

Estimates that do not yet have an outcome in the current period or won't ever have an outcome are re-estimated in the current year.

> For example, actuarial assumptions in pension costs do not have an outcome in the current year, so our retrospective review is focused on the subsequent re-estimation of those amounts for purposes of the current year financial statements.

#### Are there instances where we review both the 'outcome' and the subsequent 're-estimation of the estimate'? [ISA | 1115.15176]

Yes. There could be instances where reviewing both the 'outcome' and the subsequent 're-estimation' is appropriate.

> For example, an entity uses an income-based approach to estimate the fair value of a reporting unit as part of its quantitative goodwill impairment assessment. In determining the fair value of the reporting unit in the prior year (20X1), certain assumptions and data were used to prepare the projected financial information contained in the valuation model. One assumption included forecasted revenue growth rates for the years 20X2 through 20X6.
>
> When we perform our retrospective review in the following year (20X2), the actual revenue amounts for 20X2 may be compared with the prior year's forecasted growth rates for 20X2 to obtain information about the effectiveness of management's estimation process.
>
> Additionally, the subsequent re-estimation growth rates for years 20X3-20X6, and the reasons for any changes, may also provide information about the effectiveness of management's estimation process and may help us identify and assess RMMs in the current period.

### Do we perform a retrospective review for all accounting estimates? [ISA | 1115.15177]

No. We perform a retrospective review only for those accounting estimates for which we have identified a reasonable possibility of an RMM associated with the selection of the methods, assumptions, or data and/or an RMM associated with the application of the methods, assumptions, and data in the current year or for which we identified an RMM in the prior year.

This includes:

- Accounting estimates for which we identified an RMM in the prior year but none in the current year; and/or
- Accounting estimates for which we identified a reasonable possibility of an RMM in the current year.

#### If I meet the conditions to perform a retrospective review, is there ever a situation where it is appropriate NOT to perform a retrospective review? [ISA | 1115.15178]

Yes. When an accounting estimate is new or does not have an outcome (i.e., settled through subsequent transfer or realization) or subsequent re-estimation, it may not be possible to perform a retrospective review.

> For example, an entity granted stock-based compensation in the prior year in the form of options to its employees, which required an estimate of fair value on the grant date. However, the fair value is

only used to determine the expense to recognize over the life of the grant in future periods and is not re-estimated unless there is a change in the award. Because the value of the options is fixed on the grant date and there is no re-estimation or indication of fair value upon settlement, we do not perform a retrospective review.

### When do we perform our retrospective review? [ISA | 1115.15179]

We perform our retrospective review as part of our risk assessment procedures as we use the results to help identify and assess RMMs.

### Enhanced | What is management's responsibility to perform a retrospective review? [ISA | 1115.15479]

Management is responsible for monitoring the reasonableness of its accounting estimates on an on-going basis. Management's process will likely vary depending on the degree of complexity, subjectivity and estimation uncertainty related to an estimate and may include performing a retrospective review related to the estimate as whole or focused on the elements of an estimate.

#### Enhanced | What if management does not perform a retrospective review? [ISA | 1115.15480]

When management does not prepare a retrospective review, we evaluate the implications on our audit - primarily whether it impacts our assessment of inherent risk or our ability to rely on the entity's controls.

In situations where certain assumptions or data could be reasonably determined without using hindsight, the lack of a retrospective review may have no implications on our audit related to those assumption or data. Conversely, in situations where we would expect an assumption or data to be adjusted based on the historical experience of the entity, the lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the assumption or data.

Similarly, in situations where the entity's model(s) are not complex or dependent on updates being made in the future, the lack of a retrospective review may have no implications on our audit. However, other models call for the design and calibration to be periodically evaluated and a lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the model.

### Core and Less Complex | What is management's responsibility to perform a retrospective review? [ISA | 1115.15281]

Management is responsible for monitoring the reasonableness of its accounting estimates on an on-going basis. Management's process will likely vary depending on the degree of complexity, subjectivity and estimation uncertainty related to an estimate and may include performing a retrospective review related to the estimate as whole or focused on the elements of an estimate.

#### Core and Less Complex | What if management does not perform a retrospective review? [ISA | 1115.15282]

When management does not prepare a retrospective review, we evaluate the implications on our audit - primarily whether it impacts our assessment of inherent risk or our ability to rely on the entity's controls.

In situations where certain assumptions or data could be reasonably determined without using hindsight, the lack of a retrospective review may have no implications on our audit related to those assumption or data. Conversely, in situations where we would expect an assumption or data to be adjusted based on the historical experience of the entity, the lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the assumption or data.

Similarly, in situations where the entity's model(s) are not complex or dependent on updates being made in the future, the lack of a retrospective review may have no implications on our audit. However, other models call for the design and calibration to be periodically evaluated and a lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the model.

### Can we use the retrospective review prepared by management? [ISA | 1115.15180]

There may be situations where we are able to leverage management's retrospective review as part of our risk assessment procedures. When management prepares a retrospective review, we obtain an understanding of how management performs the retrospective review and responds to its results. This may inform us as to the nature, timing and extent of our approach towards performing our own retrospective review.

However, leveraging something that management has already done does not mean we simply take what management has done and insert it into our file. It means that we may gain insight into how to perform a retrospective review based on what management does for their own purposes. Ultimately, we take responsibility for whatever is in our file and whether it satisfies the objective of the auditing standards.

#### Do we evaluate the information used in management's retrospective review? [ISA | 1115.15181]

When we leverage management's retrospective review as part of our risk assessment procedures, we evaluate the relevance of information and whether the information is sufficiently reliable for the purpose of the risk assessment procedure by following the guidance in 'How do we evaluate the reliability of information used in our risk assessment procedures?'.

### How do we determine the nature and extent of our retrospective review? [ISA | 1115.15182]

The nature and extent of the review can vary, but is influenced by the characteristics of the estimate and the assessed risks related an estimate in the prior year and current year. Characteristics we think about that can influence the nature and extent of our retrospective review include:

| Characteristics | How this matter may impact the nature and extent of our retrospective review |
|---|---|
| **Assessment of risk in the prior period and current period** | *Prior period assessment:*<br>For estimates where inherent risk associated with the selection of one or more individual methods, assumptions, or data, or the application of the methods, assumptions, and data, was assessed as 'elevated' or 'significant' in the prior period, our review may be more extensive. For example, we may focus |

| | |
|---|---|
| | our review on both the estimate as a whole and the individual elements of the estimate that gave rise to the increased risk.<br><br>On the other hand, for estimates where inherent risk was assessed as base associated with the selection or the application of the elements, analytical procedures may be sufficient.<br><br>*Current period assessment:*<br><br>Our other risk assessment procedures or previous knowledge of an accounting estimate may provide insights into the level of expected risk in the current period. For example, we may know there are three relevant assumptions that give rise to an increased level of risk based on our other risk assessment procedures, so we may focus more attention in our retrospective review on these individual elements of the estimate.<br><br>Our retrospective review may not be as robust for an estimate that does not give rise to an RMM. However, there may be "close calls" where in order to determine whether there is an RMM associated with the selection of the methods, assumptions, or data or the application of the methods, assumptions and data for an estimate, a more granular understanding of the elements is necessary. In those cases, our retrospective review may focus on the relevant assumptions and judgments that management made in developing an estimate.<br><br>Our current period assessment could change the nature and extent of our retrospective review as we learn more information. |
| **Changes from the prior period** | When the recorded estimate, or the circumstances surrounding an estimate, have changed from the prior year this may be an indicator to perform a more extensive retrospective review. Our review may apply additional focus on the reasons for the change and the related circumstances to understand the impact on the individual elements of an estimate.<br><br>For example, when there has been a significant decrease in the reserve for uncollectible receivables this may be an indicator to perform more extensive procedures to understand whether this decrease causes us to have an increased level of risk associated with the selection and/or the application of the elements. |

| | |
|---|---|
| **Period of time over which the estimate is resolved** | Depending on how the estimate is resolved and the length of time it is resolved over, our review may be performed by looking at several periods, a shorter period (such as half-yearly or quarterly) or a longer period (over several years).<br><br>For example, we may perform a retrospective review each quarter on a rolling basis for an account that contains legal accruals related to multiple cases that are each recognized and settled over various periods of time. In this instance, comparing settlement amounts back to the previously estimated accruals on a case-by-case basis each quarter can provide audit evidence over management's ability to estimate over a period of time greater than one year. |
| **Assessed fraud risk** | When we have assessed there to be a fraud risk - either pervasively related to the development of management's estimates or related to significant changes to assumptions in recurring estimates - we may apply additional focus on the elements of the estimate that gives rise to the fraud risk. Retrospective review can highlight areas where management bias may exist. |

## What information might we learn from our retrospective review? [ISA | 1115.15183]

The table below sets out the types of matters we may learn about through our retrospective review and how it may influence our audit approach.

| Matter | Examples of relevant information that we may gather |
|---|---|
| **Information regarding the effectiveness of management's estimation process which provides audit evidence about the likely effectiveness of management's current process** | • The on-going relevance and accuracy of the model<br>• Whether the model remains suitable for its intended use<br>• How the model is changed or adjusted on a timely basis for changes in market or other conditions<br>• Whether adjustments are made to the output of the model and whether the criteria applied is consistent with the prior period<br>• The basis for management's selection of assumptions<br>• The nature and source of the data<br>• How management evaluates whether data is appropriate<br>• The consistency of data used with data in the previous periods |

| | |
|---|---|
| **Reasons for changes in prior estimates that may require disclosure in the current period financial statements** | Financial reporting frameworks may require the disclosure of estimation uncertainty, subjective assumptions, or the reasons for changes in estimated amounts. |
| **Information regarding the complexity or estimation uncertainty pertaining to the accounting estimate** | **Complexity:**<br>• Where the financial reporting framework requires a measurement basis that results in a more complex model<br>• When complicated adjustments are made to the output of the model<br>• When management uses a lag period between when the method/model is calculated and when an estimate is recorded<br>• The use of forward-looking assumptions, within multiple interrelationships between them<br>• Assumptions that involve unobservable data or adjustments to observable data<br>• When the process to derive the data is complicated, including maintaining the integrity of the data<br>• When there is a high volume of data and multiple sources of data<br>**Estimation uncertainty:**<br>• Where the financial reporting framework requires the use of a method or assumptions that have a high level of estimation uncertainty<br>• Assumptions that are sensitive to variation<br>• Assumptions that involve unobservable data or adjustments to observable data<br>• Assumptions that rely on the entity's intent or ability to carry out specific courses of action |
| **Information regarding the susceptibility of accounting estimates to, or that may be an indicator of, possible management bias** | Sources of subjectivity that may be subject to management bias include, for example:<br>• Where the financial reporting framework does not specify the valuation approach, concepts, or techniques and factors to use in the estimation method<br>• When subjective adjustments are made to the output of the model<br>• When management uses a lag period between when the method/model is calculated and when an estimate is recorded |

| | |
|---|---|
| | • The availability of alternative assumptions or data sources<br>• Assumptions that are sensitive to variation<br>• The use of forward-looking assumptions, within multiple interrelationships between them<br>• Assumptions that involve unobservable data or adjustments to observable data |

## How do we use the results of our retrospective review? [ISA | 1115.15184]

We use the information that we learned from our retrospective review to:

- identify and assess the risks of material misstatement in the current period, including fraud risks; and
- address the risk of management override of controls.

Fraudulent financial reporting often is accomplished through intentional misstatement of accounting estimates - i.e. management override of controls through intentional management bias.

### How do we use the information we obtain from our retrospective review to identify and assess the risks of material misstatement in the current period? [ISA | 1115.15185]

We use the information from our retrospective review to understand how the inherent risk factors - i.e. the estimation uncertainty, complexity, and subjectivity (including susceptibility to management bias) - impact the different elements of the estimate. We use that understanding, along with the other information that we have gathered from our risk assessment procedures, to help us identify RMMs and assess the inherent risk associated with the individual methods, assumptions, and/or data. Ultimately, this will help us determine the nature, timing, and extent of our current year audit procedures.

### How do we use the information from our retrospective review to address the risk of management override of controls and other fraud risks? [ISA | 1115.15186]

Information from our retrospective review may help us identify indicators of possible management bias with respect to management's selection of the methods, assumptions and/or data. For example the methods, assumptions and/or data selected by management may all be toward the same end of the range (i.e. prepared in a cautious manner or all prepared in an optimistic manner), resulting in a specific effect to the estimate and / or financial statements (i.e. understating / overstating estimate, increasing income, loss or other key financial statement metric).

This review is not intended to call into question our professional judgments made in the prior year that were based on information available at the time.

When we identify possible bias on the part of management, we evaluate whether the circumstances producing such bias represent a fraud risk.

### What is 'management bias' and how does it affect our audit of accounting estimates? [ISA | 1115.15187]

Management bias can be thought of as a lack of neutrality by management in preparing an accounting estimate. We evaluate management bias as we think about management's selection of the various elements of an estimate, for each of the estimates as a whole and in the aggregate for all accounting estimates made.

Management bias can be unintentional or it can be intentional (fraud).

Understanding the likely sources of management bias is part of risk assessment and can be one of the factors that drives our audit response to accounting estimates and influences our assessment of risks of material misstatement.

Examples of information we may learn from our retrospective review that may be indicators of possible management bias with respect to accounting estimates include:

- Changes in an accounting estimate, or method for making it, where management has made a subjective assessment that there has been a change in circumstances;
- Use of an entity's own assumptions for fair value accounting estimates when they are inconsistent with observable marketplace assumptions;
- Using relevant assumptions that yield a point estimate outside a reasonable range; and
- Selection of a point estimate within a reasonable range that may indicate a pattern of optimism or pessimism.

#### What if the bias is intentional? [ISA | 1115.15188]

When we identify intentional bias, we consider the possible implications of fraud and the impact on our audit approach. We re-evaluate our risk assessment conclusions and determine whether there are fraud risks we did not previously identify.

See the chapter on Fraud (ISA 240, AU-C 240, AS 2401) for a full list of activities that we perform when we identify intentional management bias.

#### What do we include in our audit documentation if we identify indicators of management bias? [ISA | 1115.15189]

When we identify bias, we:

- document the indicators of management bias
- document the implications for the audit

### Are differences identified as a result of our retrospective review considered to be misstatements? [ISA | 1115.15190]

A difference between the outcome of an accounting estimate in the current period and the amount recognized in the prior period financial statements does not necessarily represent a misstatement. Rather, it could be the result of estimation uncertainty.

#### US GAAP | If the difference is considered a misstatement, what are the implications to our audit? [ISA | 1115.15191]

We evaluate prior year misstatements identified in the current period following the guidance in activity 'Evaluate misstatements detected in the current period that relate to prior periods'.

We also consider the implications on our control conclusions in activity 'Conclude on our assessment of control risk'.

In addition to identifying the difference as a misstatement, we may revise our current year assessment of inherent risk or control risk.

# Identifying and Assessing the Risks of Material Misstatement

## International Standards on Auditing: ISA 540.16-17

### Identifying and Assessing the Risks of Material Misstatement

16. In identifying and assessing the risks of material misstatement relating to an accounting estimate and related disclosures at the assertion level, including separately assessing inherent risk and control risk at the assertion level, as required by ISA 315 (Revised 2019),[9] the auditor shall take the following into account in identifying the risks of material misstatement and in assessing inherent risk: (Ref: Para. A64 - A71)

(a) The degree to which the accounting estimate is subject to estimation uncertainty; and (Ref: Para. A72 - A75)

(b) The degree to which the following are affected by complexity, subjectivity, or other inherent risk factors: (Ref: Para. A76 - A79)

(i) The selection and application of the method, assumptions and data in making the accounting estimate; or

(ii) The selection of management's point estimate and related disclosures for inclusion in the financial statements.

---

9 ISA 315 (Revised 2019), paragraphs 31 and 34

17. The auditor shall determine whether any of the risks of material misstatement identified and assessed in accordance with paragraph 16 are, in the auditor's judgment, a significant risk.[10] If the auditor has determined that a significant risk exists, the auditor shall identify controls that address that risk.[11] and evaluate whether such controls have been designed effectively, and determine whether they have been implemented.[128] (Ref: Para. A80)

---

10 ISA 315 (Revised 2019), paragraph 32

11 ISA 315 (Revised 2019), paragraph 26(a)(i)

128 ISA 315 (Revised 2019), paragraph 26(a)

## ISA Application and Other Explanatory Material: ISA 540.A64-A80

### **Identifying and Assessing the Risks of Material Misstatement** (Ref: Para. 4, 16)

A64. Identifying and assessing risks of material misstatement at the assertion level relating to accounting estimates is important for all accounting estimates, including not only those that are recognized in the financial statements, but also those that are included in the notes to the financial statements.

A65. Paragraph A42 of ISA 200 states that the ISAs typically refer to the "risks of material misstatement" rather than to inherent risk and control risk separately. ISA 315 (Revised 2019) requires a separate assessment of inherent risk and control risk to provide a basis for designing and performing further audit procedures to respond to the risks of material misstatement at the assertion level,[140] including significant risks, in accordance with ISA 330.

---

140 ISA 315 (Revised 2019), paragraphs 31 and 34

A66. In identifying the risks of material misstatement and in assessing inherent risk for accounting estimates in accordance with ISA 315 (Revised 2019),[142] the auditor is required to take into account the inherent risk factors that affect susceptibility to misstatement of assertions, and how they do so. The auditor's consideration of the inherent risk factors may also provide information to be used in:

- Assessing the likelihood and magnitude of misstatement (i.e., where inherent risk is assessed on the spectrum of inherent risk); and
- Determining the reasons for the assessment given to the risks of material misstatement at the assertion level, and that the auditor's further audit procedures in accordance with paragraph 18 are responsive to those reasons.

The interrelationships between the inherent risk factors are further explained in Appendix 1.

---

142 ISA 315 (Revised 2019), paragraph 31(a)

A67. The reasons for the auditor's assessment of inherent risk at the assertion level may result from one or more of the inherent risk factors of estimation uncertainty, complexity, subjectivity or other inherent risk factors. 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 be subject to 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 subjectivity and the degree of 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.

A68. The relevance and significance of inherent risk factors may vary from one estimate to another. Accordingly, the inherent risk factors may, either individually or in combination, affect simple accounting estimates to a lesser degree and the auditor may identify fewer risks or assess inherent risk close to the lower end of the spectrum of inherent risk.

A69. Conversely, the inherent risk factors may, either individually or in combination, affect complex accounting estimates to a greater degree, and may lead the auditor to assess inherent risk at the higher end of the spectrum of inherent risk. For these accounting estimates, the auditor's consideration of the effects of the inherent risk factors is likely to directly affect the number and nature of identified risks of material misstatement, the assessment of such risks, and ultimately the persuasiveness of the audit evidence needed in responding to the assessed risks. Also, for these accounting estimates the auditor's application of professional skepticism may be particularly important.

A70. Events occurring after the date of the financial statements may provide additional information relevant to the auditor's assessment of the risks of material misstatement at the assertion level. For example, the outcome of an accounting estimate may become known during the audit. In such cases, the auditor may assess or revise the assessment of the risks of material misstatement at the assertion level,[42] regardless of how the inherent risk factors affect susceptibility of assertions to misstatement relating to the accounting estimate. Events occurring after the date of the financial statements also may influence the auditor's selection of the approach to testing the accounting estimate in accordance with paragraph 18. For example, for a simple bonus accrual that is based on a straightforward percentage of compensation for selected employees, the auditor may conclude that there is relatively little complexity or subjectivity in making the accounting estimate, and therefore may assess inherent risk at the assertion level close to the lower end of the spectrum of inherent risk. The payment of the bonuses subsequent to period end may provide sufficient appropriate audit evidence regarding the assessed risks of material misstatement at the assertion level.

---

[42] ISA 315 (Revised 2019), paragraph 37

A71. The auditor's assessment of control risk may be done in different ways depending on preferred audit techniques or methodologies. The control risk assessment may be expressed using qualitative categories (for example, control risk assessed as maximum, moderate, minimum) or in terms of the auditor's expectation of how effective the control(s) is in addressing the identified risk, that is, the planned reliance on the effective operation of controls. For example, if control risk is assessed as maximum, the auditor contemplates no reliance on the effective operation of controls. If control risk is assessed at less than maximum, the auditor contemplates reliance on the effective operation of controls.

## *Estimation Uncertainty* (Ref: Para. 16(a))

A72. In taking into account the degree to which the accounting estimate is subject to estimation uncertainty, the auditor may consider:

- Whether the applicable financial reporting framework requires:
  - The use of a method to make the accounting estimate that inherently has a high level of estimation uncertainty. For example, the financial reporting framework may require the use of unobservable inputs.
  - The use of assumptions that inherently have a high level of estimation uncertainty, such as assumptions with a long forecast period, assumptions that are based on data that is

unobservable and are therefore difficult for management to develop, or the use of various assumptions that are interrelated.
- Disclosures about 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.
- Whether it is possible (or practicable, 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 at which an insurance claim will be settled and the timing of its settlement); 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).

A73. The size of the amount recognized or disclosed in the financial statements for an accounting estimate is not, in itself, an indicator of its susceptibility to misstatement because, for example, the accounting estimate may be understated.

A74. In some circumstances, the estimation uncertainty may be so high that a reasonable accounting estimate cannot be made. The applicable financial reporting framework may preclude recognition of an 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 A112 - A113, A143 - A144).

A75. 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)[43] establishes requirements and provides guidance in such circumstances.

---

[43] ISA 570, (Revised), *Going Concern*

## *Complexity or Subjectivity* (Ref: Para. 16(b))

### The Degree to Which Complexity Affects the Selection and Application of the Method

A76. In taking into account the degree to which the selection and application of the method used in making the accounting estimate are affected by complexity, the auditor may consider:

- The need for specialized skills or knowledge by management which may indicate that the method used to make an accounting estimate is inherently complex and therefore the accounting estimate may have a greater susceptibility to material misstatement. There may be a greater susceptibility to material misstatement 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.

- The nature of the measurement basis required by the applicable financial reporting framework, which may result in the need for a complex method that requires multiple sources of historical and forward-looking data or assumptions, with multiple interrelationships between them.
  For example, an expected credit loss provision may require judgments about future credit repayments and other cash flows, based on consideration of historical experience data and the application of forward looking assumptions. Similarly, the valuation of an insurance contract liability may require judgments about future insurance contract payments to be projected based on historical experience and current and assumed future trends.

### The Degree to Which Complexity Affects the Selection and Application of the Data

A77. In taking into account the degree to which the selection and application of the data used in making the accounting estimate are affected by complexity, the auditor may consider:

- The complexity of the process to derive the data, taking into account the relevance and reliability of the data source. Data from certain sources may be more reliable than from others. Also, for confidentiality or proprietary reasons, some external information sources will not (or not fully) disclose information that may be relevant in considering the reliability of the data they provide, such as the sources of the underlying data they used or how it was accumulated and processed.
- The inherent complexity in maintaining the integrity of the data. When there is a high volume of data and multiple sources of data, there may be inherent complexity in maintaining the integrity of data that is used to make an accounting estimate.
- The need to interpret complex contractual terms. For example, the determination of cash inflows or outflows arising from a commercial supplier or customer rebates may depend on very complex contractual terms that require specific experience or competence to understand or interpret.

### The Degree to Which Subjectivity Affects the Selection and Application of the Method, Assumptions or Data

A78. In taking into account the degree to which the selection and application of method, assumptions or data are affected by subjectivity, the auditor may consider:

- The degree to which the applicable financial reporting framework does not specify the valuation approaches, concepts, techniques and factors to use in the estimation method.
- The uncertainty regarding the amount or timing, including the length of the forecast period. The amount and timing are a source of inherent estimation uncertainty, and give rise to the need for management judgment in selecting a point estimate, which in turn creates an opportunity for management bias. For example, an accounting estimate that incorporates forward looking assumptions may have a high degree of subjectivity which may be susceptible to management bias.

## *Other Inherent Risk Factors* (Ref: Para. 16(b))

A79. The degree of subjectivity associated with an accounting estimate influences the susceptibility of the accounting estimate to misstatement due to management bias or other fraud risk factors insofar as they affect inherent risk. For example, when an accounting estimate is subject to a high degree of subjectivity, the accounting estimate is likely to be more susceptible to misstatement due to management bias or fraud and this may result in a wide range of possible measurement outcomes. 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 preceding periods may influence the planning and risk assessment procedures in the current period.

### *Significant Risks* (Ref: Para. 17)

A80. The auditor's assessment of inherent risk, which takes into account the degree to which an accounting estimate is subject to, or affected by estimation uncertainty, complexity, subjectivity or other inherent risk factors, assists the auditor in determining whether any of the risks of material misstatement identified and assessed are a significant risk.

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Identify and assess RMMs related to an accounting estimate [ISA | 7707]

## What do we do?

Identify and assess RMMs related to an accounting estimate

## Why do we do this?

Once we understand the entity's process used to develop an accounting estimate, determine the components of the estimate and perform our retrospective review, we identify and assess RMMs for each estimate in order to design and implement an appropriate audit response.

## Execute the Audit

### What procedures do we perform to identify and assess the RMMs related to an estimate? [ISA | 7707.15362]

We perform the following activities to identify and assess the RMMs related to an estimate:

- Identify and assess which RMs related to an accounting estimate are RMMs;
- Assess CAR for the selection of the individual methods, assumptions, and data, if applicable and
- Assess CAR for the application of the methods, assumptions, and data, if applicable

#### How do we identify and assess the RMMs related to an estimate that has components? [ISA | 7707.15365]

When an estimate has different components, we perform the activities to identify and assess the RMMs for each component of the estimate.

# 1.1 Identify and assess which RMs related to an accounting estimate are RMMs [ISA | 7708]

## What do we do?

Identify and assess which RMs related to an accounting estimate are RMMs

# Why do we do this?

We determine which estimates give rise to an RMM by evaluating the relevant inherent risk factors. This allows us to determine those estimates where we will plan and perform an audit response.

# Execute the Audit

## What are the RMs that we identify and assess related to an accounting estimate? [ISA | 7708.15301]

For an accounting estimate, we identify and assess whether there is an RMM associated with:

- the selection of the methods, assumptions, or data (selection risk); and/or
- the application of the methods, assumptions, and data (application risk).

## What do we mean when we say there is an RMM associated with the 'selection of the methods, assumptions, or data' ("selection risk")? [ISA | 7708.8781]

When we say there is an RMM associated with the selection of the methods, assumptions, or data, we have assessed that there is a risk of material misstatement that one or more of the elements used by the entity to determine the estimate is inappropriate.

### How does selection risk relate to a method? [ISA | 7708.8782]

Selection risk for a method relates to whether the method, including the related model, selected by the entity is appropriate in the context of the applicable financial reporting framework or given the nature of the accounting estimate and the business, industry and environment in which the entity operates. This includes considerations around whether changes from the method or model used in prior periods are appropriate in the circumstances and whether any adjustments made to the output of the method are consistent with the measurement objective of the applicable financial reporting framework and are appropriate in the circumstances.

### How does selection risk relate to an assumption? [ISA | 7708.8783]

Selection risk for an assumption relates to whether the assumption selected by the entity is reasonable in the context of the applicable financial reporting framework, including whether changes from the prior periods are appropriate.

### How does selection risk relate to data? [ISA | 7708.8784]

Selection risk for data relates to whether the data used by the entity is appropriate in the context of the applicable financial reporting framework, including whether changes from the prior periods are appropriate. This includes considerations around whether the data is sufficiently relevant and sufficiently reliable, including whether the data has been appropriately understood or interpreted by management.

## What do we mean when we say there is an RMM associated with the 'application of the methods, assumptions, and data' ("application risk")? [ISA | 7708.8785]

When we say there is RMM associated with the application of the methods, assumptions, and data, we have assessed that there is a risk of material misstatement that:

- The calculations are not made in accordance with the method and/or are mathematically inaccurate, and/or
- The integrity of the relevant assumptions and the data has not been maintained in applying the method.

## How do we determine which RMs related to an estimate are RMMs? [ISA | 7708.15315]

We perform the activity, 'Assess likelihood and magnitude of potential misstatements to determine RMMs', like we do for non-estimate RMMs. However, we consider additional inherent risk factors when assessing risks related to accounting estimates.

## What are the additional inherent risk factors that we evaluate when we assess whether a RM related to an estimate is an RMM? [ISA | 7708.15337]

We evaluate additional inherent risk factors when considering the likelihood and magnitude of potential misstatements for accounting estimates, which include:

- complexity of the process for developing the accounting estimate;
- number and complexity of methods and relevant assumptions;
- degree of subjectivity associated with the methods, relevant assumptions, and data;
- degree of subjectivity associated with the selection of management's point estimate and related disclosures;
- degree of uncertainty associated with the future occurrence or outcome of events and conditions underlying the relevant assumptions; and
- length of the forecast period and degree of uncertainty regarding trends affecting the forecast.

### What do we think about when we evaluate the additional inherent risk factors related to accounting estimates? [ISA | 7708.15339]

These inherent risk factors help us to think about qualities that are specific to estimates that provide insight into the level of risk. For example:

| Inherent risk factor | What it might tell us about the likelihood and magnitude of potential misstatements |
|---|---|
| **Complexity of the process for developing the accounting estimate** | As the degree of the complexity of the process for developing an accounting estimate increases, so does the likelihood of a material misstatement.<br><br>Examples of 'complexity' that may increase the susceptibility of an estimate to material misstatement:<br><br>• Certain data sources or processes to derive data, may be more reliable than others.<br>• For confidential or proprietary reasons, some external information sources will not (or not fully) disclose information that may be relevant in considering the reliability of the data they provide, such as the sources of the underlying data they used or how it was accumulated. |

| | |
|---|---|
| | • When there is a high volume of data and multiple sources of data, it may be difficult to maintain the integrity of the data. |
| **Number and complexity of methods and relevant assumptions** | As the number of and complexity of methods and relevant assumptions increases, so does the likelihood of a material misstatement.<br><br>Examples of 'the number and complexity of methods and assumptions' that may increase the susceptibility of an estimate to material misstatement:<br><br>• More complex estimates may be derived from multiple methods, data and/or assumptions which have to be compiled, increasing the risk for error in application<br>• More complex methods may use multiple sources of historical and forward-looking data or assumptions, with multiple interrelationships between them. One unreliable data element or unreasonable assumption may impact multiple other methods or assumptions.<br>• More complex methods, may require the use of specialists or third parties (other than specialists).<br>• Management may use an internally developed model 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.<br>• Management bases their methods or assumptions on data that is unobservable and therefore difficult to develop into reliable methods or assumptions.<br>• Complex contractual terms that require specific experience or competence to understand or interpret. |
| **Degree of subjectivity associated with the methods, relevant assumptions, and data** | As the degree of subjectivity associated with the selection of the method, assumptions, or data increases, so does the likelihood of a material misstatement.<br><br>Examples of 'subjectivity' that may increase the susceptibility of an estimate to material misstatement:<br><br>• The applicable financial reporting framework does not specify the valuation approach, concepts, techniques, and factors to use in the estimation method.<br>• The applicable financial reporting framework may require the use of unobservable inputs.<br>• The business environment may be experiencing 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.<br><br>When an accounting estimate is made using methods, assumptions, and data with a high degree of subjectivity, the accounting estimate is likely more susceptible to misstatement due to management bias or fraud. |
| **Degree of subjectivity associated with the selection of management's point estimate and related disclosures** | As the range of possible outcomes increases, so does the likelihood of material misstatement. A wide range is often the result of an estimate with a higher degree of complexity, subjectivity, and/or estimation uncertainty.<br><br>When there is range of possible outcomes, management applies judgment in selecting a point estimate and related disclosures. 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. |
| **Degree of uncertainty associated with the future occurrence or outcome of events and conditions underlying the relevant assumptions** | As the degree of estimation uncertainty increases, so does the likelihood of a material misstatement.<br><br>Management may not have the ability to make a precise and reliable prediction of the future, so they make assumptions that are important to the recognition or measurement of the account or disclosure. This may lead to a wide range of possible outcomes which increases the risk related to an accounting estimate, especially where the range of possible outcomes exceeds our materiality.<br><br>An accounting estimate that incorporates forward looking assumptions may have a high degree of subjectivity which may be susceptible to management bias. |
| **Length of the forecast period and degree of uncertainty regarding trends affecting the forecast** | When management uses a long forecast period, the risk of material misstatement increases since more recent data and information is likely to be less relevant to making predictions about the future. As there is less relevant information available to make predictions, significant management judgment is required to derive assumptions and resulting extended period forecasts, thus increasing the level of uncertainty associated with the estimate.<br><br>For example, the valuation of an insurance contract liability may require judgments about future insurance contract payments |

| | |
|---|---|
| | to be projected based on historical experience and current and assumed future trends. |

We weigh the relative significance of each inherent risk factor during our evaluation; however, no single factor outweighs another.

What if an estimate is quantitatively immaterial? [ISA | 7708.15344]

The size of the amount recognized or disclosed in the financial statements for an accounting estimate is not, in itself, an indicator of its susceptibility to misstatement because - for example, the accounting estimate may be understated.

For example, a significant decrease in an accrual year over year without a plausible explanation may indicate that a seemingly immaterial balance poses a risk of material misstatement to the financial statements.

This may also be true if an account or disclosure is immaterial but our understanding of the industry, environment, or circumstances of the entity indicates that the account or disclosure could be understated.

What if an estimate does not fluctuate significantly year over year? [ISA | 7708.15345]

Whether an estimate fluctuates year over year is not, in itself, an indicator of its susceptibility to misstatement.

For example, the estimate might not fluctuate significantly year over year but should have due to certain circumstances, transactions or events.

Do we document our assessment of likelihood and magnitude of potential misstatements related to RMs for accounting estimates? [ISA | 7708.15346]

When we have assessed that the RM for the selection and/or the application of methods, assumptions, and data related to an estimate is not an RMM, we document our rationale for why there is no risk of material misstatement associated with the RM.

# 1.2 Assess CAR for the selection of the individual methods, assumptions, and data, if applicable [ISA | 7703]

## What do we do?

IF an accounting estimate gives rise to an RMM associated with selection risk, THEN assess CAR for each of the methods, assumptions, and data used in the accounting estimate.

## Why do we do this?

We assess CAR for each of the methods, assumptions, and data to help us to design our substantive audit response to obtain sufficient appropriate audit evidence, considering the level of risk associated with each of the methods, assumptions, and data.

# Execute the audit

### Why does the CAR assessment for each method, assumption, or data matter? [ISA | 7703.8786]

Our CAR assessment helps us to design our substantive audit response to obtain sufficient appropriate audit evidence over each method, assumption, and data used in the estimate that require an audit response. These procedures over individual elements aggregate to provide the audit evidence over the RMM associated with the selection of the methods, assumptions, and data for the accounting estimate.

### How do we assess CAR for individual methods, assumptions, and data? [ISA | 7703.15283]

We evaluate the risks associated with the individual methods, assumptions, and data. We perform the following:

- Identify and assess inherent risk for each of the methods, assumptions, and data;
- Assess control risk for each of the methods, assumptions, and data; and
- Make a preliminary CAR assessment for each of the methods, assumptions, and data.

While we describe our methodology sequentially, we continually refine our assessment of CAR as we understand more about the entity's process and the individual elements.

# 1.2.1 Identify and assess inherent risk for each of the methods, assumptions, and data [ISA | 7710]

## What do we do?

Identify the methods, assumptions, and data that contribute individually (or in combination) to the to the RMM associated with the selection of individual methods, assumptions, and data and assess the inherent risk for each of these elements.

## Why do we do this?

We consider how the individual methods, assumptions, and data contribute to the risk of material misstatement associated with the selection of methods, assumption, and data both individually and in combination with one another. This allows us to assess the inherent risk for each method, assumption, and data.

## Execute the Audit

### How do we identify the individual items that contribute risk individually (or in combination) to the selection risk? [ISA | 7710.15218]

We think about the degree of complexity, subjectivity, and measurement uncertainty associated with each of the methods, assumptions, and data. We also think about how the individual elements relate and/or interact with one another and how they may in combination add to the degree of complexity, subjectivity, and measurement uncertainty for the estimate as a whole.

## How do we determine the inherent for the individual methods, assumptions, and data used in an estimate? [ISA | 7710.15219]

We assess the likelihood and magnitude of potential misstatements related to each method, assumption, and data. We consider the same inherent risk factors as we do when we assess the selection and application risks. See the activity 'Identify and assess which RMs related to an accounting estimate are RMMs'.

For each method, assumption, and data, we assess the inherent risk as base, elevated, or significant. Whenever we determine that the selection of an individual method, assumption, or data is an RM we document our rationale.

### What do we think about when we assess the likelihood and magnitude of a misstatement associated with the individual methods, assumptions, and data? [ISA | 7710.15222]

Although we look to the same inherent risk factors used to assess the selection and application risks, there are certain key factors and other considerations we think about in making our assessments of inherent risk related to the individual methods, assumptions, and data:

| Element | Inherent risk factors most relevant to our assessment | Other considerations that can influence our assessment |
|---|---|---|
| **Method** | • The number and complexity of methods associated with the process;<br>• The degree of subjectivity associated with the method; and<br>• The degree of subjectivity associated with the selection of management's point estimate and related disclosures for inclusion in the financial statements. | • Alternative methods or models exist<br>• Adjustments are made to the output of the model;<br>• There is a lag period between the calculation of an estimate and the reporting date;<br>• Management uses a specialist or third party (other than a specialist); and<br>• There has been a change from the method used in the prior period, or we expect there to be a change. |
| **Assumption** | • The degree of subjectivity associated with the assumption;<br>• The degree of uncertainty related to the future occurrence or outcome of events and conditions underlying the assumption; | • Alternatives to the assumption exist and should be considered;<br>• The assumption is sensitive to variation such that minor changes can cause significant changes in the estimate; |

| | | |
|---|---|---|
| | • If forecasts are important to the assumption, the length of the forecast period and degree of uncertainty regarding trends affecting the forecast; and<br>• The degree of subjectivity associated with the selection of management's point estimate and related disclosures for inclusion in the financial statements. | • The assumption involves unobservable data or adjustments to observable data;<br>• The assumption relies on the entity's intent or ability to carry out specific course of action;<br>• Management uses a specialist or third party (other than a specialist).<br>• There has been (or should have been) a change from the prior period; and<br>• The assumption may be internally inconsistent with others used to develop the estimate, with similar assumptions used in other estimates, or those used in other areas of the entity's business activities. |
| **Data** | • The degree of complexity for developing the accounting estimate; and<br>• The degree of subjectivity associated with data. | • Alternative data or sources exist;<br>• The data may be insufficiently precise and detailed for its use in the audit;<br>• Management uses a specialist or third party (other than a specialist);<br>• There has been (or should have been) a change from the prior period; and<br>• The data may be internally inconsistent with the data used in other estimates, significant accounts, or disclosures. |

How do we determine whether the risk associated with any of the methods, assumptions, or data is a significant risk? [ISA | 7710.15223]

We perform the activity: 'Identify significant risks'.

How do we determine whether the risk associated with any of the methods, assumptions, or data is a fraud risk? [ISA | 7710.15225]

Our determination of whether there is a fraud risk associated with a method, assumption, or data depends on the extent to which subjectivity is present and the potential for intentional management bias. We evaluate whether the circumstances producing the bias, if any, represent a fraud risk.

The susceptibility of an accounting estimate to management bias increases with the subjectivity involved in making it. The potential for fraud (intentional management bias), is inherent in subjective decisions that are often required in making an accounting estimate.

We identify fraud risks in activity 'Identify Fraud Risks'.

# 1.2.2 Assess control risk for each of the methods, assumptions, and data [ISA | 7891]

## What do we do?

Assess control risk for each of the individual methods, assumptions, and data

## Why do we do this?

Our planned audit procedures can consist of a substantive testing approach, which does not include tests of control activities, or a controls approach, which includes both tests of control activities and substantive tests.

## Execute the audit

How do we assess control risk for each of the methods, assumptions, and data? [ISA | 7891.8804]

For each method, assumption, and data, we perform the following activities to asses control risk: 'Determine whether to take a controls approach, and design tests of control activities', 'Conclude on our assessment of control risk', and 'Confirm control risk assessment'.

# 1.2.3 Make a preliminary CAR assessment for each of the methods, assumptions, and data [ISA | 7704]

## What do we do?

Assess, preliminarily, CAR for each of the methods, assumptions, and data

## Why do we do this?

Our preliminary assessment of CAR for each of the methods, assumptions, and data is set equal to the degree of inherent risk that we identified to which the items contribute individually (or in combination) to the selection risk and our expected control risk. This helps us to design an appropriate audit response to address the RMM for selection of the methods, assumptions, and data.

We reassess CAR after we complete our tests of controls (if applicable) and throughout the audit.

# Execute the audit

### How do we make a preliminary CAR assessment for each method, assumption, and data? [ISA | 7704.15395]

We perform the activity, 'Make a preliminary CAR assessment for each RMM'.

### How does our preliminary CAR assessment affect our substantive procedures for the individual methods, assumptions, and data? [ISA | 7704.8805]

Our preliminary CAR assessment helps us to design the nature, timing, and extent of our substantive procedures for each of the individual methods, assumptions, and data used in an accounting estimate. Refer to 'How does our preliminary CAR assessment affect substantive procedures?'

#### May we conclude that we do not have an audit response for a particular method, assumption, or data of an accounting estimate? [ISA | 7704.15398]

Yes. We may determine that no response is necessary for an individual method, assumption, or data. We assess the inherent risk for that individual method, assumption, or data as 'RM'.

### Do we perform an aggregate risk assessment for the selection of the methods, assumptions, and data used in an estimate? [ISA | 7704.15399]

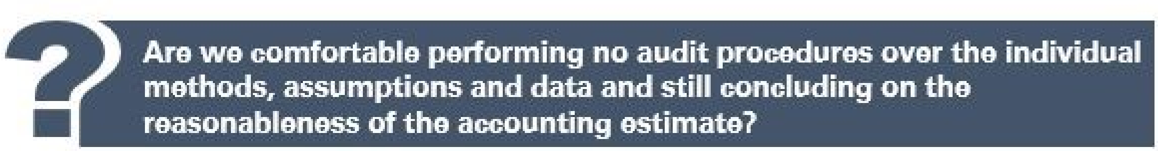
Yes. we step back and consider the individual methods, assumptions, or data where no response is planned.

#### How do we step back and consider the individual methods, assumptions or data where no response is planned? [ISA | 7704.15400]

When we decide that one or more individual methods, assumptions, or data of an estimate do not require an audit response, we consider the aggregate risk that is left unaddressed for the RMM associated with the selection of methods, assumptions, and data used in the estimate and the implications on our audit. When the residual risk is inconsequential - i.e., does not give rise to a risk of material misstatement in aggregate, there may be no change to our assessed level of CAR for each of the methods, assumptions, or data or to our audit approach.

When this is not the case or we find it difficult to draw this conclusion, then we reconsider our preliminary CAR assessments and adjust the inherent risk for one or more individual methods, assumptions, and data until we are satisfied that we have appropriately addressed the RMM associated with the selection of the methods, assumptions, or data related to the estimate.

In reaching our conclusion, it may help to ask ourselves:




We evidence this assessment of the aggregate risk of the individual methods, assumptions, and data where no response is planned in our audit documentation.

# 1.3 Assess CAR for the application of the methods, assumptions, and data, if applicable [ISA | 7892]

## What do we do?

IF an accounting estimate gives rise to an RMM associated with application risk, THEN assess CAR for the application of the methods, assumptions, and data.

## Why do we do this?

We assess CAR for the application of the methods, assumptions, and data, to help us to design our substantive audit response to obtain sufficient appropriate audit evidence, considering the level of risk associated with the application of the methods, assumptions, and data.

## Execute the audit

### How do we assess CAR for the application of the methods, assumptions, and data? [ISA | 7892.8806]

We evaluate the risks associated with the application of the methods, assumptions, and data. We perform the following:

- Assess inherent risk for the application of the methods, assumptions, and data;
- Assess control risk for the application of the methods, assumptions, and data; and
- Assess CAR for application of the methods, assumptions, and data

While we describe our methodology sequentially, we continually refine our assessment of CAR as we understand more about the entity's process and the individual elements.

### How do we determine inherent risk related to the application of the methods, assumptions, and data used in an estimate? [ISA | 7892.8807]

We assess the likelihood and magnitude of potential misstatements that could result from the application of the methods, assumptions, or data. We consider the same inherent risk factors as we do when we assess the RMs related to an estimate. See the activity 'Identify and assess which RMs related to an accounting estimate are RMMs'.

For the application of the elements, we assess the inherent risk as base, elevated, or significant.

### How do we assess control risk for the application of the methods, assumptions, and data? [ISA | 7892.8808]

For the application of the methods, assumptions, and data, we perform the following activities to assess control risk: 'Determine whether to take a controls approach, and design tests of control activities', 'Conclude on our assessment of control risk', and 'Confirm control risk assessment'.

### How do we determine the appropriate CAR for application of the methods, assumptions, and data? [ISA | 7892.8809]

We perform the activity 'Make a preliminary CAR assessment for each RMM'.

### How does our preliminary CAR assessment affect our substantive procedures for application of methods, assumptions, and data? [ISA | 7892.8810]

Our preliminary CAR assessment helps us to design the nature, timing, and extent of our substantive procedures related to the application of the methods, assumptions, and data used in an accounting estimate. Refer to 'How does our preliminary CAR assessment affect substantive procedures?'

# Responses to the Assessed Risks of Material Misstatement

## International Standards on Auditing: ISA 540.18-30

### Responses to the Assessed Risks of Material Misstatement

18. As required by ISA 330,[12] the auditor's further audit procedures shall be responsive to the assessed risks of material misstatement at the assertion level,[13] considering the reasons for the assessment given to those risks. The auditor's further audit procedures shall include one or more of the following approaches:

(a) Obtaining audit evidence from events occurring up to the date of the auditor's report (see paragraph 21);

(b) Testing how management made the accounting estimate (see paragraphs 22 - 27); or

(c) Developing an auditor's point estimate or range (see paragraphs 28 - 29).

The auditor's further audit procedures shall take into account that the higher the assessed risk of material misstatement, the more persuasive the audit evidence needs to be.[14] The auditor shall design and perform further audit procedures in a manner that is not biased towards obtaining audit evidence that may be corroborative or towards excluding audit evidence that may be contradictory. (Ref: Para. A81 - A84)

---

[12] ISA 330, paragraphs 6 - 15 and 18

[13] ISA 330, paragraphs 6 - 7 and 21

[14] ISA 330, paragraph 7(b)

19. As required by ISA 330,[15] the auditor shall design and perform tests to obtain sufficient appropriate audit evidence as to the operating effectiveness of controls, if:

(a) The auditor's assessment of risks of material misstatement at the assertion level includes an expectation that the controls are operating effectively; or

(b) Substantive procedures alone cannot provide sufficient appropriate audit evidence at the assertion level.

In relation to accounting estimates, the auditor's tests of such controls shall be responsive to the reasons for the assessment given to the risks of material misstatement. In designing and performing tests of controls, the auditor shall obtain more persuasive audit evidence the greater the reliance the auditor places on the effectiveness of a control.[16] (Ref: Para. A85 - A89)

---

[15] ISA 330, paragraph 8

[16] ISA 330, paragraph 9

20. For a significant risk relating to an accounting estimate, the auditor's further audit procedures shall include tests of controls in the current period if the auditor plans to rely on those controls. When the approach to a significant risk consists only of substantive procedures, those procedures shall include tests of details.[17] (Ref: Para. A90)

---

[17] ISA 330, paragraphs 15 and 21

## *Obtaining Audit Evidence from Events Occurring up to the Date of the Auditor's Report*

21. When the auditor's further audit procedures include obtaining audit evidence from events occurring up to the date of the auditor's report, the auditor shall evaluate whether such audit evidence is sufficient and appropriate to address the risks of material misstatement relating to the accounting estimate, taking into account that changes in circumstances and other relevant conditions between the event and the measurement date may affect the relevance of such audit evidence in the context of the applicable financial reporting framework. (Ref: Para. A91 - A93)

## *Testing How Management Made the Accounting Estimate*

22. When testing how management made the accounting estimate, the auditor's further audit procedures shall include procedures, designed and performed in accordance with paragraphs 23 - 26, to obtain sufficient appropriate audit evidence regarding the risks of material misstatement relating to: (Ref: Para. A94)

(a) The selection and application of the methods, significant assumptions and the data used by management in making the accounting estimate; and

(b) How management selected the point estimate and developed related disclosures about estimation uncertainty.

### Methods

23. In applying the requirements of paragraph 22, with respect to methods, the auditor's further audit procedures shall address:

(a) Whether the method selected is appropriate in the context of the applicable financial reporting framework, and, if applicable, changes from the method used in prior periods are appropriate; (Ref: Para. A95, A97)

(b) Whether judgments made in selecting the method give rise to indicators of possible management bias; (Ref: Para. A96)

(c) Whether the calculations are applied in accordance with the method and are mathematically accurate;

(d) When management's application of the method involves complex modelling, whether judgments have been applied consistently and whether, when applicable: (Ref: Para. A98 - A100)

(i) The design of the model meets the measurement objective of the applicable financial reporting framework, is appropriate in the circumstances, and, if applicable, changes from the prior period's model are appropriate in the circumstances; and

(ii) Adjustments to the output of the model are consistent with the measurement objective of the applicable financial reporting framework and are appropriate in the circumstances; and

(e) Whether the integrity of the significant assumptions and the data has been maintained in applying the method. (Ref: Para. A101)

## Significant Assumptions

24. In applying the requirements of paragraph 22, with respect to significant assumptions, the auditor's further audit procedures shall address:

(a) Whether the significant assumptions are appropriate in the context of the applicable financial reporting framework, and, if applicable, changes from prior periods are appropriate; (Ref: Para. A95, A102 - A103)

(b) Whether judgments made in selecting the significant assumptions give rise to indicators of possible management bias; (Ref: Para. A96)

(c) Whether the significant assumptions are consistent with each other and with those used in other accounting estimates, or with related assumptions used in other areas of the entity's business activities, based on the auditor's knowledge obtained in the audit; and (Ref: Para. A104)

(d) When applicable, whether management has the intent to carry out specific courses of action and has the ability to do so. (Ref: Para. A105)

## Data

25. In applying the requirements of paragraph 22, with respect to data, the auditor's further audit procedures shall address:

(a) Whether the data is appropriate in the context of the applicable financial reporting framework, and, if applicable, changes from prior periods are appropriate (Ref: Para. A95, A106);

(b) Whether judgments made in selecting the data give rise to indicators of possible management bias; (Ref: Para. A96)

(c) Whether the data is relevant and reliable in the circumstances; and (Ref: Para. A107)

(d) Whether the data has been appropriately understood or interpreted by management, including with respect to contractual terms. (Ref: Para. A108)

## Management's Selection of a Point Estimate and Related Disclosures about Estimation Uncertainty

26. In applying the requirements of paragraph 22, the auditor's further audit procedures shall address whether, in the context of the applicable financial reporting framework, management has taken appropriate steps to:

(a) Understand estimation uncertainty; and (Ref: Para. A109)

(b) Address estimation uncertainty by selecting an appropriate point estimate and by developing related disclosures about estimation uncertainty. (Ref: Para. A110 - A114)

27. When, in the auditor's judgment based on the audit evidence obtained, management has not taken appropriate steps to understand or address estimation uncertainty, the auditor shall: (Ref: Para. A115 - A117)

(a) Request management to perform additional procedures to understand estimation uncertainty or to address it by reconsidering the selection of management's point estimate or considering providing additional disclosures relating to the estimation uncertainty, and evaluate management's response(s) in accordance with paragraph 26;

(b) If the auditor determines that management's response to the auditor's request does not sufficiently address estimation uncertainty, to the extent practicable, develop an auditor's point estimate or range in accordance with paragraphs 28 - 29; and

(c) Evaluate whether a deficiency in internal control exists and, if so, communicate in accordance with ISA 265.[18]

---

[18] ISA 265, *Communicating Deficiencies in Internal Control to Those Charged with Governance and Management*

## *Developing an Auditor's Point Estimate or Range*

28. When the auditor develops a point estimate or range to evaluate management's point estimate and related disclosures about estimation uncertainty, including when required by paragraph 27(b), the auditor's further audit procedures shall include procedures to evaluate whether the methods, assumptions or data used are appropriate in the context of the applicable financial reporting framework. Regardless of whether the auditor uses management's or the auditor's own methods, assumptions or data, these further audit procedures shall be designed and performed to address the matters in paragraphs 23 - 25. (Ref: Para. A118 - A123)

29. If the auditor develops an auditor's range, the auditor shall:

(a) Determine that the range includes only amounts that are supported by sufficient appropriate audit evidence and have been evaluated by the auditor to be reasonable in the context of the measurement objectives and other requirements of the applicable financial reporting framework; and (Ref: Para. A124 - A125)

(b) Design and perform further audit procedures to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement relating to the disclosures in the financial statements that describe the estimation uncertainty.

## *Other Considerations Relating to Audit Evidence*

30. In obtaining audit evidence regarding the risks of material misstatement relating to accounting estimates, irrespective of the sources of information to be used as audit evidence, the auditor shall comply with the relevant requirements in ISA 500.

When using the work of a management's expert, the requirements in paragraphs 21 - 29 of this ISA may assist the auditor in evaluating the appropriateness of the expert's work as audit evidence for a relevant assertion in accordance with paragraph 8(c) of ISA 500. In evaluating the work of the management's expert, the nature, timing and extent of the further audit procedures are affected by the auditor's evaluation of the expert's competence, capabilities and objectivity, the auditor's understanding of the nature of the work performed by the expert, and the auditor's familiarity with the expert's field of expertise. (Ref: Para. A126 - A132)

# ISA Application and Other Explanatory Material: ISA 540.A81-A132

## Responses to the Assessed Risks of Material Misstatement

### *The Auditor's Further Audit Procedures* (Ref: Para. 18)

A81. In designing and performing further audit procedures the auditor may use any of the three testing approaches (individually or in combination) listed in paragraph 18. For example, when several assumptions are used to make an accounting estimate, the auditor may decide to use a different testing approach for each assumption tested.

#### Obtaining Relevant Audit Evidence Whether Corroborative or Contradictory

A82. Audit evidence comprises both information that supports and corroborates management's assertions, and any information that contradicts such assertions.[44] Obtaining audit evidence in an unbiased manner may involve obtaining evidence from multiple sources within and outside the entity. However, the auditor is not required to perform an exhaustive search to identify all possible sources of audit evidence.

---

[44] ISA 500, paragraph A1

A83. ISA 330 requires the auditor to obtain more persuasive audit evidence the higher the auditor's assessment of the risk.[45] Therefore, the consideration of the nature or quantity of the audit evidence may be more important when inherent risks relating to an accounting estimate is assessed at the higher end of the spectrum of inherent risk.

---

[45] ISA 330, paragraphs 7(b) and A19

#### Scalability

A84. The nature, timing and extent of the auditor's further audit procedures are affected by, for example:

- The assessed risks of material misstatement, which affect the persuasiveness of the audit evidence needed and influence the approach the auditor selects to audit an accounting estimate. For example, the assessed risks of material misstatement relating to the existence or valuation assertions may be lower for a straightforward accrual for bonuses that are paid to employees shortly after period end. In this situation, it may be more practical for the auditor to obtain sufficient appropriate audit evidence by evaluating events occurring up to the date of the auditor's report, rather than through other testing approaches.
- The reasons for the assessed risks of material misstatement.

### *When the Auditor Intends to Rely on the Operating Effectiveness of Controls* (Ref: Para: 19)

A85. Testing the operating effectiveness of controls may be appropriate when inherent risk is assessed as higher on the spectrum of inherent risk, including for significant risks. This may be the case when the accounting estimate is subject to or affected by a high degree of complexity. When the accounting estimate is affected by a high degree of subjectivity, and therefore requires significant judgment by management, inherent limitations in the effectiveness of the design of controls may lead the auditor to focus more on substantive procedures than on testing the operating effectiveness of controls.

A86. In determining the nature, timing and extent of testing of the operating effectiveness of controls relating to accounting estimates, the auditor may consider factors such as:

- The nature, frequency and volume of transactions;
- The effectiveness of the design of the controls, including whether controls are appropriately designed to respond to the assessed inherent risk, and the strength of governance;
- The importance of particular controls to the overall control objectives and processes in place at the entity, including the sophistication of the information system to support transactions;
- The monitoring of controls and identified deficiencies in internal control;
- The nature of the risks the controls are intended to address, for example, controls related to the exercise of judgment compared with controls over supporting data;
- The competency of those involved in the control activities;
- The frequency of performance of the control activities; and
- The evidence of performance of control activities.

### Substantive Procedures Alone Cannot Provide Sufficient Appropriate Audit Evidence

A87. In some industries, such as the financial services industry, management makes extensive use of IT to conduct business. It may therefore be more likely that there are risks related to certain accounting estimates for which substantive procedures alone cannot provide sufficient appropriate audit evidence.

A88. Circumstances when risks for which substantive procedures alone cannot provide sufficient appropriate audit evidence at the assertion level may exist include:

- When controls are necessary to mitigate risks relating to the initiation, recording, processing, or reporting of information obtained from outside of the general and subsidiary ledgers.
- Information supporting one or more assertions is electronically initiated, recorded, processed, or reported. This is likely to be the case when there is a high volume of transactions or data, or a complex model is used, requiring the extensive use of information technology to ensure the accuracy and completeness of the information. A complex expected credit loss provision may be required for a financial institution or utility entity. For example, in the case of a utility entity, the data used in developing the expected credit loss provision may comprise many small balances resulting from a high volume of transactions. In these circumstances, the auditor may conclude that sufficient appropriate audit evidence cannot be obtained without testing controls around the model used to develop the expected credit loss provision.

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.

A89. 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 procedures in relation to, or to provide an assurance conclusion on, internal control. In these and other similar circumstances, the auditor may be able to use information obtained in performing such procedures as audit evidence, subject to determining whether subsequent changes have occurred that may affect its relevance to the audit.

## *Significant Risks* (Ref: Para. 20)

A90. When the auditor's further audit procedures in response to a significant risk consist only of substantive procedures, ISA 330[46] requires that those procedures include tests of details. Such tests of details may be designed and performed under each of the approaches described in paragraph 18 of this ISA based on the auditor's professional judgment in the circumstances. Examples of tests of details for significant risks related to accounting estimates include:

- Examination, for example, examining contracts to corroborate terms or assumptions.
- Recalculation, for example, verifying the mathematical accuracy of a model.
- Agreeing assumptions used to supporting documentation, such as third-party published information.

---

[46] ISA 330, paragraph 21

## *Obtaining Audit Evidence from Events Occurring up to the Date of the Auditor's Report* (Ref: Para. 21)

A91. In some circumstances, obtaining audit evidence from events occurring up to the date of the auditor's report may provide sufficient appropriate audit evidence to address the risks of material misstatement. For example, sale of the complete inventory of a discontinued product shortly after the period end may provide sufficient appropriate audit evidence relating to the estimate of its net realizable value at the period end. In other cases, it may be necessary to use this testing approach in connection with another approach in paragraph 18.

A92. For some accounting estimates, events occurring up to the date of the auditor's report are unlikely to provide sufficient appropriate audit evidence regarding the accounting estimate. For example, the conditions or events relating to some accounting estimates develop only over an extended period. Also, because of the measurement objective of fair value accounting estimates, information after the period-end may not reflect the events or conditions existing at the balance sheet date and therefore may not be relevant to the measurement of the fair value accounting estimate.

A93. Even if the auditor decides not to undertake this testing approach in respect of specific accounting estimates, the auditor is required to comply with ISA 560. ISA 560 requires the auditor to perform audit procedures designed to obtain sufficient appropriate audit evidence that all events occurring between the date of the financial statements and the date of the auditor's report that require adjustment of, or disclosure in, the financial statements have been identified[47] and appropriately reflected in the financial statements.[48] Because the measurement of many accounting estimates, other than fair value accounting estimates, usually depends on the outcome of future conditions, transactions or events, the auditor's work under ISA 560 is particularly relevant.

---

[47] ISA 560, paragraph 6

[48] ISA 560, paragraph 8

## *Testing How Management Made the Accounting Estimate* (Ref. Para. 22)

A94. Testing how management made the accounting estimate may be an appropriate approach when, for example:

- The auditor's review of similar accounting estimates made in the prior period financial statements suggests that management's current period process is appropriate.
- The accounting estimate is based on a large population of items of a similar nature that individually are not significant.
- The applicable financial reporting framework specifies how management is expected to make the accounting estimate. For example, this may be the case for an expected credit loss provision.
- The accounting estimate is derived from the routine processing of data.

Testing how management made the accounting estimate may also be an appropriate approach when neither of the other testing approaches is practical to perform, or may be an appropriate approach in combination with one of the other testing approaches.

### Changes in Methods, Significant Assumptions and the Data from Prior Periods (Ref: Para. 23(a), 24(a), 25(a))

A95. When a change from prior periods in a method, significant assumption, or the data is not based on new circumstances or new information, or when significant assumptions are inconsistent with each other and with those used in other accounting estimates, or with related assumptions used in other areas of the entity's business activities, the auditor may need to have further discussions with management about the circumstances and, in doing so, challenge management regarding the appropriateness of the assumptions used.

### Indicators of Management Bias (Ref: Para. 23(b), 24(b), 25(b))

A96. When the auditor identifies indicators of possible management bias, the auditor may need a further discussion with management and may need to reconsider whether sufficient appropriate audit evidence has been obtained that the method, assumptions and data used were appropriate and supportable in the circumstances. An example of an indicator of management bias for a particular accounting estimate may be when management has developed an appropriate range for several different assumptions, and in each case the assumption used was from the end of the range that resulted in the most favorable measurement outcome.

## Methods

### The selection of the method (Ref: Para. 23(a))

A97. Relevant considerations for the auditor regarding the appropriateness of the method selected in the context of the applicable financial reporting framework, and, if applicable, the appropriateness of changes from the prior period may include:

- Whether management's rationale for the method selected is appropriate;
- Whether the method is appropriate in the circumstances given the nature of the accounting estimate, the requirements of the applicable financial reporting framework, other available valuation concepts or techniques, regulatory requirements, and the business, industry and environment in which the entity operates;
- When management has determined that different methods result in a range of significantly different estimates, how management has investigated the reasons for these differences; and
- Whether the change is based on new circumstances or new information. When this is not the case, the change may not be reasonable or in compliance with the applicable financial reporting framework. Arbitrary changes result in inconsistent financial statements over time and may give

rise to financial statement misstatements or may be an indicator of possible management bias. (see also paragraphs A133 - A136)

These matters are important when the applicable financial reporting framework does not prescribe the method of measurement or allows multiple methods.

## Complex modelling (Ref: Para. 23(d))

A98. A model, and the related method, is more likely to be complex when:

- Understanding and applying the method, including designing the model and selecting and using appropriate data and assumptions, requires specialized skills or knowledge;
- It is difficult to obtain data needed for use in the model because there are restrictions on the availability or observability of, or access to, data; or
- It is difficult to maintain the integrity (e.g., accuracy, consistency, or completeness) of the data and assumptions in using the model due to multiple valuation attributes, multiple relationships between them, or multiple iterations of the calculation.

A99. Matters that the auditor may consider when management uses a complex model include, for example, whether:

- The model is validated prior to usage or when there has been a change to the model, 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.
- Management uses appropriate skills and knowledge in using the model.

These considerations may also be useful for a method that does not involve complex modelling.

A100. Management may make adjustments to the output of the model to meet the requirements of the applicable financial reporting framework. In some industries these adjustments are referred to as overlays. 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.

## Maintenance of integrity of significant assumptions and the data used in applying the method (Ref: Para. 23(e))

A101. Maintaining the integrity of significant assumptions and the data in applying the method refers to the maintenance of the accuracy and completeness of the data and assumptions through all stages of information processing. A failure to maintain such integrity may result in corruption of the data and assumptions and may give rise to misstatements. In this regard, relevant considerations for the auditor may include whether the data and assumptions are subject to all changes intended by management, and not subject to any unintended changes, during activities such as input, storage, retrieval, transmission or processing.

## Significant Assumptions (Ref: Para. 24)

A102. Relevant considerations for the auditor regarding the appropriateness of the significant assumptions in the context of the applicable financial reporting framework, and, if applicable, the appropriateness of changes from the prior period may include:

- Management's rationale for the selection of the assumption;
- Whether the assumption is appropriate in the circumstances given the nature of the accounting estimate, the requirements of the applicable financial reporting framework, and the business, industry and environment in which the entity operates; and
- Whether a change from prior periods in selecting an assumption is based on new circumstances or new information. When it is not, the change may not be reasonable nor in compliance with the applicable financial reporting framework. Arbitrary changes in an accounting estimate may give rise to material misstatements of the financial statements or may be an indicator of possible management bias (see paragraphs A133 - A136).

A103. Management may evaluate alternative assumptions or outcomes of accounting estimates, which may 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 may be variation because different market participants will use different assumptions. A sensitivity analysis may lead to the development of a number of outcome scenarios, sometimes characterized as a range of outcomes by management, and including 'pessimistic' and 'optimistic' scenarios.

A104. Through the knowledge obtained in performing the audit, the auditor may become aware of or may have obtained an understanding of assumptions used in other areas of the entity's business. Such matters may include, for example, business prospects, assumptions in strategy documents and future cash flows. Also, if the engagement partner has performed other engagements for the entity, ISA 315 (Revised)[49] requires the engagement partner to consider whether information obtained from those other engagements is relevant to identifying risks of material misstatement. This information may also be useful to consider in addressing whether significant assumptions are consistent with each other and with those used in other accounting estimates.

[49] ISA 315 (Revised), paragraph 8

A105. The appropriateness of the significant assumptions in the context of the requirements of the applicable financial reporting framework 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 management to do so. The nature and extent of audit evidence to be obtained about management's intent and ability is a matter of professional judgment. When applicable, the auditor's procedures may include the following:

- Review of management's history of carrying out its stated intentions.
- Inspection 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 significant assumptions reflect those used by marketplace participants.

## Data (Ref: Para. 25(a))

A106. Relevant considerations for the auditor regarding the appropriateness of the data selected for use in the context of the applicable financial reporting framework, and, if applicable, the appropriateness of the changes from the prior period may include:

- Management's rationale for the selection of the data;
- Whether the data is appropriate in the circumstances given the nature of the accounting estimate, the requirements of the applicable financial reporting framework, and the business, industry and environment in which the entity operates; and
- Whether the change from prior periods in the sources or items of data selected or data selected, is based on new circumstances or new information. When it is not, it 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 financial statement misstatements or may be an indicator of possible management bias (see paragraphs A133 - A136).

## Relevance and reliability of the data (Ref: Para. 25(c))

A107. When using information produced by the entity, ISA 500 requires the auditor to evaluate whether the information is sufficiently reliable for the auditor's purposes, including as necessary in the circumstances, to obtain audit evidence about the accuracy and completeness of the information and evaluating whether the information is sufficiently precise and detailed for the auditor's purposes.[50]

---

[50] ISA 500, paragraph 9

## Complex legal or contractual terms (Ref: Para. 25(d))

A108. 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 to:
  - Evaluate, the underlying business purpose for the transaction or agreement; and
  - Consider whether the terms of the contracts are consistent with management's explanations.

## Management's Selection of a Point Estimate and Related Disclosures about Estimation Uncertainty

### Management's steps to understand and address estimation uncertainty (Ref: Para. 26(a))

A109. Relevant considerations regarding whether management has taken appropriate steps to understand and address estimation uncertainty may include whether management has:

(a) Understood the estimation uncertainty, through identifying the sources, and assessing the degree of inherent variability in the measurement outcomes and the resulting range of reasonably possible measurement outcomes;

(b) Identified the degree to which, in the measurement process, complexity or subjectivity affect the risk of material misstatement, and addressed the resulting potential for misstatement through applying:

(i) Appropriate skills and knowledge in making accounting estimates; and

(ii) Professional judgment, including by identifying and addressing susceptibility to management bias; and

(c) Addressed estimation uncertainty through appropriately selecting management's point estimate and related disclosures that describe the estimation uncertainty.

### The selection of management's point estimate and related disclosures of estimation uncertainty (Ref: Para. 26(b))

A110. Matters that may be relevant regarding the selection of management's point estimate and the development of related disclosures about estimation uncertainty include whether:

- The methods and data used were selected appropriately, including when alternative methods for making the accounting estimate and alternative sources of data were available.
- 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 was appropriate, relevant and reliable, and the integrity of that data was maintained.
- The calculations were applied in accordance with the method and were mathematically accurate.
- Management's point estimate is appropriately chosen from the reasonably possible measurement outcomes.
- 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.

A111. Relevant considerations for the auditor regarding the appropriateness of management's point estimate, may include:

- When the requirements of the applicable financial reporting framework prescribe the point estimate that is to be used after consideration of the alternative outcomes and assumptions, or prescribes a specific measurement method, whether management has followed the requirements of the applicable financial reporting framework.

- When the applicable financial reporting framework has not specified how to select an amount from reasonably possible measurement outcomes, whether management has exercised judgment, taking into account the requirements of the applicable financial reporting framework.

A112. Relevant considerations for the auditor regarding management's disclosures about estimation uncertainty include the requirements of the applicable financial reporting framework, which 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.[51]
- 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.
- About 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.

In certain circumstances, additional disclosures beyond those explicitly required by the financial reporting framework may be needed in order to achieve fair presentation, or in the case of a compliance framework, for the financial statements not to be misleading.

---

[51] IFRS 13, *Fair Value Measurement* , paragraph 92

A113. The greater the degree to which an accounting estimate is subject to estimation uncertainty, the more likely the risks of material misstatement will be assessed as higher and therefore the more persuasive the audit evidence needs to be to determine, in accordance with paragraph 35, whether management's point estimate and related disclosures about estimation uncertainty are reasonable in the context of the applicable financial reporting framework, or are misstated.

A114. 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.[52]

---

[52] ISA 701, *Communicating Key Audit Matters in the Independent Auditor's Report*

## When Management Has Not Taken Appropriate Steps to Understand and Address Estimation Uncertainty (Ref: Para. 27)

A115. When the auditor determines that management has not taken appropriate steps to understand and address estimation uncertainty, additional procedures that the auditor may request management to perform to understand estimation uncertainty may include, for example, consideration of alternative assumptions or the performance of a sensitivity analysis.

A116. In considering whether it is practicable to develop a point estimate or range, matters the auditor may need to take into account include whether the auditor could do so without compromising independence requirements. This may include relevant ethical requirements that address prohibitions on assuming management responsibilities.

A117. If, after considering management's response, the auditor determines that it is not practicable to develop an auditor's point estimate or range, the auditor is required to evaluate the implications for the audit or the auditor's opinion on the financial statements in accordance with paragraph 34.

## *Developing an Auditor's Point Estimate or Using an Auditor's Range* (Ref: Para. 28 - 29)

A118. Developing an auditor's point estimate or range to evaluate management's point estimate and related disclosures about estimation uncertainty may be an appropriate approach when, for example:

- The auditor's review of similar accounting estimates made in the prior period financial statements suggests that management's current period process is not expected to be effective.
- The entity's controls within and over management's process for making accounting estimates are not well designed or properly implemented.
- Events or transactions between the period end and the date of the auditor's report have not been properly taken into account, when it is appropriate for management to do so, and such events or transactions appear to contradict management's point estimate.
- There are appropriate alternative assumptions or sources of relevant data that can be used in developing an auditor's point estimate or a range.
- Management has not taken appropriate steps to understand or address the estimation uncertainty (see paragraph 27).

A119. The decision to develop a point estimate or range also 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).

A120. The auditor's decision as to whether to develop a point estimate rather than a range may depend on the nature of the estimate and the auditor's judgment in the circumstances. For example, the nature of the estimate may be such that there is expected to be less variability in the reasonably possible outcomes. In these circumstances, developing a point estimate may be an effective approach, particularly when it can be developed with a higher degree of precision.

A121. The auditor may develop a point estimate or a range in a number of ways, for example, by:

- Using a different model than the one used by management, 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 but developing alternative assumptions or data sources to those used by management.
- Using the auditor's own method but developing alternative assumptions to those used by management.
- Employing or engaging a person with specialized expertise to develop or execute a model, or to provide relevant assumptions.
- Consideration of other comparable conditions, transactions or events, or, where relevant, markets for comparable assets or liabilities.

A122. The auditor also may develop a point estimate or range for only part of the accounting estimate (for example, for a particular assumption, or when only a certain part of the accounting estimate is giving rise to the risk of material misstatement).

A123. When using the auditor's own methods, assumptions or data to develop a point estimate or range, the auditor may obtain evidence about the appropriateness of management's methods, assumptions or data. For example, if the auditor uses the auditor's own assumptions in developing a range to evaluate the reasonableness of management's point estimate, the auditor may also develop a view about whether management's judgments in selecting the significant assumptions used in making the accounting estimate give rise to indicators of possible management bias.

A124. The requirement in paragraph 29(a) for the auditor to determine that the range includes only amounts that are supported by sufficient appropriate audit evidence does not mean that the auditor is expected to obtain audit evidence to support each possible outcome in the range individually. Rather, the auditor is likely to obtain evidence to determine that the points at both ends of the range are reasonable in the circumstances, thereby supporting that amounts falling between those two points also are reasonable.

A125. The size of the auditor's range 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. This situation is more likely to arise in circumstances when the estimation uncertainty associated with the accounting estimate is itself multiples of materiality, which is more common for certain types of accounting estimates or in certain industries, such as insurance or banking, where a high degree of estimation uncertainty is more typical and there may be specific requirements in the applicable financial reporting framework in that regard. Based on the procedures performed and audit evidence obtained in accordance with the requirements of this ISA, the auditor may conclude that a range that is multiples of materiality is, in the auditor's judgment, appropriate in the circumstances. When this is the case, the auditor's evaluation of the reasonableness of the disclosures about estimation uncertainty becomes increasingly important, particularly whether such disclosures appropriately convey the high degree of estimation uncertainty and the range of possible outcomes. Paragraphs A139 - A144 include additional considerations that may be relevant in these circumstances.

## *Other Considerations Relating to Audit Evidence* (Ref: Para. 30)

A126. Information to be used as audit evidence, regarding risks of material misstatement relating to accounting estimates, may have been produced by the entity, prepared using the work of a management's expert, or provided by an external information source.

### External Information Sources

A127. As explained in ISA 500,[53] the reliability of information from an external information source is influenced by its source, its nature, and the circumstances under which it is obtained. Consequently, the nature and extent of the auditor's further audit procedures to consider the reliability of the information used in making an accounting estimate may vary depending on the nature of these factors. For example:

- When market or industry data, prices, or pricing related data, are obtained from a single external information source, specializing in such information, the auditor may seek a price from an alternative independent source with which to compare.
- When market or industry data, prices, or pricing related data, are obtained from multiple independent external information sources and points to consensus across those sources, the auditor may need to obtain less evidence about the reliability of the data from an individual source.

- When information obtained from multiple information sources points to divergent market views the auditor may seek to understand the reasons for the diversity in views. The diversity may result from the use of different methods, assumptions, or data. For example, one source may be using current prices and another source using future prices. When the diversity relates to estimation uncertainty, the auditor is required by paragraph 26(b) to obtain sufficient appropriate audit evidence about whether, in the context of the applicable financial reporting framework, the disclosures in the financial statements that describe the estimation uncertainty are reasonable. In such cases professional judgment is also important in considering information about the methods, assumptions or data applied.
- When information obtained from an external information source has been developed by that source using its own model(s). Paragraph A34e of ISA 500 provides relevant guidance.

---

[53] ISA 500, Paragraph A31

A128. For fair value accounting estimates, additional considerations of the relevance and reliability of information obtained from external information sources may include:

(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.

A129. When information from an external information source is used as audit evidence, a relevant consideration for the auditor may be whether information can be obtained, or whether the information is sufficiently detailed, to understand the methods, assumptions and other data used by the external information source. This may be limited in some respects and consequently influence the auditor's consideration of the nature, timing and extent of procedures to perform. 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. Paragraph A34f of ISA 500 provides guidance with respect to restrictions placed by the external information source on the provision of supporting information.

## Management's Expert

A130. Assumptions relating to accounting estimates that are made or identified by a management's expert become management's assumptions when used by management in making an accounting estimate. Accordingly, the auditor applies the relevant requirements in this ISA to those assumptions.

A131. If the work of a management's expert involves the use of methods or sources of data relating to accounting estimates, or developing or providing findings or conclusions relating to a point estimate or related disclosures for inclusion in the financial statements, the requirements in paragraphs 21 - 29 of this ISA may assist the auditor in applying paragraph 8(c) of ISA 500.

### Service Organizations

A132. ISA 402[54] deals with the auditor's understanding of the services provided by a service organization, including internal control, as well as the auditor's responses to assessed risks of material misstatement. When the entity uses the services of a service organization in making accounting estimates, the requirements and guidance in ISA 402 may therefore assist the auditor in applying the requirements of this ISA.

---

[54] ISA 402, *Audit Considerations Relating to an Entity Using a Service Organization*

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Design and implement a response to the RMMs related to an accounting estimate [ISA | 4331]

## What do we do?

Design and implement a response to the risks of material misstatement related to an accounting estimate, based on the assessed level of CAR.

## Why do we do this?

We design our audit approach for each method, assumption and data and application of the elements to respond to the CAR assessment in order to obtain sufficient appropriate audit evidence.

Our planned audit procedures may consist of a substantive testing approach, which does not include tests of controls, or a controls approach, which includes both tests of controls and substantive tests.

## Execute the Audit

### How do we design and implement a response for the selection and application risks? [ISA | 4331.15560]

We perform the same activities for the selection of the individual methods, assumptions or data and the application of the methods, assumptions, and data as for RMMs related to non-estimates. See activity - 'Design and perform procedures to address each RMM'.

Consistent with how we design a response for RMMs related to non-estimates, we design our response to gather more persuasive audit evidence for those methods, assumptions, and data for which the selection or the application have a higher inherent risk. We calibrate the level of audit evidence we obtain by altering the nature, timing and/or extent of our tests of controls or substantive procedures. This includes properly responding to items containing significant risks, including fraud risks, as well as determining whether individuals with specialized skills or knowledge are needed.

Is there anything incremental that we consider in designing and implementing our response specific to accounting estimates? [ISA | 4331.15559]

Yes, we also perform the activity 'Determine whether to test an accounting estimate using one or a combination of three substantive approaches' and Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework.

How do we respond to significant risks related to an accounting estimate? [ISA | 4331.15568]

We perform the activity 'Perform substantive procedures that respond to significant risks'.

How do we respond to fraud risks related to an accounting estimate? [ISA | 4331.15570]

Our response to fraud risks related to an accounting estimate involves the application of professional skepticism in gathering and evaluating audit evidence.

See activity related to how to respond to fraud risks at 'Design and perform procedures to address each assertion-level RMM due to fraud'.

How do we apply professional skepticism in gathering and evaluating audit evidence when responding to the relevant risks of material misstatement? [ISA | 4331.15571]

Applying the appropriate level of professional skepticism when designing and implementing a response related to an accounting estimate is done similarly to when we apply professional skepticism in our risk assessment procedures related to accounting estimates - see question 'How do we apply the appropriate level of professional skepticism when auditing an accounting estimate?' We also perform the activities in 'Apply Professional Skepticism'.

How do we respond to management bias related to an accounting estimate? [ISA | 4331.15572]

We perform additional procedures. See the activity 'Evaluate management bias in the preparation of accounting estimates'.

What do we do when an assumption is developed using its own methods, assumptions, and data? [ISA | 4331.15573]

In these situations, it is often most effective to treat these assumptions as a separate estimate, or a component of an estimate, following the same approach as any other estimate that contains methods, assumptions, and data. We sometimes refer to these assumptions as 'an estimate within an estimate'.

What do we consider when we decide to use a KPMG specialist in our audit? [ISA | 4331.15574]

When we decide to use a KPMG specialist in our audit, we perform activity 'Perform specific procedures when using the work of a management's specialist' and sub-activities'. This includes considering whether the KPMG specialist's understanding of fair value, in the case of fair value measurements, and the method and assumptions that the KPMG specialists will use are consistent with those of management and the applicable financial reporting framework.

# 1.1 Identify PRPs related to an accounting estimate and determine which process control

# activities are relevant to the audit, if applicable [ISA | 4332]

## What do we do?

Identify the process risk points AND determine which controls are relevant to the audit

## Why do we do this?

We identify the points in the entity's process where a misstatement could occur so that we can then:

- determine which process control activities are relevant to address those process risk points (PRPs);
- further assess the factors that affect the risks of material misstatement; and
- design further audit procedures.

Then, before we evaluate the design and implementation of an entity's control activities, we determine which are relevant to the audit.

## Execute the Audit

### How do we identify PRPs and understand relevant process control activities related to accounting estimates? [ISA | 4332.157148]

As part of our walkthrough or inquiry and observation or inspection procedures over the estimation process, we identify the PRPs where the risks of material misstatement may manifest themselves in the process, and then identify the process control activities management has developed and deployed to mitigate the process risk points (see activity 'Identify process risk points' for further information).

See question "How do we obtain an understanding of business processes?" for guidance on when to perform (i) a walkthrough or (ii) inquiry and observation or inspection based on the applicable International-Enhanced methodology.

### Under what circumstances do we identify process risk points? [ISA | 4332.1400]

We identify PRPs, and the relevant process control activities that mitigate them, in the following cases:

- an integrated audit;
- when we evaluate the design and implementation (regardless of whether we go on to test the operating effectiveness of process control activities) in a non-integrated audit

### When are process control activities relevant to our audit? [ISA | 4332.1500]

Refer to question 'Which control activities do we obtain an understanding of and are relevant to the audit?'

#### How do we determine which process control activities are relevant to the audit? [ISA | 4332.1600]

We perform the activity, 'Determine which control activities are relevant to the audit'.

#### How do we obtain an understanding of process control activities? [ISA | 4332.1700]

We obtain an understanding of process control activities by performing the activity 'Understand control activities'.

### What are some examples of controls specific to an accounting estimate? [ISA | 4332.1800]

Controls specific to an estimate may include:

- Controls around the nature and extent of oversight and governance that the entity has in place over management's process for making an accounting estimate, including the controls over data and the segregation of duties between those committing the entity to the underlying transactions and those responsible for undertaking valuations.
- Controls related to how management identifies the need for, and applies, specialized skills or knowledge related to an accounting estimate, including with respect to the use of a management's specialist.
- Controls related to how the entity's risk assessment process identifies and addresses risks related to an accounting estimate, including with respect to the susceptibility to management bias.
- Controls related to management review and response to the outcome of previous measurement(s).
- Other control activities relevant to the audit over management's process for making an accounting estimate, such as:
  - the change controls and security procedures for valuation models and relevant information systems, including approval processes;
  - the controls over the consistency, timeliness, and reliability of the data used in valuation models;
  - the controls over selecting a point estimate from a range of reasonably possible amounts; and
  - the controls over the sensitivity of significant assumptions to changes.

For example, to achieve its objectives, management of an entity with extensive derivatives transactions may implement controls that call for-

(a) Monitoring by a control staff that is fully independent of derivatives activities.
(b) Derivatives personnel to obtain, prior to exceeding limits, at least oral approval from members of senior management who are independent of derivatives activities.
(c) Senior management to properly address limit excesses and divergences from approved derivatives strategies.
(d) The accurate transmittal of derivatives positions to the risk measurement systems.
(e) The performance of appropriate reconciliations to validate data integrity across the full range of derivatives, including any new or existing derivatives that may be monitored apart from the main processing networks.
(f) Derivatives traders, risk managers, and senior management to define constraints on derivatives activities and justify identified excesses.
(g) Senior management, an independent group, or an individual that management designates to perform a regular review of the identified controls and financial results of the derivatives activities to determine whether controls are being effectively implemented and the entity's business objectives and strategies are being achieved.

(h) A review of limits in the context of changes in strategy, risk tolerance of the entity, and market conditions.

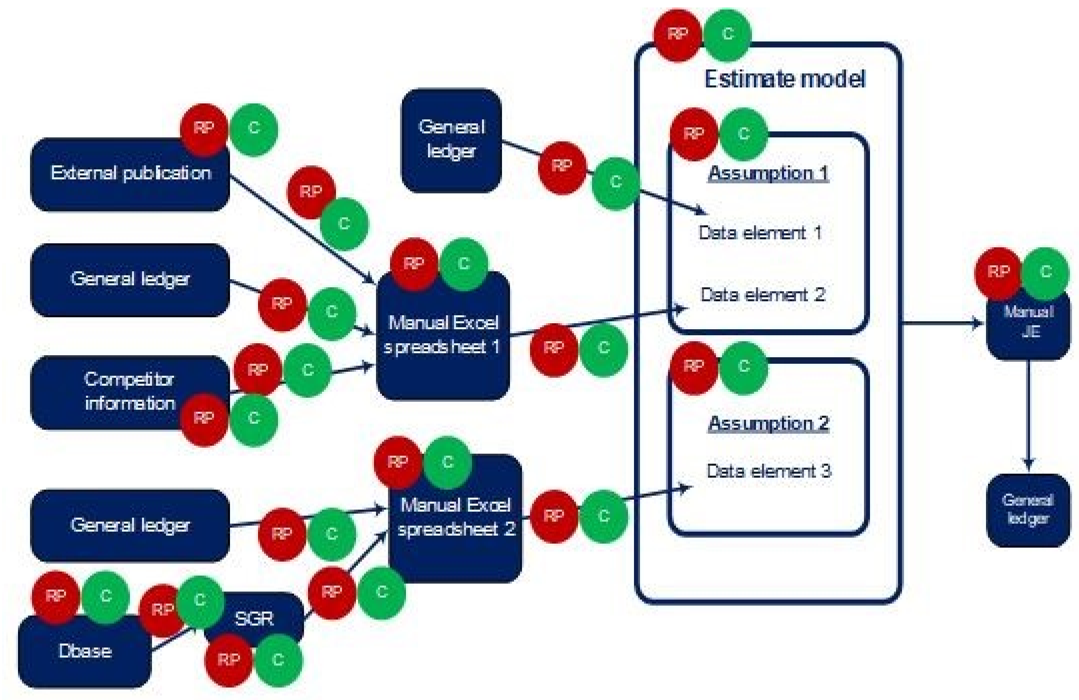
### What do we use for RAWTC when we intend to test the operating effectiveness of relevant controls for an individual method, assumption or data? [ISA | 4332.15584]

We assess RAWTC in the same way as we do for any other control.

### How do we document PRPs related to an accounting estimate? [ISA | 4332.15586]

We use the same documentation we initially prepared to document our understanding of the process during our risk assessment procedures.

We may choose to include a diagram of the method/model, assumptions, and data that are used to develop an accounting estimate similar to the following:




RP - applicable process risk point

C - process control activity implemented by management to address the applicable process risk point

# 1.2 Determine whether to test an accounting estimate using one or a combination of three substantive approaches [ISA | 4333]

## What do we do?

Determine whether to test an accounting estimate using one or a combination of three substantive approaches.

# Why do we do this?

We test an accounting estimate using one or a combination of three substantive approaches. Our determination of which approach(es) to use depends on which will most effectively provide sufficient appropriate audit evidence.

# Execute the Audit

### What are the three substantive approaches used to test an accounting estimate? [ISA | 4333.1300]

We test an accounting estimate using one or a combination of the following approaches:

(1) Test and evaluate the entity's process for developing an accounting estimate;
(2) Develop an independent expectation of an accounting estimate; and
(3) Evaluate events and transactions occurring after the measurement date to test an accounting estimate.

We may use any of the three approaches (individually or in combination) to substantively test an accounting estimate as a whole OR the differing elements of an accounting estimate.

### How do we determine which of the three substantive approaches to use when we have an RMM associated with selection risk? [ISA | 4333.1400]

Ultimately, the approach, or combination of approaches, used is determined based on which approach we believe best provides sufficient appropriate audit evidence.

Our decision as to which response to use, individually or in combination, will be influenced by:

- The nature of an accounting estimate, including whether it arises from routine or non-routine transactions
- Whether the procedure is expected to effectively provide us with sufficient appropriate audit evidence
- Our assessment of the RMM(s) related to an estimate
- The availability of audit evidence from events occurring up to the date of the auditor's report that is relevant to events and conditions at the measurement date.

The work that we performed as part of our risk assessment, including any testing of internal controls, will help inform our decisions about the approach we take to audit an estimate. We design our further audit procedures considering the level of CAR that we have determined for each of the methods, assumptions, and data. We are careful not to bias the design of our procedures such that we only seek to obtain corroborative evidence or exclude audit evidence that is contradictory.

#### Which approach do we use when we have only identified an RMM associated with the application of the methods, assumptions, and data? [ISA | 4333.8764]

When we have only identified an RMM associated with the application of the methods, assumptions, and data, we use the 'Test and evaluate the entity's process for developing an accounting estimate' substantive approach. We apply this approach by performing the activity 'Test and evaluate the application of the methods, assumptions, and data'.

#### How does our assessment of inherent risk affect the substantive procedures we perform for accounting estimates? [ISA | 4333.15562]

Inherent risk serves as a practical measure that we can use to gauge the level of audit procedures to perform. However, it is ultimately our assessed level of CAR that helps us determine the nature, timing and extent of our audit procedures to address each of the risks related to the methods, assumptions and data (see activities 'Assess CAR for the selection of the individual methods, assumptions, and data, if applicable' and 'Assess CAR for the application of the methods, assumptions, and data, if applicable'). We obtain more persuasive audit evidence the higher our assessment of risk.

For estimates, as our assessment of risk increases, we also consider whether to apply more than one of the testing approaches (i.e. increase the quantity of evidence) and/or we consider the source of the audit evidence (i.e. increase the quality of evidence).

### When might the three substantive approaches to testing an accounting estimate be appropriate? [ISA | 4333.1500]

The following table provides the circumstances for when each approach may be appropriate:

| Approach | Circumstances when the approach may be appropriate |
|---|---|
| Test the entity's process used to develop an accounting estimate | This may be appropriate, for example, when:<br>• an accounting estimate is derived from the routine processing of data by the entity's accounting system;<br>• our review of similar accounting estimates made in the prior period financial statements suggests that management's current period process is likely to be effective;<br>• an accounting estimate is based on a large population of items of a similar nature that individually are not significant;<br>• the applicable financial reporting framework specifies how management is expected to make the accounting estimate;<br>• the accounting estimate is a fair value accounting estimate developed on a model that uses observable and unobservable inputs;<br>• the data and significant assumptions underlying the estimate are largely based on an entity's internal information (e.g., sales projections or employee data); and<br>• the estimate is generated using a customized entity-specific model. |
| Develop an independent expectation for comparison to the entity's estimate | This may be appropriate, for example, when:<br>• an accounting estimate is not derived from the routine processing of data by an accounting system;<br>• our review of similar accounting estimates made in the prior period financial statements suggests that management's current period process is not expected to be effective;<br>• the entity's controls within and over management's process for making accounting estimates are not well designed or properly implemented; |

| | |
|---|---|
| | • events or transactions between the period end and the date of the auditor's report have not been properly taken into account, when it is appropriate for management to do so, and such events or transactions appear to contradict management's point estimate.;<br>• there are appropriate alternative assumptions or sources of relevant data that can be used in developing our point estimate or a range; and<br>• Management has not taken appropriate steps to understand and address the estimation uncertainty.<br><br>Even when the entity's controls are well designed and properly implemented, developing a point estimate or a range may be an effective or efficient response to the assessed risks. In other situations, we may consider this approach as part of determining whether further procedures are appropriate and, if so, their nature and extent. |
| Evaluate audit evidence from events or transactions occurring after the measurement date related to an accounting estimate for comparison to the entity's estimate. | This may be appropriate, for example, when such events or transactions:<br>• are expected to occur; and<br>• can provide relevant and reliable audit evidence that confirms or contradicts an accounting estimate.<br><br>For example, this may be an appropriate response if litigation has been settled, the entity has sold an impaired asset, or receivables have been collected. |

### When testing internal controls, do we have to use a 'Test and evaluate the entity's process for developing an accounting estimate' substantive approach? [ISA | 4333.159429]

No, testing internal controls does not solely drive the substantive approach to be used to test an accounting estimate.

However, the work we perform as part of our risk assessment, including any testing of controls, will help inform our decisions about the substantive approach to take to test the accounting estimate.

For example, we obtain an understanding of the entity's process and test controls. The entity's controls are properly designed, implemented, and operating effectively. However, based on the nature of the accounting estimate, we determined, in this case, that developing an auditor's point estimate or a range is the more efficient and effective way to respond to the risk and provide us with sufficient appropriate audit evidence. Therefore, while we use a controls approach over relevant elements, we use a 'Develop an independent expectation for comparison to the entity's estimate' substantive approach to obtain our substantive audit evidence related to the accounting estimate.

### Which substantive approach do we use when we have an RMM associated with application risk? [ISA | 4333.159430]

Consistent with the selection risk, the approach, or combination of approaches, used is determined based on which approach we believe best provides sufficient appropriate audit evidence.

When addressing an RMM for application risk for an estimate where we have also identified an RMM for selection risk, we may align our substantive approach to be consistent for both risks, as follows.

| Selection Risk | Application Risk |
|---|---|
| Test the entity's process for developing an accounting estimate | Direct test application by:<br>- Testing the entity's calculation as a whole<br>- Testing the entity's calculations using a sample approach<br>- Performing a substantive analytical procedure |
| Develop an independent expectation of the accounting estimate | Indirect test: This approach indirectly tests the application of the methods, assumptions and data so no further audit procedures need to be performed. |
| Evaluate events and transactions occurring after the measurement date to test an accounting estimate | Indirect test: This approach indirectly tests the application of the methods, assumptions and data so no further audit procedures need to be performed. |

Ultimately, the substantive approach, or combination of approaches, used is determined based on which approach we believe best provides sufficient appropriate audit evidence.

Our decision as to which response to use, individually or in combination, will be influenced by:

- The nature of an accounting estimate, including whether it arises from routine or non-routine transactions
- Whether the procedure is expected to effectively provide us with sufficient appropriate audit evidence
- Our assessment of the RMM(s) related to an estimate
- The availability of audit evidence from events occurring up to the date of the auditor's report that is relevant to events and conditions at the measurement date.

| Approach | Circumstances when the approach may be appropriate |
|---|---|
| Test the entity's calculations for the estimate as a whole | This may be appropriate, for example, when:<br>• a single accounting estimate is determined using a model, whether configured within an entity's IT |

| | |
|---|---|
| | system(s) or created using end-user computing applications; or<br>• a single accounting estimate is developed by a management's specialist |
| Test the entity's calculations using a sampling approach | This may be appropriate, for example, when:<br>• an accounting estimate is made up of a population of items for which the application of the model and related calculations is consistent across the items in the population<br>• the population of items is derived from the routine processing of data by the entity's accounting system |
| Perform a substantive analytical procedure | This may be appropriate, for example, when:<br>• the application is consistent period over period and there is a plausible and sufficiently predictable relationship upon which to develop our expectation for the estimate and we have evaluated the reliability of the data used to develop our expectation |
| Other | This may be appropriate, for example, when:<br>• the estimate is developed by a management's specialist using a proprietary model that we cannot access. Refer to 'What if the management's specialist's model is proprietary and we cannot access it?' in activity 'Test whether the calculations are made in accordance with the method and are mathematically accurate' |
| Indirect test: This approach indirectly tests the application of the methods, assumptions and data so no further audit procedures need to be performed. | This may be appropriate, for example, when:<br>• we select a 'Develop an independent expectation for comparison to the entity's estimate'<br>• we select an 'Evaluate audit evidence from events or transactions occurring after the measurement date related to the accounting estimate for comparison to the entity's estimate' |

### When are substantive procedures alone not able to provide sufficient appropriate audit evidence for an accounting estimate? [ISA | 4333.1800]

There may be times when we cannot obtain sufficient appropriate audit evidence from substantive procedures alone, especially when an estimate is more complex and / or a significant amount of information or data elements are electronically initiated, recorded, processed or reported. In these situations, we test controls as part of our response.

> For example, a complex expected credit loss provision may be appropriate for a financial institution or utility entity. In the case of a utility entity, the data used in developing the expected credit loss provision may comprise many small balances resulting from a high volume of transactions. In these circumstances, we may conclude that sufficient appropriate audit evidence cannot be obtained without testing controls around the model used to develop the expected credit loss provision to conduct business, such as the financial services industry.

See activity, 'Test controls when substantive procedures alone cannot provide sufficient audit evidence'.

# 1.2.1 Evaluate events and transactions occurring after the measurement date to test an accounting estimate [ISA | 4357]

## What do we do?

Evaluate events and transactions occurring after the measurement date to test an accounting estimate

## Why do we do this?

When an accounting estimate has been realized or settled due to an event or transaction that happens after the measurement date, that transaction or event may provide audit evidence about management's estimate at the measurement date, provided that the conditions are the same or sufficiently similar between the measurement date and the date the transaction or event occurred.

If our audit approach includes obtaining audit evidence from events up to the date of the auditor's report, it may not be necessary to test the individual methods, assumptions and data used by management when we can obtain sufficient appropriate audit evidence from these events and transactions occurring after the measurement date.

## Execute the Audit

### How do we evaluate the events or transactions occurring after the measurement date to test an accounting estimate? [ISA | 4357.1300]

We evaluate events or transactions occurring after the measurement date to test an accounting estimate by:

- 'Evaluating audit evidence from events or transactions occurring after the measurement date' and
- 'Considering changes between the measurement date and the event or transaction date'.

### When might we test an accounting estimate by evaluating audit evidence from events or transactions occurring after the measurement date? [ISA | 4357.15539]

We might choose to test an accounting estimate by evaluating audit evidence from events or transactions occurring after the measurement date when such events or transactions:

- are expected to occur; and
- can provide relevant and reliable audit evidence that confirms or contradicts an accounting estimate.

> For example, this may be an appropriate response if litigation has been settled, the entity has sold an impaired asset, or receivables have been collected.

### When might events or transactions occurring after the measurement date provide sufficient appropriate audit evidence for an accounting estimate? [ISA | 4357.15540]

Events or transactions occurring after the measurement date may provide sufficient appropriate audit evidence for an accounting estimate when they are relevant to an accounting estimate and reflect the events and conditions existing at the time an estimate was made - i.e., the measurement date.

> For example:
>
> - Selling all of the inventory of a discontinued product shortly after period end may provide audit evidence for the valuation of the inventory at net realizable value as of the reporting date.
> - The sale of another real estate owned (OREO) property may support the lower of cost or fair value of the property as of the reporting date.

However, there are events or transactions occurring after the measurement date that do *not* reflect the events or conditions existing at the measurement date and, therefore, may not provide sufficient appropriate audit evidence for an accounting estimate.

> For example:
>
> - The conditions or events relating to some accounting estimates which develop over an extended period such as an insurance reserve.
> - The measurement of fair value accounting estimate such as the prices of actively traded marketable securities that change after the reporting date.

In these situations, these events or transactions may reflect changes in circumstances occurring *after* the balance-sheet date that do not reflect the events and conditions existing at the time an estimate was made.

As the length of time from the measurement date increases, the likelihood that events and conditions have changed during the intervening period also increases.

### Do we still obtain an understanding of management's process and perform risk assessment procedures over each element of the accounting estimate? [ISA | 4357.15505]

Yes. Regardless of our substantive approach, we:

- Understand the process by which the accounting estimates are developed, and
- Identify and assess the RMMs related to an accounting estimate.

We do this even when we are not testing or relying on controls.

# 1.2.1.1 Evaluate audit evidence from events or transactions occurring after the measurement date

[ISA | 4358]

## What do we do?

Evaluate whether evidence from events or transactions occurring after the measurement date is sufficient, reliable, and relevant to an accounting estimate and whether the evidence supports or contradicts an estimate

## Why do we do this?

Events or transactions sometimes occur after the measurement date but before the date of the auditor's report that can be used to evaluate the reasonableness of accounting estimates. In such circumstances, we evaluate the audit evidence that the events or transaction provide before concluding whether other evidence is necessary.

## Execute the Audit

### How do we evaluate audit evidence from events or transactions occurring after the measurement date?

[ISA | 4358.1300]

Consistent with what we do for all audit evidence obtained, we:

- evaluate whether the audit evidence is sufficient and appropriate to address the RMMs,
- evaluate whether the audit evidence is reliable and relevant to the accounting estimate, and
- evaluate whether the audit evidence supports or contradicts the accounting estimate.

#### What if the audit evidence obtained from an event or transaction occurring after the measurement date contradicts an accounting estimate?

It may indicate that:

- the amount recorded is misstated (audit misstatement),
- management has ineffective processes for determining the accounting estimate (control deficiency), or
- there is potential management bias.

> For example:
>
> - Evidence obtained after the measurement date, indicates that a major customer filed for bankruptcy; however, the entity did not consider the collectability of this customer's receivables in its determination of direct write-offs or the allowance for doubtful accounts.
> - Evidence obtained after the measurement date, indicates that slow moving inventory was sold at prices lower than the cost to manufacture the product; however, the entity did not consider the inventory in its determination of allowance for inventory obsolescence.

How is our evaluation of events and transactions occurring after the measurement date when testing an estimate different than our evaluation of subsequent events in accordance with the Subsequent Events auditing standard? [ISA | 4358.15543]

Evaluating audit evidence from events or transactions occurring after the measurement date as a response to the RMM of an estimate is a substantive procedure specific to an estimate and thus differs from the evaluation of subsequent events and audit procedures performed in the subsequent period pursuant to the activities in the chapter on subsequent events (AS 2801 , AU-C 560 , ISA 560 ).

# 1.2.1.2 Consider changes between the measurement date and the event or transaction date [ISA | 4359]

## What do we do?

Take into account changes in the entity's circumstances and other relevant conditions between the measurement date and the event or transaction date when assessing the relevance of audit evidence

## Why do we do this?

We assess relevance and reliability of the audit evidence provided by the event or transaction that occurred in order to validate that it is reflective of the conditions present at the measurement date and provides sufficient appropriate audit evidence.

## Execute the Audit

How do we evaluate the relevance and reliability of audit evidence provided by the event or transaction that occurred? [ISA | 4359.1300]

We perform the activities in 'Evaluate the relevance and reliability of information used as audit evidence '.

How do we determine whether an event or transaction provides evidence relevant to an accounting estimate at its measurement date? [ISA | 4359.1400]

We consider whether that event or transaction is reflective of the circumstances and other conditions existing at the balance sheet date taking into account changes in circumstances and other relevant conditions between the event and the measurement date. In other words, we consider whether the event or transaction simply provides additional evidence with respect to conditions that existed at the measurement date but were not fully known or understood. One way to do this is to ask ourselves, "if the evidence provided by the event or transaction was known as of the balance sheet date or during the close process, would or should management have used it in determining their estimate?"

> For example when responding to a risk of understatement as it relates to testing the completeness and valuation of accrued liabilities, testing the recorded accrued liabilities is not

> relevant. Instead testing information such as subsequent disbursements, subsequently received invoices, suppliers' statements and unmatched receiving reports may be relevant.

Additionally, some accounting estimates, by their nature, do not have an outcome that is relevant audit evidence.

For further information on assessing whether the events or transactions are relevant and thus is considered appropriate audit evidence, see activity 'Determine whether subsequent events are reflected in the financial statements '. This determination can involve a high amount of judgment and is an area where we apply professional skepticism.

> 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 at a later date may differ from the related accounting estimate made at the reporting date because, with the passage of time, the market participants' perceptions of value may have changed.

# Examples

## What are some examples of audit evidence obtained from events or transactions occurring after the measurement date that we evaluate for relevance? [ISA | 4359.1500]

Scenario 1 - Inventory write-off

***Fact Pattern***

Inventory is written off subsequent to period end due to a major casualty, such as a fire or flood, experienced at one of the entity's manufacturing plants.

***Analysis***

Because the casualty event occurred after the measurement date, this represents a new condition that changes the entity's ability to realize the benefits from its inventory but it is not relevant to the valuation of the inventory as of the measurement date. It may be considered a subsequent event that management discloses; however, it does not provide relevant audit evidence about the valuation of inventory at the measurement date.

Scenario 2 - Settlement over a contingency

***Fact Pattern***

The entity enters a settlement with its regulator subsequent to period-end related to findings from a market conduct exam over transactions and market practices that occurred in the previous year.

***Analysis***

The transaction provides relevant audit evidence over the accrual made for estimated amounts owed to the regulatory body, as the settlement pertains to operations that were under examination at the measurement date.

# 1.2.2 Test and evaluate the entity's process for developing an accounting estimate [ISA | 4334]

## What do we do?

Test and evaluate the entity's process for developing an accounting estimate, to determine whether the estimate is reasonable in the circumstances, in conformity with the applicable financial reporting framework, and free from bias that results in material misstatement

## Why do we do this?

Our objective is to obtain sufficient appropriate audit evidence to determine whether an estimate is reasonable in the circumstances, has been accounted for and disclosed in conformity with the applicable financial reporting framework, and is free from bias that results in material misstatement. In order to achieve the objective, we test and evaluate the entity's process used to develop the estimate.

## Execute the Audit

### How do we test the process by which an accounting estimate was developed? [ISA | 4334.1300]

We test the process by which an accounting estimate was developed by performing audit procedures over the following elements of management's estimate:

| Element of an estimate | Perform the Activity |
|---|---|
| Method/model (selection) | 'Test and evaluate the methods used in the entity's estimation process' |
| Method/model (application) | 'Test and evaluate the application of the methods, assumptions, and data' |
| Assumptions | 'Evaluate the assumptions used in the entity's estimation process' |
| Data | 'Evaluate the data used in the entity's estimation process' |

These activities are designed and performed to obtain sufficient appropriate audit evidence regarding the selection and application of the methods, relevant assumptions, and the data.

In addition, we also Evaluate whether management has selected an appropriate point estimate.

# 1.2.2.1 Test and evaluate the methods used in the entity's estimation process [ISA | 4335]

# What do we do?

Test and evaluate the methods used in the entity's estimation process

# Why do we do this?

When we test the entity's process for developing an accounting estimate, our procedures are designed to test and evaluate the entity's method or methods used in making the accounting estimate. This helps us to obtain sufficient appropriate audit evidence over the accounting estimate and address the risk of material misstatement that arises from the entity's selection and application of methods.

# Execute the Audit

### How do we test and evaluate the methods used in the entity's estimation process? [ISA | 4335.1300]

We test and evaluate the methods used in the entity's estimation process by performing procedures that are designed to address the RMM associated with selection risk and the RMM associated with application risk.

We test and evaluate whether the selection of the method(s) is appropriate by performing the following activities:

- Evaluate whether the method is appropriate in the context of the applicable financial reporting framework or the nature of the related account or disclosure and the business, industry, and environment;
- Evaluate whether changes to the method used in prior periods are appropriate; and
- Evaluate, if applicable, whether adjustments to the output of the model are appropriate.

We test and evaluate whether the application of the methods, assumptions and data is appropriate by performing the following activities:

- Test and elevate the application of the methods, assumptions, and data.

In addition, we evaluate:

- whether there is evidence of management bias, either in the selection or application of the method, the adjustments to the outputs of the model, or the determination of the point estimate when there is a range of possibilities; and
- whether judgments have been consistently applied.

We keep these items in mind as we perform our procedures over the methods used so that we are able to conclude on these items upon the completion of our audit work.

# 1.2.2.1.1 Evaluate whether the method is appropriate in the context of the financial reporting framework or the nature of the account

# or disclosure and the business, industry, and environment [ISA | 4336]

## What do we do?

Evaluate whether the method used by the entity to determine the estimate is appropriate in the context of the financial reporting framework or the nature of the account or disclosure and the business, industry, and environment in which the entity operates

## Why do we do this?

As part of evaluating the appropriateness of the method used by the entity in determining an estimate, we evaluate whether the method selected is appropriate in the context of the applicable financial reporting framework, the nature of the related account or disclosure and the business, industry, and environment in which the entity operates. If we fail to appropriately evaluate the appropriateness of the method(s), it will impact our ability to obtain sufficient appropriate audit evidence over the estimate.

## Execute the Audit

### How do we determine whether the method selected in the estimation process is appropriate? [ISA | 4336.15544]

We perform procedures to address whether the method:

- is consistent with the requirements of the applicable financial reporting framework,
- is consistent with any industry practices,
- aligns with the entity's business and environment, and
- aligns with the nature of the estimate.

In many cases, certain of our risk assessment procedures can provide us the information necessary to make our evaluation. We may also be able to look to management's own process/methodology for validating they have complied with the applicable financial reporting framework and have not deviated from industry practice (unless determined to be appropriate to do so).

As part of our procedures, we also address whether management's judgments have been applied consistently, regardless of the level of complexity in the model, and whether those judgments give rise to indicators of possible management bias.

### What if the applicable financial reporting framework does not prescribe an estimation method or offers a variety of approaches? [ISA | 4336.15545]

When the applicable financial reporting framework does not prescribe a particular method or model, we focus on whether the method is appropriate considering the nature of the estimate and the business, industry and environment in which the entity operates.

> For example, the financial reporting framework may specify a particular method in general to be used (e.g. fair value) but not the specific method (e.g., a discounted cash flow). In these cases, our evaluation focuses on whether the discounted cash flow method is appropriate given the nature of the account, etc. A discounted cash flow method may be appropriate for valuing certain

long-lived assets; however, other valuation methods (e.g., a market approach using comparable transactions) may be more appropriate for valuing different types of assets.

### Are there common process risk points (PRPs) and controls related to the appropriateness of the estimation method? [ISA | 4336.15546]

Although process risk points (PRPs) and specific controls are entity specific, the following are examples of the types of PRPs and controls we may identify when we are evaluating or testing controls related to the appropriateness of the methods selected:

| PRPs | Controls |
|---|---|
| • Appropriate personnel do not analyze the method, the financial reporting framework, and whether the method is appropriate for the nature of the account or disclosure and the business, industry, and environment in which the entity operates<br>• The analysis of whether the method is appropriate is incorrect | • A periodic review to validate the model selected is still suitable for its intended use, which may include management evaluating the model's theoretical soundness prior to its use, the consistency and completeness of the model's inputs with market practices and the model's output compared to actual transactions.<br>The control is performed annually or when there are changes to the method or to the financial reporting framework and documented in a memo prepared by the control owner. |

We may find that these controls are performed in conjunction with other controls. Depending on the complexity of the model, they may include discussion about the model's intended application and limitations, its key parameters, inputs and results of any validation analysis performed.

The PRPs may be described differently or in more detail depending on the complexity of the model or the financial reporting framework.

#### What if no changes to the method, the financial reporting framework or the business, industry, and environment have occurred? [ISA | 4336.15547]

When there are no changes, an entity may have controls designed to consider the method, the financial reporting framework, and the business, industry, and environment to determine that there were no changes. Once that is determined, the control operator may not have any further actions to take.

### What types of substantive procedures might we perform over the appropriateness of the estimation process in the context of the financial reporting framework the nature of the account or disclosure and the business, industry, and environment? [ISA | 4336.15548]

An analysis of the method, the relevant framework, and industry practice may be appropriate to address the risk, but when there are significant changes to the method, the framework, or industry practice, our procedures are altered to address the risk.

> For example, when a new accounting standard is adopted or there is a major change in the industry, our procedures may include not just an analysis of the changes in the standard or the industry and the related changes to the method, but also sampling or other traditional substantive procedures.

#### How might we perform a dual purpose test when evaluating the appropriateness of the estimation method? [ISA | 4336.15549]

When we test the effectiveness of the internal controls, we may structure our procedures to both obtain evidence that management has evaluated the method and also independently re-perform that evaluation to determine that the method complies with the applicable financial reporting framework and is appropriate. As a result, there may not be any incremental evidence to obtain to make our evaluation.

However, we may perform additional substantive procedures based on our assessed level of CAR - for example, developing an independent expectation about the appropriate method.

### What if we determined that the method was appropriate in the prior period? [ISA | 4336.15550]

We still update our understanding of the method, the applicable financial reporting framework and any industry practice to determine that there were no changes and that the method continues to be appropriate. This may provide sufficient evidence to address the risk, but we still evidence our evaluation by capturing the full analysis of how we concluded that the method is appropriate in the context of the financial reporting framework and industry practice.

### How might management bias impact the risk of the appropriateness of the method? [ISA | 4336.15551]

When the applicable financial reporting framework does not specify one method/model or how to apply the method/model for a particular industry, it introduces subjectivity into management's selection and/or application of the method. Therefore, management makes judgments about the method, which may be susceptible to management bias.

Where these judgments exist, we also consider whether indicators of possible management bias exist.

> For example, if management selects a particular method that results in a favorable outcome or has no basis for the method selected, this may be an indicator of possible management bias.

Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

### How might inconsistent judgments impact the risk of the appropriateness of the method? [ISA | 4336.15552]

When judgments are inconsistent - either period over period or between similar judgments in different estimates - it may be an indicator of an increased level of risk related to the method.

Inconsistent judgments may impact our conclusion as to whether our assessed level of CAR for the method remains appropriate.

We also consider whether the audit evidence points to a misstatement and whether the financial statements as a whole are free from material misstatement.

#### What if the inconsistent judgments are intentional? [ISA | 4336.15553]

When management intentionally makes judgments that are inconsistent with one another this is an indicator of management bias. See 'How might inconsistent judgments impact the risk of the appropriateness of the method?' above for further information on how inconsistent judgments may impact our audit approach.

#### What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4336.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

### Can we use a KPMG specialist to understand the estimation method or help us evaluate its appropriateness? [ISA | 4336.15555]

Yes. This is particularly true when the models are complex or when special skills are used to determine the estimate (e.g., actuarial models). It may also be true in situations where there are a variety of methods available to management (e.g., valuation of intangible assets in a business combination).

#### When is a model more likely to be considered complex? [ISA | 4336.15556]

Indicators that a model, and the related method, are more complex can include situations where:

- Understanding and applying the method, including designing the model and selecting and using appropriate data and assumptions, calls for specialized skills or knowledge;
- It is difficult to obtain the data to use the model because there are restrictions on the availability or observability of, or access to, data; or
- It is difficult to maintain the integrity (e.g., accuracy, consistency, or completeness) of the data and assumptions in using the model due to multiple valuation attributes, multiple relationships between them, or multiple iterations of the calculation.

# 1.2.2.1.2 Evaluate whether changes to the method used in prior periods are appropriate [ISA | 4337]

## What do we do?

Evaluate whether changes to the method used in prior periods are appropriate

## Why do we do this?

When management changes their method(s) for determining an estimate, there is a risk that those changes may not be appropriate. We evaluate whether changes to the method are appropriate as part of our procedures to address the risks related to the appropriateness of the method used by the entity. If we fail to evaluate the appropriateness of changes to the method, we may be unable to obtain sufficient appropriate audit evidence.

# Execute the Audit

## How do we evaluate whether a change from the estimation method, including any models, used in prior periods is appropriate? [ISA | 4337.1300]

We perform procedures to address whether the changes from the method used in the prior period are appropriate. These procedures provide information to help us better understand:

- the change made;
- the reason for the change; and
- the impact of the change.

We first determine the reasons for the change and then evaluate the appropriateness of the change, by thinking about the impact of the change, the applicable framework and the circumstances.

If the outcome from the modified method or model is significantly different than the outcome derived using the previous method or model, we also understand the reasons for the different outcomes and evaluate the drivers of the different outcomes.

### Do we evaluate all changes from the estimation method used in prior periods? [ISA | 4337.1400]

Yes, but the extent of our work depends on how significant the changes are.

We also consider whether a change to the method or model ought to have been made from the prior period. A change in circumstances affecting the entity may necessitate a change in the method and / or the model.

### Do changes in methods also represent changes in accounting principles? [ISA | 4337.1500]

Some changes in methods are also considered changes in accounting principles. As such, we include this in our evaluation of changes in methods.

### What constitutes an appropriate reason for a change? [ISA | 4337.1600]

Appropriate reasons for a change may include:

- changing to a method that provides a more appropriate basis of measurement;
- a change that is supported by a change in the requirements of the financial reporting framework; or,
- a change that is supported by a change in circumstances.

### Are all changes from the estimation method used in prior periods appropriate, as long as we understand the reason for the change? [ISA | 4337.1700]

No. A lack of reason for a change, or the only reason being to achieve a certain financial result, is a warning to us that the change may not be appropriate and could be an indicator of management bias.

Additionally, a change that is not based on a change in circumstances or new information is considered arbitrary. Arbitrary changes in an accounting estimate result in inconsistent financial statements over time and may give rise to a financial statement misstatement and also be an indicator of possible management bias.

Further, it is not be appropriate for the change to have the effect that causes the method to no longer comply with the financial reporting framework. In fact, we evaluate changes in methods that represent changes in accounting principles when we assess the comparability of financial statements (see the chapter on assessing comparative information) (ISA 700)

### Are there common process risk points (PRPs) and controls related to the appropriateness of changes from the estimation method used in prior periods? [ISA | 4337.1900]

Although process risk points (PRPs) and specific controls are entity specific, the following are examples of the types of PRPs and controls we may identify when we are evaluating or testing controls related to the appropriateness of changes to the methods:

| PRPs | Controls |
|---|---|
| • There are changes made to the method/model without an appropriate understanding of the reason for the change and how the change impacts the financial statements.<br>• There are changes in the business, industry or environment that necessitates a change to the method but no change is made. | • A periodic review to evaluate the need for a change to the estimation method used.<br>The control may be performed annually, but if the business, industry, or environmental conditions dictate, it may be more frequent.<br>• A review to evaluate and approve a change to the method, including an understanding of why the change was needed and the impact of the change on the financial statements, as well as, validating the change was appropriately applied / incorporated into the method.<br>Consideration as to the appropriate level of review within the organization is part of our testing of the control.<br>• The control is performed on an as needed basis as changes are made. |

We may find that these controls are performed in conjunction with other controls.

The PRPs may be described differently or in more detail depending on the complexity of the model, the nature of the change, and the potential impact of the change.

### What types of substantive procedures might we perform over changes from the estimation method used in prior periods? [ISA | 4337.2100]

An analysis of the change to the method, which includes understanding the nature and impact of the change and whether the change may be appropriate. We also validate that the change was appropriately applied / incorporated into the method, as applicable.

#### How might we perform a dual purpose test when evaluating the appropriateness of changes made to the estimation method? [ISA | 4337.2200]

When we test the effectiveness of the internal controls, we may structure our procedures to both obtain evidence that management has evaluated the change and independently re-perform that evaluation to determine that the change was appropriate under the circumstances, that the change was authorized and that the change was appropriately applied / incorporated into the method. As a result, there may not be any incremental evidence to obtain for this particular risk.

However, we may perform additional substantive procedures based on our assessed level of CAR - for example, developing an independent expectation about the change in method.

### How might management bias impact the risk that changes from the estimation method used in prior periods are not appropriate? [ISA | 4337.2300]

Changes to the method/model that are subjective in nature may be more susceptible to management bias. Especially in situations where there are multiple acceptable models which yield significantly different outcomes.

Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

> For example, if management makes a change to the method that results in a favorable outcome, this may be an indicator of management bias.

### How might inconsistent judgments impact the risk of changes from the estimation method used in prior periods are not appropriate? [ISA | 4337.15557]

When judgments are inconsistent - either period over period or between similar judgments in different estimates - it may be an indicator of an increased level of risk related to the method.

Inconsistent judgments may impact our conclusion as to whether our assessed level of CAR for the method remains appropriate.

We also consider whether the audit evidence points to a misstatement and whether the financial statements as a whole are free from material misstatement.

#### What if the inconsistent judgments are intentional? [ISA | 4337.15558]

When management intentionally makes judgments that are inconsistent with one another this is an indicator of management bias. See 'How might inconsistent judgments impact the risk of changes from the estimation method used in prior periods are not appropriate?', above for further information how inconsistent judgments may impact our audit approach.

#### What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4337.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

Do we evaluate the consistent application of judgments even when they do not relate to complex models? [ISA | 4337.15563]

Yes. We always understand the consistency of judgments regardless of whether they relate to a complex model.

Can KPMG specialists help us understand whether changes from the estimation method used in prior periods are appropriate? [ISA | 4337.15564]

Yes. This is particularly true when the models, and the changes to them, are complex or when special skills are used to determine the estimate (e.g., actuarial models).

When is a model more likely to be considered complex? [ISA | 4337.15556]

Indicators that a model, and the related method, are more complex can include situations where:

- Understanding and applying the method, including designing the model and selecting and using appropriate data and assumptions, calls for specialized skills or knowledge;
- It is difficult to obtain the data to use the model because there are restrictions on the availability or observability of, or access to, data; or
- It is difficult to maintain the integrity (e.g., accuracy, consistency, or completeness) of the data and assumptions in using the model due to multiple valuation attributes, multiple relationships between them, or multiple iterations of the calculation.

# 1.2.2.1.3 Evaluate, if applicable, whether adjustments to the output of a model are appropriate [ISA | 4340]

## What do we do?

Evaluate, if applicable, whether adjustments made by the entity to the output of the model are consistent with the measurement objective of the applicable financial reporting framework and are appropriate in the circumstances

## Why do we do this?

As part of evaluating the appropriateness of the method used by the entity in determining an estimate, we evaluate whether adjustments made to the output of the model are appropriate. Management may have made an error or otherwise manipulated the results of the model through adjustments, which could lead to a material misstatement that we may fail to detect without testing.

## Execute the Audit

How might management adjust the output to the model? [ISA | 4340.1300]

Adjustments to the output of a model may be necessary to incorporate or account for different facts or circumstances not already addressed through the data and assumptions used in the method. In some instances, management's process may include applying a model as a first step and then evaluating certain of the outputs of the method and adjusting the results.

> For example, management may initially estimate their inventory reserve by calculating the reserve based on inventory items greater than one year old. However, they may then adjust for specific items that are anticipated to sell, even though they are aged.

Management may also make adjustments to the output of the model when using complex and sophisticated models that use large amounts of data and multiple assumptions as a means to more expeditiously incorporate changes that occur that impact the data and assumptions used.

> For example, when there are late breaking events or due to timing of when the measurement of the estimate occurs, management may determine it appropriate to reassess the assumptions or data used for an expected credit loss reserve, but not efficient to completely rerun the models. Instead, they make an adjustment to the output of the model which approximates the effects of this updated assessment

Changes to the output of a model may be entirely appropriate, but the likelihood of management bias and, in some cases, inherent risk, increases when management makes adjustments to the output of the model.

## Are there common process risk points (PRPs) and controls related to the adjustments to the output of an estimation model? [ISA | 4340.1400]

Although process risk points (PRPs) and specific controls are entity specific, the following are examples of the types of PRPs and controls we may identify when we are evaluating or testing controls related to the adjustments to the output of an estimation model:

| PRPs | Controls |
|---|---|
| • The adjustments to the output of a model are not appropriate. | • Controls over the identification and approval of adjustments to the output of an estimation model. These controls will allow the entity to understand and conclude whether the adjustment is appropriate. |

### What questions might we ask when testing controls over adjustments to the output of an estimation model? [ISA | 4340.1500]

As part of the control to assess the appropriateness of such adjustments, pertinent considerations may include:

- What is the criteria for when adjustments should or should not be made?
- Does that criteria seem reasonable given the nature of the account and the circumstances?

- How well was the criteria applied?
- Was the adjustment made consistent with the applicable financial reporting framework and, in the case of adjustments to fair value, does the adjustment reflect marketplace participant assumptions?
- How well does the control operator understand the reason for the adjustments?
- Does that person have sufficient knowledge to assess the reasonableness of the adjustment?
- What are the appropriate layers of review, including to those charged with governance, depending on the nature of an estimate and the significance of the changes? (Those charged with governance should be thinking about where management bias may be present and determine an appropriate review of those items).
- Is there an appropriate rationale for why the adjustments have not been made directly in the model itself instead of making an adjustment to the model output?
- Is the adjustment sufficiently detailed and precise?

### What types of substantive procedures might we perform over adjustments to the output of an estimation model? [ISA | 4340.15614]

The extent of audit work we perform over the adjustment will depend on the materiality of the adjustment (i.e. its size relative to our performance materiality) and whether or not the adjustment causes an estimate to be outside of a range of reasonable outcomes.

There also may be instances where the adjustment may not be quantitatively material but qualitatively material. This may be the case when the adjustment causes an estimate to be at the opposite end of the range of acceptable outcomes as compared with prior years to enable the entity to meet its forecasted results or the expectations of the users of the financial statements.

Our substantive procedures are designed with a similar objective in mind as our control procedures, except that instead of determining whether management has considered certain matters, we think about them independently:

- What is the criteria for when adjustments should or should not be made?
- Does that criteria seem reasonable given the nature of the account and the circumstances?
- How well was the criteria applied?
- Was the adjustment made consistent with the applicable financial reporting framework and, in the case of adjustments to fair value, does the adjustment reflect marketplace participant assumptions?
- What is the reason for the adjustment?
- Do we have sufficient knowledge to assess the reasonableness of the adjustment?
- Are the adjustments an indicator of management bias?
- Is there an appropriate rationale for why the adjustments have not been made directly in the model itself instead of making an adjustment to the model output?
- Is the adjustment sufficiently detailed and precise?

### How might we perform a dual purpose test when evaluating the adjustments to the output of an estimation model? [ISA | 4340.1600]

When we test the effectiveness of the internal controls, we may structure our procedures to both obtain evidence that management has evaluated the adjustment(s) to the method and also independently re-perform that evaluation to determine that the adjustment was appropriate and authorized. As a result, there may not be any incremental evidence to obtain for this particular risk.

However, we may perform additional substantive procedures based on our assessed level of CAR - for example, developing an independent expectation.

When an adjustment to the model is based on an assumption or underlying data, we treat that assumption or data in the same manner as we do any other assumption in an estimate - i.e., we perform substantive procedures to address the objectives at activity, 'Evaluate the assumptions used in the entity's estimation process' or 'Evaluate the data used in the entity's estimation process'.

### How might management bias impact the risk that the outputs to the model chosen are then adjusted by management inappropriately? [ISA | 4340.1700]

When management adjusts the output of the model, particularly outside of the entity's normal process, this introduces subjectivity into management's selection of their point estimate which requires management to make judgments, which may be susceptible to management bias.

Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

> For example, if management makes adjustments to the model that result in a favorable outcome this may be an indicator of management bias.

### How might inconsistent judgments impact the risk that the outputs to the model chosen are then adjusted by management inappropriately? [ISA | 4340.1800]

When judgments are inconsistent - either period over period or between similar judgments in different estimates - it may be an indicator of an increased level of risk related to the method.

Inconsistent judgments may impact our conclusion as to whether our assessed level of CAR for the method remains appropriate.

We also consider whether the audit evidence points to a misstatement and whether the financial statements as a whole are free from material misstatement.

#### What if the inconsistent judgments are intentional? [ISA | 4340.1900]

When management intentionally makes judgments that are inconsistent with one another this is an indicator of management bias. See 'How might inconsistent judgments impact the risk that the outputs to the model chosen are then adjusted by management inappropriately?' above for further information how inconsistent judgments may impact our audit approach.

### What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4340.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

# 1.2.2.1.4 Test and evaluate the application of the methods, assumptions, and data [ISA | 7890]

## What do we do?

Test and evaluate the application of the methods, assumptions, and data

## Why do we do this?

We perform procedures in order address the risk of material misstatement related to the application of the methods, assumptions, and data.

## Execute the audit

How do we test and evaluate whether the application of methods, assumptions, and data is appropriate? [ISA | 7890.8779]

We test and evaluate whether the application of the methods, assumptions, and data is appropriate by performing the following activities:

- Test whether the calculations are made in accordance with the method and are mathematically accurate; and
- Test whether the integrity of the relevant assumptions and data has been maintained in applying the method.

# 1.2.2.1.4.1 Test whether the calculations are made in accordance with the method and are mathematically accurate [ISA | 4338]

## What do we do?

Test whether the calculations are made in accordance with the method and are mathematically accurate

## Why do we do this?

In order address the risk of material misstatement related to the application of the methods, assumptions, and data, we test whether calculations are applied in accordance with the method and are mathematically accurate. Management may have made an error or improperly applied the method, which could lead to a material misstatement that we may fail to detect without testing.

## Execute the Audit

## How do we test the calculations of an estimate? [ISA | 4338.15580]

We perform procedures that address whether the entity's calculations are applied in accordance with the method and are mathematically accurate. In many cases, we address this by:

- Testing management's calculations for the estimate as a whole;
- Testing management's calculations using a sampling approach; or
- Performing a substantive analytical procedure.

## Are there common process risk points (PRPs) and controls related to the appropriateness of the estimation method? [ISA | 4338.15581]

Although process risk points (PRPs) and specific controls are entity specific, the following are examples of the types of PRPs and controls we may identify when we are evaluating or testing controls related to whether calculations are applied in accordance with the method and are mathematically accurate:

| PRPs | Controls |
| --- | --- |
| • The calculation of an estimate is not mathematically accurate.<br>A PRP related to calculations, i.e. the calculation was not performed correctly, likely exists every time a calculation is performed. | • If the calculation is made within a system that is governed by GITCs, then the relevant controls may be an application control (the way the system is programmed to calculate) and the related GITCs (all the supporting controls to determine that the application control will operate as intended every time).<br>• If the calculation is done outside of the system, e.g., in a spreadsheet, there may be controls over end-user computing, including reviewing formulas on a frequent basis, often every time that the calculation is made.<br>• If the calculation is made by a third party service organization, the entity is likely to be relying on the controls at the service organization and we follow the standards on evaluating controls at service organizations - for example, obtaining a type 2 SOC report that covers controls over the calculations.<br>• If the calculation of a method is made by a management's specialist, management's controls are likely to include a review control over the reasonableness of the model output, as well as controls over the completeness |

| | |
|---|---|
| | and accuracy of the inputs used in the model.<br>• Management may implement controls where the model is periodically calibrated and tested for validity, particularly when inputs are subjective. |

### How might we perform a dual purpose test when testing that calculations are made in accordance with the method and are mathematically accurate? [ISA | 4338.15582]

When we test the effectiveness of the internal controls, we may structure our procedures to both obtain evidence that management performed controls over the calculations and also independently re-perform the calculations to determine that they are made in accordance with the method and are mathematically accurate. As a result, there may not be any incremental evidence to obtain for this particular risk.

### What if management or management's specialist will not give us access to their estimation model? [ISA | 4338.15583]

We first determine if this is considered a scope limitation. We follow activity 'Perform procedures to address management imposed scope limitation'.

If it is not considered a scope limitation we consider using another approach to test an estimate besides testing management's process-either developing our own independent expectation or evaluating audit evidence from events or transactions occurring after the measurement date.

#### What if the management's specialist's model is proprietary and we cannot access it? [ISA | 4338.14032]

It may not be necessary for us to obtain access to the model used by the management's specialist in order to evaluate it. We may be able to perform other procedures to obtain information to assess whether the model is appropriate and applies the selected method in conformity with the applicable financial reporting framework. Depending on the model and the factors discussed in 'Determine the necessary evidence from evaluation of the work of the management's specialist,' we may gather sufficient information to assess the appropriateness of the model by, for example:

- Obtaining an understanding of the model;
- Reviewing descriptions of the model in the management's specialist's report or equivalent communication;
- Testing controls over the entity's evaluation of the specialist's work; or
- Assessing the inputs to and outputs from the model, if necessary, using an alternative (or challenge) model for comparison.

# 1.2.2.1.4.2 Test whether the integrity of the relevant assumptions and data has been maintained in applying the method [ISA | 4339]

# What do we do?

Test whether the integrity of the relevant assumptions and data has been maintained in applying the method

# Why do we do this?

As part of determining that an estimate is reasonable, we test whether the integrity of the relevant assumptions and the data has been maintained in applying the method. Management may have made an error in bringing the selected assumptions and data into the model, which could lead to a material misstatement that we may fail to detect without testing.

# Execute the Audit

### What does it mean to address whether the integrity of the relevant assumptions and data has been maintained in applying the method? [ISA | 4339.1300]

Whether the integrity of the relevant assumptions and the data has been maintained in applying the method refers to the possible loss of data or assumptions or inaccuracies that may occur when they are transferred from their source into and through the model.

### How do we evaluate whether the integrity of relevant assumptions and data has been maintained in applying the estimation method? [ISA | 4339.1400]

We address whether the integrity of relevant assumptions and data has been maintained in applying the estimation method by performing procedures focused on validating the completeness and accuracy of the assumptions and data that are actually used when management applies the model. In many cases, we can do this by performing procedures that address whether:

(1) the assumptions and data are complete and accurate at each point it is transferred/manipulated in the process - for example, by agreeing back to the original source, or

(2) the "ending" assumptions and data used in the model are complete and accurate, by agreeing them back to their original source.

### Are there common process risk points (PRPs) and controls related to the integrity of the relevant assumptions and data? [ISA | 4339.1500]

Although process risk points (PRPs) and specific controls are entity specific, the following are examples of the types of PRPs and controls we may identify when we are evaluating or testing controls related to the integrity of the relevant assumptions and data:

| PRPs | Controls |
|---|---|
| • The assumptions and/or data used in an estimate are not complete or accurate.<br>• A PRP related to the completeness and accuracy of the assumptions and/or data likely exists every time the assumptions/data move from one place to another | • A combination of controls each time the process is performed such as review of inputs for completeness and accuracy, interface controls, controls over access, and controls over completeness and accuracy of reports. |

| | |
|---|---|
| (input, processed, stored, moved, or output). | |

How might we perform a dual purpose test when testing whether the integrity of the relevant assumptions and data has been maintained in applying the method? [ISA | 4339.1600]

When we test the effectiveness of the internal controls, we may structure our procedures to both obtain evidence that management performed steps to validate the completeness and accuracy of the data and assumptions and also independently re-perform those validations to determine that integrity of the relevant assumptions and data has been maintained in applying the method. As a result, there may not be any incremental evidence to obtain for this particular risk.

# 1.2.2.2 Evaluate the assumptions used in the entity's estimation process [ISA | 4341]

## What do we do?

Evaluate the assumptions used in the entity's estimation process

## Why do we do this?

When we test the entity's process for developing an accounting estimate, our procedures are designed to test and evaluate the assumptions used in making the accounting estimate. This helps us to obtain sufficient appropriate audit evidence over the accounting estimate and address the risk of material misstatement that arises from the entity's selection of assumptions.

## Execute the Audit

Do we evaluate all assumptions? [ISA | 4341.15229]

Not necessarily. Although we understand and identify assumptions, we wouldn't necessarily evaluate an assumption where there is a remote chance of a material misstatement occurring, even if the assumption used was wrong.

What is a relevant assumption? [ISA | 4341.15230]

Relevant assumptions are those that give rise to a risk of material misstatement.

We assign relevant assumptions inherent risk of base, elevated, or significant. See activity 'Assess CAR for the selection of individual methods, assumptions and data'.

How do we identify relevant assumptions used in an accounting estimate? [ISA | 4341.15245]

We consider the likelihood that a material misstatement could occur, either individually or in combination, if that particular assumption is incorrect. Typically that means that we test most assumptions unless we can clearly demonstrate why a risk of material misstatement is not present.

How do we evaluate the assumptions used in the entity's estimation process? [ISA | 4341.15579]

We perform the following:

- Identify which assumptions are relevant to an accounting estimate; and
- Evaluate whether the entity's relevant assumptions are reasonable.

In addition, we evaluate:

- whether there is evidence of management bias, either in the selection or application of the assumptions; and
- whether judgments have been consistently applied.

We keep these items in mind as we perform our procedures over the assumptions used so that we are able to conclude on these items upon the completion of our audit work.

# 1.2.2.2.1 Identify which assumptions are relevant to an accounting estimate [ISA | 4342]

## What do we do?

Identify which assumptions are relevant to an accounting estimate by determining those that are important to its recognition or measurement

## Why do we do this?

We determine which assumptions are relevant assumptions, meaning those assumptions that will have an audit response. If we fail to appropriately identify relevant assumptions, it will impact our ability to obtain sufficient appropriate audit evidence over the estimate.

## Execute the Audit

### How do we identify relevant assumptions used in an accounting estimate? [ISA | 4342.15245]

We consider the likelihood that a material misstatement could occur, either individually or in combination, if that particular assumption is incorrect. Typically that means that we test most assumptions unless we can clearly demonstrate why a risk of material misstatement is not present.

#### What factors do we consider in determining whether an assumption is relevant? [ISA | 4342.15604]

We consider the inherent risk factors for non-estimates and for estimates. See activity 'Assess likelihood and magnitude of potential misstatements to determine RMMs' for the risk factors we consider for all RMs and activity 'Identify and assess which RMs related to an accounting estimate are RMMs' for the additional risk factors we consider for accounting estimates.

#### Are certain assumptions more likely to be considered relevant? [ISA | 4342.15605]

Yes. Assumptions that are more likely to be considered relevant include those that:

- Are sensitive to variation;
- Are susceptible to manipulation or bias;
- Involve unobservable data or entity adjustments to observable data; or
- Depend on the entity's intent and ability to carry out specific courses of action.

#### How might we better understand whether an assumption used in an accounting estimate is sensitive to variation? [ISA | 4342.15607]

In order to better understand whether an assumption used is sensitive to variation, we may leverage sensitivity analyses that management has performed or ask them to perform a sensitivity analysis on our behalf. If management does not perform a sensitivity analysis, we may choose to perform our own sensitivity analysis.

The sensitivity analysis is based on all reasonable variations in the underlying assumption so that we can better see how sensitive to variation that assumption is - i.e. the impact that reasonable changes in that assumption has on the entity's point estimate.

As the variability, or sensitivity, of the assumption increases, so does our assessment of the risk related to that particular assumption.

Even in situations where variability of an assumption is obvious - i.e. the assumption clearly gives rise to a risk of material misstatement - a properly performed sensitivity analysis can help us provide a basis for our assessed inherent risk and may assist us in documenting how our audit procedures provide sufficient appropriate audit evidence.

> For example, when an assumption is more sensitive to variation, our assessed inherent risk typically is higher and therefore the audit evidence we obtain may have to be more persuasive than that addressing an assumption that is not as sensitive to variation.

# 1.2.2.2.2 Evaluate whether the entity's relevant assumptions are reasonable [ISA | 4343]

## What do we do?

Evaluate whether the entity's relevant assumptions used in an accounting estimate are reasonable, including whether changes are appropriate

## Why do we do this?

As part of evaluating the assumptions used by the entity in determining an estimate, we evaluate whether the entity's relevant assumptions are reasonable. If we fail to appropriately evaluate the reasonableness of those relevant assumptions, it will impact our ability to obtain sufficient appropriate audit evidence over the estimate.

## Execute the Audit

### Enhanced | How do we evaluate whether the entity's relevant assumptions are reasonable? [ISA | 4343.15591]

We perform procedures to address whether:

- Management has a reasonable basis for the relevant assumptions used in the context of the applicable financial reporting framework, and, if applicable, changes from prior periods are appropriate;
- Management's judgments made in selecting the relevant assumptions give rise to indicators of possible management bias;

- Management has the intent and ability to carry out specific courses of action; and
- The relevant assumptions are consistent with:
  - Relevant industry, regulatory, and other external factors, including economic conditions;
  - The entity's objectives, strategies, and related business risks;
  - Existing market information;
  - Historical or recent experience, taking into account changes in conditions and events affecting the company; and
  - Other related assumptions used by the entity in the estimate, or other estimates, or other assumptions used in other areas of the entity's business activities.

### Core and Less Complex | How do we evaluate whether the entity's relevant assumptions are reasonable?

[ISA | 4343.15591]

We perform procedures to address whether:

- Management has a reasonable basis for the relevant assumptions used in the context of the applicable financial reporting framework, and, if applicable, changes from prior periods are appropriate;
- Management's judgments made in selecting the relevant assumptions give rise to indicators of possible management bias;
- Management has the intent and ability to carry out specific courses of action; and

We also perform procedures to address whether the assumptions are consistent with other data points. We may consider the below other data points in evaluating the consistency of the assumptions:

- Relevant industry, regulatory, and other external factors, including economic conditions;
- The entity's objectives, strategies, and related business risks;
- Existing market information; and
- Historical and recent experience, taking into account changes in conditions and events affecting the entity.

If the assumption has been used in other estimates, significant accounts or disclosures, or other areas of the entity's business activities such that there is a risk of internal inconsistency, we may also consider:

- Other related assumptions used by the entity in the estimate, in other estimates, or other assumptions used in other areas of the entity's business activities.

#### How do we determine whether management has a reasonable basis for a relevant assumption? [ISA | 4343.15592]

Our determination as to whether management has a reasonable basis for a relevant assumption relates to whether the assumption is based on an analysis of relevant information, or determined arbitrarily, with little or no such analysis. We take into account all relevant evidence relating to the reasonableness of the assumption, regardless of whether it corroborates or contradicts what the company has selected. In other words, our evidence considers both pros and cons of using a particular assumption.

#### How do we determine whether management has selected reasonable assumptions from a range of assumptions? [ISA | 4343.15593]

Our determination as to whether management has selected assumptions from a range of potential assumptions that are reasonable takes in account factors such as:

- whether the range of assumptions has been narrowed to only those that are reasonable - i.e. has management excluded those assumptions that are unlikely to occur in developing their range,
- the impact that the range of assumptions has on an estimate as a whole, or the range of measurement outcomes, and
- why management selected its assumption from within that range and whether that is appropriate and whether there are any indicators of possible management bias.

Management bias may be difficult to detect at the level of an individual assumption or even at account level and may only be identified when considering groups of accounting estimates, all accounting estimates in aggregate or when observed over a number of accounting periods.

### How do we evaluate whether management has the intent and ability to carry out specific courses of action? [ISA | 4343.15594]

When an assumption depends on management's intent and ability to carry out a specific course of action, we perform procedures to address management's intent and ability. Our evaluation takes into account certain factors, including:

- The entity's past history of carrying out its stated intentions;
- Written plans or other relevant documentation, such as, formally approved budgets, and authorized minutes of the entity
- The entity's stated reasons for choosing a particular course of action;
- Whether the entity has the financial resources or other means to carry out the action
- Whether there are any legal, regulatory, or contractual restrictions that impact the ability to carry out management's stated intentions
- Whether there are required actions of third parties that impact the ability to carry out management's stated intentions, including those parties commitment to those actions

In addition to the above, it can also be helpful to:

- Review of events occurring subsequent to the date of the financial statements, and
- Consider 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 of estimates because their measurement objective requires that assumptions reflect those used by marketplace participants.

## Are there common process risk points (PRPs) and controls related to the reasonableness of assumptions? [ISA | 4343.15597]

Although process risk points (PRPs) and specific controls are entity specific, the following are examples of the types of PRPs and controls we may identify when we are evaluating or testing controls related to the reasonableness of assumptions:

| PRPs | Controls |
|---|---|

| | |
|---|---|
| • Management does not have a reasonable basis for the assumption.<br>• The assumption is not reasonable.<br>• The assumptions are inconsistent with other information or assumptions used in other estimates.<br>• Management doesn't have the intent or ability to carry out specific actions which assumptions are based on. | • Periodic reviews or system controls to validate the underlying data supporting the assumption is complete and accurate.<br>• Recalculation of the assumption based on the underlying data elements.<br>• Periodic reviews to evaluate the on-going relevance of the assumptions and their consistency with other sources of information (industry information, entity objectives, market information, etc.), assumptions used in other accounting estimates and related assumptions used in other areas of the entity's business activities.<br>• Periodic reviews over the range of possible assumptions, if applicable, to appropriately consider all reasonably possible assumptions.<br>• Periodic review of analyses supporting management's intent and ability to carry out specific courses of action that assumptions are made on |

### What types of substantive procedures might we perform over the reasonableness of a relevant assumption used in an accounting estimate? [ISA | 4343.15598]

We perform substantive procedures with a similar objective in mind as our control procedures, except that instead of determining whether *management* has considered the reasonableness of the assumption, we consider it ourselves. Depending on the nature of an assumption, we may choose to develop an independent expectation for the assumption in order to assess whether the assumption used is reasonable.

### How do we develop an independent expectation for an assumption? [ISA | 4343.8766]

We develop an independent expectation for an individual assumption in the same way that we develop an independent expectation for an estimate as a whole. We perform the following activities:

- Develop a point estimate or range;
- Determine whether the range is appropriate and supported and
- Compare our independent expectation to the entity's estimate.

### How might we perform a dual purpose test when evaluating the reasonableness of assumptions? [ISA | 4343.15599]

When we test the effectiveness of the internal controls, we may structure our procedures to both obtain evidence that management has evaluated the assumption and also independently re-perform that evaluation to determine that the assumptions are reasonable. As a result, there may not be any incremental evidence to obtain for this particular risk.

However, we may perform additional substantive procedures based on our assessed level of CAR - for example, developing an independent expectation about the reasonableness of the assumption.

### How do we evaluate the data used to develop assumptions? [ISA | 4343.8767]

When an assumption is based on underlying data we audit that data in the same manner as we audit any other data - i.e. we perform procedures to address the objectives at activity, 'Evaluate the data used in the entity's estimation process'.

### How might management bias impact the risk that the entity's relevant assumptions used in an accounting estimate are unreasonable? [ISA | 4343.15600]

When assumptions involve a high degree of judgment, this introduces subjectivity into determining the appropriate assumption to use. These assumptions are more prone to manipulation or bias because one individual's judgment may differ from another. As the subjectivity of an assumption increases so too does its susceptibility to manipulation or bias.

Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

Some indicators of manipulation or bias include, for example:

- use of an entity's own assumptions for fair value accounting estimates when they are inconsistent with observable marketplace assumptions
- selection or construction of relevant assumptions that yield a favorable point estimate
- use of multiple assumptions near the end of an appropriate range that yield a favorable point estimate

### How might inconsistent judgments impact the risk that the entity's relevant assumptions used in an accounting estimate are unreasonable? [ISA | 4343.15602]

When judgments are inconsistent - either period over period or between similar judgments in different estimates - it may be an indicator of an increased level of risk related to the risk.

Inconsistent judgments may impact our conclusion as to whether our assessed level of CAR remains appropriate.

We also consider whether the audit evidence points to a misstatement and whether the financial statements as a whole are free from material misstatement.

#### What if the inconsistent judgments are intentional? [ISA | 4343.15603]

When management intentionally makes judgments that are inconsistent with one another this is an indicator of management bias. See, 'How might inconsistent judgments impact the risk that the entity's relevant assumptions used in an accounting estimate are unreasonable?' above for further information how inconsistent judgments may impact our audit approach.

#### What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4343.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

# Examples

## What are some examples of accounting estimates that may include subjective assumptions? [ISA | 4343.15611]

Examples of accounting estimates that may include subjective assumptions:

- Accounting estimates relating to the outcome of litigation, claims or assessments
- Fair value accounting estimates for derivative financial instruments not publicly traded
- Fair value accounting estimates for which a highly specialized entity-developed model is used or for which there are inputs that cannot be observed in the marketplace
- Accounting estimates that are highly dependent upon judgment, for example, the amount and timing of future cash flows dependent on uncertain events many years in the future
- Accounting estimates that are not calculated using recognized measurement techniques
- Accounting estimates where the results of our review of similar accounting estimates made in the prior period financial statements indicate substantial difference between the original accounting estimate and the actual outcome

### How do we assess if a relevant assumption is consistent with other relevant assumptions used by the entity? [ISA | 4343.15613]

We do this by evaluating whether the relevant assumptions are consistent with each other and with those used in other accounting estimates, or with related assumptions used in other areas of the entity's business activities.

> For example, if projected financial information is an input to multiple models used to calculate an estimate or another estimate altogether such as a goodwill impairment analysis, they are expected to be consistent.

We also do this by evaluating the reasonableness of assumptions that are interrelated together.

> For example, when analyzing projected and discounted cash flows the internal rate of return (IRR) and weighted average cost of capital (WACC) typically have a relationship and therefore are evaluated for reasonableness both individually and in combination.

When assumptions are not consistent with each other, with similar assumptions used in other estimates, or in other areas of the entity's business activities, this may be an indication that there is increased risk of misstatement due to error, management bias or fraud.

# 1.2.2.3 Evaluate the data used in the entity's estimation process [ISA | 7713]

## What do we do?

Evaluate the data used in the entity's estimation process

## Why do we do this?

When we test the entity's process for developing an accounting estimate, our procedures are designed to test and evaluate the data used in making the accounting estimate. This helps us to obtain sufficient appropriate audit evidence over the accounting estimate and address the risk of material misstatement that arises from the entity's selection and application of data.

## Execute the Audit

### Do we evaluate all data used in the entity's estimation process? [ISA | 7713.15250]

We evaluate data that is important to an estimate. We wouldn't necessarily test data where there is a remote chance of a material misstatement occurring, even if the data used was completely wrong. In other words, the risk that the particular data element represents a risk of material misstatement is, in that case, remote.

### How do we evaluate the data that is important to an estimate? [ISA | 7713.15619]

We evaluate the data that is important to an estimate by:

- Evaluating whether the data is appropriately used by the entity by performing procedures to address whether:
  - the data is appropriate in the context of the requirements of the applicable financial reporting framework, as well as the business, industry and environment in which the entity operates;
  - the source or items of data have changed from the prior period and, if so, whether the change is appropriate;
  - the source or items of data should have changed from the prior period, but did not;
  - the judgments made in selecting the data give rise to possible management bias;
  - the data is internally consistent with its use by the entity in other significant accounts or disclosures that are tested; and
  - the data is appropriately understood and interpreted by management, including with respect to contractual terms.
- Evaluating the relevance and reliability of information used as audit evidence.

#### What do we think about when we evaluate whether data is appropriate in the context of the requirements of the applicable financial reporting framework? [ISA | 7713.15620]

We consider whether the data is relevant to the measurement objective of the accounting estimate.

#### How does a change to the source of the data from the prior period affect our evaluation of the data? [ISA | 7713.15621]

When management changes the source of the data that is important to an estimate from the prior period, we consider whether the change is appropriate as part of our evaluation. A change to the source of the data could include:

- the source from which the data originates

> For example, if foreign exchange rates are used to determine the fair value of FX derivative instruments, management may change the source of this data to Oanda.com in the current year from Bloomberg in the prior year.

- the 'type of data' used in the estimate or the criteria that management uses to include or exclude data points

> For example, if management historically considered past due receivables of 90+ days when determining the allowance for doubtful accounts, but changed the criteria to 120+ days in the current year.

When determining whether the change is appropriate, it may be helpful to ask:

- What was management's rationale for changing the selection of the data?
- Was there a related change in the estimation process (including the model or assumptions)?
- Is the change a result of recent changes in the business, industry, environment and/or underlying transactions?
- Is the change a result of a change in the financial reporting framework?
- Is the previous data source no longer available (i.e., the change was a necessity)?
- Does the change have a better or equivalent connection, or relationship, to the measurement objective for the accounting estimate?

### What if management cannot support the change in the source of the data? [ISA | 7713.15622]

If there is no support or rationale for management's decision to change the source of the data (or the support / rationale for the change is determined to be inadequate), the new data source may not be appropriate. Further, this may be an indication of management bias.

In this situation, we challenge management regarding the appropriateness of the data used in the estimate and evaluate the impact of the change to determine if it is appropriate or indicative of an error in the current or prior period. We also consider whether the change is an indication of management bias - refer to the question "How might management bias impact our evaluation of data that is important to an estimate?"

### Are there indicators where we expect data to have changed from the prior period? [ISA | 7713.15623]

Yes. Indicators where we expect that the source or items of the data should have changed in the current period from the prior period include:

- no change to the underlying data, however, this is inconsistent with recent trends;
- a change in the estimation process (including the model or assumptions) for the accounting estimate;
- a change in the financial reporting framework; or
- a change in the business, industry, environment, and/or underlying transactions.

For example, if a model uses historical warranty returns or loan loss rates, we expect that those rates would be updated for more recent experience and not simply carry forward prior year data.

When we identify indicators where we expect data to change but it has not, we evaluate the impact on the accounting estimate to determine if the lack of change is indicative of an error in the current or prior period. These situations may also be an indication of possible management bias.

#### Why do we consider whether the data that is important to an estimate is consistent with its use in other significant accounts and disclosures? [ISA | 7713.15624]

We expect that the data important to an estimate is consistent with its use by the entity in other areas or applications - for example, other accounting estimates.

If we identify inconsistencies between the data that is important to an estimate and its use by the entity in other areas, this may be an indication that the data is not sufficiently relevant or reliable to the measurement objective for the accounting estimate.

In this situation, we challenge management regarding the appropriateness of the data used in the estimate. In addition, we evaluate the impact on the accounting estimate to determine if is appropriate or if it is indicative of an error in the current or prior period. These situations may also be an indication of possible management bias.

#### How do we consider whether the data is appropriately understood and interpreted by management? [ISA | 7713.15625]

The level of procedures we perform to evaluate whether the data is appropriately understood and interpreted by management will depend on the complexity of the data. When the data is not complex, this is often more simple to evaluate and the evidence that we gather during our walkthrough procedures will be sufficient to make this evaluation.

However, when data elements are complex, our evaluation may involve:

- Considering whether specialized skills or knowledge are needed to understand or interpret the data, especially with respect to complex legal or contractual terms;
- Inquiring of the entity's legal counsel regarding complex legal or contractual terms;
- Inspecting underlying contracts to:
  - Evaluate the underlying business purpose for the transaction and agreement; and
  - Consider whether the terms of the contracts are consistent with management's explanations.

### What do we do differently when testing controls over data used in an estimate? [ISA | 7713.157411]

If we determine to test management's controls over data used in an estimate, in addition to testing controls over the accuracy and completeness (i.e. reliability) of the data, we also test management's controls over the relevance of the data used in the estimate.

### Are there common process risk points related to the data used in the estimation process we think about when testing management's controls? [ISA | 7713.15626]

Although process risk points (PRPs) and specific controls are entity specific, in addition to the risks related to the reliability of data, we at minimum identify the following PRPs and include examples of the types controls we may identify when we are evaluating or testing controls related to the selection of the data:

| PRPs | Controls |
|---|---|
| • The data does not meet the measurement objective for the accounting estimate;<br>• The data is not internally consistent with its use in other significant accounts and disclosures;<br>• The source of the data has inappropriately changed (including not changed) from the prior year; and<br>• The data is inappropriately understood and interpreted, including with respect to contractual terms. | • Periodic review of the origination of the data, including the underlying sources; and<br>• Review of changes / adjustments to the data source prior to its use in the model or an assumption. |

### Is testing management's controls alone sufficient to evaluate the reliability of the data? [ISA | 7713.15627]

It depends. We use our judgment to decide the nature and extent of the testing necessary to evaluate whether the data is sufficiently reliable.

When we test management's controls, we think about the following factors when assessing whether we will obtain sufficient evidence over the reliability of the data that is important to an estimate.

| Factors | Our consideration |
|---|---|
| **The assessed inherent risk for the data.** | The higher the assessed inherent risk for the data, the more persuasive the evidence we obtain in relation to the reliability of the data. |
| **The impact of the data on the related assumption and/or method and the overall estimate.** | Data used in an estimate will have varying impacts on the estimate. The greater the impact of the data on an estimate, the more persuasive the evidence we obtain in relation to the reliability of the data. |
| **The relationship of the data to the entity's financial statements. [Internal data]** | The more directly related the data is to information included in the financial statements (e.g., internal financial data vs. non-financial data), the more persuasive the evidence we obtain in relation to the reliability of the data.* |
| **The objectivity and reputation of the originating source (i.e., third-party) of the data. [External data]** | Data is inherently more reliable when it originates from an independent and reputable third-party that has a history of providing reliable information. In these |

| | |
|---|---|
| | circumstances, further evidence over the reliability of the data may not be necessary. |
| * Often, data originates from elsewhere in the financial statements (i.e., internal financial data) and is used to derive the estimate. In many cases, we have already tested this data because it is (or is part of) an account balance where we have identified an RMM. In this scenario, we consider this evidence when evaluating whether the data that is important to an estimate is sufficiently reliable. | |

If we determine we will not be able to obtain sufficient evidence over the reliability of the data that is important to an estimate by solely testing management's controls, then we perform additional procedures over the reliability of the data.

### How do we obtain more evidence over the reliability of the data when we determine that testing management's controls only is not sufficient? [ISA | 7713.15628]

In this circumstance, we can perform one or more of the following to obtain further evidence over the reliability of the data that is important to an estimate:

| Data | Additional Procedures |
|---|---|
| **Internal data** | Financial RDE:<br>Directly test the data using attribute sampling,* For details, refer to the chapter on audit evidence, specifically the related activities under 'Directly test the accuracy and completeness of internal information'.<br>Non-Financial RDE:<br>If the non-financial RDE is related to financial information that we have already tested, we can:<br>• Incorporate additional steps into the original substantive procedure performed on the related information to test the non-financial RDE - e.g., as part of revenue testing, test product type and date of sale in addition to sales amount.<br>OR<br>• Directly test the data using attribute sampling,*<br>If the non-financial RDE is not related to financial information that we have already tested, we directly test the data using attribute sampling.* |
| **External data** | Design specific procedures to evaluate the reliability of the data used in the model and/or assumption. |

| | |
|---|---|
| | For details on evaluating the reliability of external data, refer to the chapter on audit evidence, specifically the activity 'Determine the approach to evaluate the reliability of external information'. |

***Direct-testing - in this circumstance, we use the attribute sample size table for data used in the entity's estimation process when management's controls were tested and found to be operating effectively.**

### How might management bias impact our evaluation of the data that is important to an estimate? [ISA | 7713.15630]

When multiple data sets or sources exist that could be appropriate for management to use in making an estimate, this introduces subjectivity into management's selection of data and possible management bias. This could also be true when management is making judgments as to what data points within a data set are relevant before using it in making an accounting estimate.

> For example, management may determine that certain insurance claims (specific 'data points') within a claims population (the 'data set') are large and unusual and therefore should be excluded when developing the loss factors used to develop the entity's estimate. The criteria that management uses to exclude claims are subjective and therefore susceptible to management bias.

#### How do indicators of management bias that we identify impact our audit approach? [ISA | 7713.15631]

Indicators of possible management bias may impact our previous assessment of the level of CAR for the data.

We also consider whether the audit evidence points to a misstatement rather than simply an indicator of management bias and our conclusion as to whether the financial statements as a whole are free from material misstatement.

#### What if the bias is intentional? [ISA | 7713.15188]

When we identify intentional bias, we consider the possible implications of fraud and the impact on our audit approach. We re-evaluate our risk assessment conclusions and determine whether there are fraud risks we did not previously identify.

See the chapter on Fraud (ISA 240, AU-C 240, AS 2401) for a full list of activities that we perform when we identify intentional management bias.

#### What do we include in our audit documentation when we identify indicators of management bias? [ISA | 7713.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

# 1.2.2.4 Evaluate whether management has selected an appropriate point estimate [ISA | 4347]

## What do we do?

Evaluate whether management has selected an appropriate point estimate and developed related disclosures about estimation uncertainty by understanding how management has understood and addressed estimation uncertainty. IF management has not taken appropriate steps, THEN perform specific procedures.

## Why do we do this?

Part of testing management's process is evaluating whether management has appropriately selected their point estimate. If management doesn't properly understand and address estimation uncertainty, the measurement of the estimate may be incorrect and they may not select an appropriate point estimate.

## Execute the Audit

### How do we evaluate whether management has selected an appropriate point estimate? [ISA | 4347.1300]

After we have performed our audit procedures related to the method, assumptions and data, we perform procedures to address whether management has appropriately recorded their point estimate - i.e. has management understood and addressed estimation uncertainty. See activity 'Understand how management understands and addresses estimation uncertainty'.

In many cases, we will consider the evidence gathered in our other procedures and evaluate whether we believe that management has taken appropriate steps to:

- Understand the estimation uncertainty; and
- Address estimation uncertainty by selecting an appropriate point estimate and by developing related disclosures about estimation uncertainty.

#### What if management has determined that different valuation methods result in a range of significantly different estimates? [ISA | 4347.1400]

If management has determined that different methods result in a range of significantly different estimates, we evaluate how management addresses estimation uncertainty by understanding how they have investigated the reasons for those differences when establishing the point estimate.

### Where do we consider management's disclosures regarding estimation uncertainty? [ISA | 4347.1500]

We consider this at the activity, 'Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework'.

### What sources of audit evidence do we consider when we evaluate whether management has selected an appropriate point estimate? [ISA | 4347.1600]

Relevant considerations and sources of audit evidence related to management's point estimate include the following:

| Consideration | Source of Audit Evidence |
|---|---|
| **The methods and data used were selected appropriately, including when alternative methods for making the accounting estimate and alternative sources of data were available.** | This consideration is likely addressed by the substantive procedures performed related to the following risks:<br>• the method used by management to determine an estimate does not comply with the applicable financial reporting framework or is not appropriate for the nature of the account or disclosure and the business, industry and environment in which the entity operates<br>• the changes to the method used by management are not appropriate<br>• the outputs to the model chosen by management are adjusted by management inappropriately<br>• the data used by management to determine an estimate is not relevant<br>• the data used by management to determine an estimate is not reliable |
| **Valuation attributes used were appropriate and complete** | This consideration is likely addressed by the substantive procedures performed related to the following risks:<br>• the method used by management to determine an estimate does not comply with the applicable financial reporting framework or is not appropriate for the nature of the account or disclosure and the business, industry and environment in which the entity operates<br>• the assumption used by management is not reasonable<br>• the data used by management to determine an estimate is not relevant<br>• the data used by management to determine an estimate is not reliable |
| **The assumptions used were selected from a range of reasonably possible amounts and were supported by appropriate data that is relevant and reliable** | This consideration is likely addressed by the substantive procedures performed related to the following risks:<br>• the assumption used by management is not reasonable<br>• the data used by management to determine an estimate is not relevant |

| | |
|---|---|
| | • the data used by management to determine an estimate is not reliable |
| **The data used was appropriate, relevant and reliable, and the integrity of that data was maintained** | This consideration is likely addressed by the substantive procedures performed related to the following risks:<br>• the integrity of the relevant assumptions and the data has been compromised in applying the method<br>• the data used by management to determine an estimate is not relevant<br>• the data used by management to determine an estimate is not reliable |
| **The calculations were applied in accordance with the method and were mathematically accurate** | This consideration is likely addressed by the substantive procedures performed related to the following risks:<br>• the calculations made within the method are performed incorrectly |
| **Management's point estimate is appropriately chosen from the reasonably possible measurement outcomes** | This consideration is likely addressed by the substantive procedures performed related to the following risks:<br>• the method used by management to determine an estimate does not comply with the applicable financial reporting framework or is not appropriate for the nature of the account or disclosure and the business, industry and environment in which the entity operates<br>• the outputs to the model chosen by management are adjusted by management inappropriately |
| **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** | This consideration is likely informed by our understanding of the applicable financial reporting framework and by the aggregation of the audit results obtained over the accounting estimate. |

### What if management has not taken appropriate steps to understand or address estimation uncertainty?

[ISA | 4347.15214]

If based on the evidence obtained and our judgement, we determine that management has not taken the appropriate steps to understand or address the estimation uncertainty, we:

- Request management to perform additional procedures to understand estimation uncertainty or to address it by reconsidering the selection of their point estimate or considering providing additional disclosures relating to the estimation uncertainty; and
- Evaluate management's response.

### What do we do if we determine that management's response to our request does not sufficiently address estimation uncertainty? [ISA | 4347.15215]

We:

- 'Develop an independent expectation of an accounting estimate,' to the extent possible; and
- Evaluate whether a deficiency in internal control exists and, if so, communicate to TCWG in accordance with the applicable communication requirements.

### When might we determine that management has not adequately addressed the effects of estimation uncertainty on the accounting estimate? [ISA | 4347.15521]

Some examples of situations where management may have failed to adequately address the effects of estimation uncertainty include when:

- sufficient appropriate audit evidence could not be obtained through our evaluation of how management has addressed the effects of estimation uncertainty;
- we deem it appropriate to explore further the degree of estimation uncertainty related to an accounting estimate, for example, where we are aware of wide variation in outcomes for similar accounting estimates in similar circumstances;
- it is unlikely that other audit evidence can be obtained, for example, through the review of events occurring up to the date of the auditors' report; and
- indicators of management bias in the making of accounting estimates may exist.

### How might management bias impact the risk related to how management selected the point estimate? [ISA | 4347.15523]

When the process to develop an estimate results in a range of acceptable measurement outcomes, this introduces subjectivity into management's selection of their point estimate, absent specific guidance in the applicable financial reporting framework related to how to select a point estimate. This requires management to make judgments which may be susceptible to management bias.

> For example, if management selects a point estimate at the low end of an acceptable range when in the prior year their point estimate was at the high end of the range this may be an indicator of management bias. This may also be true if they are selecting assumptions that are overly conservative or aggressive when compared with those same assumptions in the prior year.

Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

### How do indicators of management bias that we identify impact our audit approach? [ISA | 4347.8811]

Indicators of possible management bias may impact our conclusion as to whether our previous assessment of the level of CAR.

We also consider whether the audit evidence points to a misstatement rather than simply an indicator of management bias and our conclusion as to whether the financial statements as a whole are free from material misstatement.

What if the bias is intentional? [ISA | 4347.15188]

When we identify intentional bias, we consider the possible implications of fraud and the impact on our audit approach. We re-evaluate our risk assessment conclusions and determine whether there are fraud risks we did not previously identify.

See the chapter on Fraud (ISA 240, AU-C 240, AS 2401) for a full list of activities that we perform when we identify intentional management bias.

What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4347.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

# 1.2.3 Develop an independent expectation of an accounting estimate [ISA | 4350]

## What do we do?

Develop an independent expectation to test an accounting estimate.

## Why do we do this?

A common approach to auditing accounting estimates is to independently develop a point estimate or a range to evaluate the entity's point estimate and related disclosures about estimation uncertainty. Additionally, this approach might be the most appropriate when the entity's internal controls over the entity's process used to develop an accounting estimate are not expected to be effective.

## Execute the Audit

What is an independent expectation of an accounting estimate? [ISA | 4350.1300]

Developing an 'independent expectation' refers to when we develop our own point estimate or range using some or all of our own methods, assumptions and/or data. We can develop an independent expectation using the same model or some of the same data or assumptions as those used by the entity; however, we cannot use all of the same data and assumptions as the entity.

How do we use our independent expectation as audit evidence? [ISA | 4350.1400]

Our independent expectation is used as direct evidence to evaluate management's estimate and disclosures about estimation uncertainty - i.e., the outcome of management's process to develop the estimate. Although it does not directly test the individual methods, assumption and data management uses, we still obtain indirect evidence that the risks of material misstatement associated with the selection and application risks have been addressed.

For example, we can develop an independent expectation to:

- test the valuation of customer relationships acquired in a business combination using the same data as management, but using *our own* methods and assumptions. Although we would obtain direct evidence regarding the reasonableness of the value management determined for the customer relationships, we wouldn't necessarily perform procedures to recalculate or determine that management's Weighted Average Cost of Capital is reasonable.
- test the valuation of the reserve for incurred but not reported claims (IBNR) using the same methods and data as the entity but using *our own* assumptions in the selection of the loss development factors. Although we would obtain direct evidence regarding the ultimate value of the reserve for IBNR recorded, we wouldn't necessarily perform procedures to determine that the individual loss development factors for claims incurred but not reported are reasonable.

### When may developing an independent expectation be an appropriate approach? [ISA | 4350.1500]

Developing an independent expectation of an accounting estimate may be appropriate when:

- The auditor's review of similar accounting estimates made in the prior period financial statements suggests that management's current period controls over the estimation process are not expected to be effective;
- The entity's controls within and over management's process for making accounting estimates are not well designed or properly implemented;
- Events or transactions between the period end and the date of the auditor's report have not been properly taken into account, when it is appropriate for management to do so, and such events or transactions appear to contradict management's point estimate;
- There are appropriate alternative assumptions or sources of relevant data that can be used in developing an auditor's point estimate or a range; or
- Management has not taken appropriate steps to understand and address the estimation uncertainty.

We may develop a point estimate or range for certain components of an accounting estimate that gives rise to an RMM.

### Do we still obtain an understanding of management's process and perform risk assessment procedures over each element of the accounting estimate? [ISA | 4350.15505]

Yes. Regardless of our substantive approach, we:

- Understand the process by which the accounting estimates are developed, and
- Identify and assess the RMMs related to an accounting estimate.

We do this even when we are not testing or relying on controls.

### How do we develop an independent expectation of an accounting estimate? [ISA | 4350.15506]

We perform the following activities:

- Develop a point estimate or range;

- Determine whether the range is appropriate and supported; and
- Compare our independent expectation to the entity's estimate.

# 1.2.3.1 Develop a point estimate or range [ISA | 4351]

## What do we do?

Develop a point estimate or range using some or all of our own methods, data and assumptions

## Why do we do this?

When it is an effective response to the assessed risks of material misstatement, we may develop an independent expectation of an accounting estimate or an assumption used in an accounting estimate.

Even when developing our own independent expectation, we still perform audit procedures to obtain sufficient appropriate evidence to evaluate whether the methods, assumptions or data used by us are appropriate in the context of the applicable financial reporting framework in order to be valid audit evidence to test the entity's accounting estimate.

## Execute the Audit

### How do we express our independent expectation? [ISA | 4351.1300]

Our independent expectation may be a single amount, which we refer to as a 'point estimate', or it may be a range of amounts, which we refer to as a 'range'.

#### When do we use a point estimate versus a range to develop an independent expectation of an accounting estimate? [ISA | 4351.1400]

The greater the estimation uncertainty, the more appropriate it may be to express our independent expectation as a range rather than a point estimate. Said another way, if an estimate is very sensitive to changes in assumptions, then a range might be more appropriate.

When making this determination we may think about the following factors:

| | |
|---|---|
| The nature and extent of data available to the audit team | When an assumption or data used by management does not have reliable audit evidence available, we may develop our own assumptions for which we can obtain audit evidence. In such instances, we may exclude management's information from the determination of the accounting estimate, and use alternative assumptions or data to develop our own independent expectation. In certain situations, we might involve a KPMG specialist. |
| The applicable financial reporting framework | The applicable financial reporting framework 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. |
| The nature of the estimate and our judgement in the circumstances | The nature of the estimate may be such that there is expected to be less variability in the reasonably possible outcomes. In these circumstances, developing a point estimate may be an effective approach, particularly when it can be developed with a higher degree of precision. |
| The model used by management | When management uses a range, we might also deem it appropriate to develop our own independent range. For example, if an entity is party to an ongoing lawsuit, management, with the help of inside or outside counsel, will be required to quantify the anticipated outcome(s). Based upon the facts and circumstances, and the probability of the various results, management will likely be able to narrow the impact of the lawsuit to an appropriate range. |
| The estimation uncertainty involved with an accounting estimate | As the estimation uncertainty increases the benefit of using a range to develop an independent expectation also increases. |

### What method do we use to develop our point estimate or range? [ISA | 4351.1500]

We use a method that is consistent with and based upon the applicable financial reporting framework. Using our understanding of the entity's process in developing an accounting estimate, we may develop a point estimate or a range in a number of ways, for example, by:

- Using a different model than the one used by the entity, for example, one that is commercially available for use in a particular sector or industry, or a proprietary or auditor-developed model.
- Using the entity's model but developing alternative assumptions or data sources to those used by the entity.
- Using our own method and developing alternative assumptions to those used by the entity.
- Employing or engaging a person with specialized expertise to develop or execute a model, or to provide relevant assumptions.
- Considering other comparable conditions, transactions or events, or, where relevant, markets for comparable assets or liabilities.

## What is our responsibility for the methods, assumptions and data used in developing an independent expectation of an accounting estimate? [ISA | 4351.15509]

Whether we develop a point estimate or range using the entity's or our own methods, assumptions and/or data, we obtain sufficient appropriate audit evidence to evaluate whether the methods, assumptions, and data are appropriate in the context of the applicable financial reporting framework.

Remember that an independent expectation is one that uses other data or alternative methods and/or assumptions from what the entity uses, but that does not mean that it has to be completely derived by us. We can develop an independent expectation using the same model or some of the same data or assumptions as those used by the entity; however, we cannot use *all* of the same data and assumptions as the entity.

When assessing whether we have a reasonable basis for our assumption or method used when they differ from management's, we take into account our understanding of management's assumptions or methods to determine whether our point estimate or range accounts for relevant variables.

How do we evaluate the methods, assumptions and data used in developing an independent expectation of an accounting estimate? [ISA | 4351.15510]

The procedures we perform depend upon the source of the methods, assumptions, and data. The table below lists the possible sources and references to the related requirements.

| Possible sources of methods, assumptions, and data: | Perform the activity: |
|---|---|
| Us | Evaluate our own independent methods, assumptions and data, if applicable |
| The entity or management's specialist or third party (other than a specialist) | Test the entity's methods, assumptions and data, if applicable |
| A third party used by us | Evaluate the data and assumptions obtained from a third party, if applicable |

# 1.2.3.1.1 Evaluate our own independent methods, assumptions and data, if applicable [ISA | 4352]

## What do we do?

IF we use our own methods OR independently derive assumptions or data when developing an expectation of an accounting estimate THEN have a reasonable basis for the methods, assumptions and data used AND obtain sufficient appropriate audit evidence over them.

## Why do we do this?

We cannot use our independent expectation as audit evidence unless we have sufficiently tested the method, assumptions and data that we use. Otherwise, we have no reasonable basis for relying upon our expectation.

## Execute the Audit

What does a 'reasonable basis' mean for purposes of evaluating our independently derived methods, assumptions and/or data? [ISA | 4352.1300]

A reasonable basis means that we have obtained sufficient appropriate evidence to support that the methods, assumptions, and/or data that we used are consistent with the applicable financial reporting framework and our understanding of the entity's process, including the significant assumptions used by the entity, so that our expectation considers the factors relevant to the estimate.

### How do we obtain sufficient appropriate audit evidence over our independently derived methods, assumptions, and/or data? [ISA | 4352.1400]

We perform procedures to obtain a reasonable basis over our independently derived methods, assumptions, and/or data.

As part of this assessment we perform procedures to address the same matters that we do when we test the methods, assumptions, and data used by the entity ('see activity 'Test and evaluate the entity's process for developing an accounting estimate' and sub-activities), which includes the following matters:

| Element of an estimate | Matters |
|---|---|
| Method/model | • Whether the method selected is appropriate in the context of the financial reporting framework or the nature of the account or disclosure, and if applicable, changes from our method used in the prior period are appropriate;<br>• Whether the method is consistent with the business, industry, and environment in which the entity operates or the method generally accepted with the field of the KPMG specialist, if we use one;<br>• Whether the calculations made in accordance with our method are mathematically accurate.<br>• Whether the integrity of the relevant assumptions and the data has been maintained in applying our method.<br>• If we made adjustments to the output of our model, whether those adjustments are consistent with the measurement objective of the applicable financial reporting framework and appropriate in the circumstances. |
| Assumption | • Whether our assumption is appropriate in the context of the applicable financial reporting framework, and if applicable, changes from prior periods are appropriate;<br>• Whether our assumption is consistent with:(i) relevant industry, regulatory, and other external factors, including economic conditions, (ii) the entity's objectives, strategies, and related business risks, (iii) existing market information; (iv) historical or recent experience, along with changes in conditions and events affecting the company; and (v) relevant assumptions used in other estimates tested in the entity's financial statements;<br>• If our assumption was developed by a KPMG specialist, whether the assumption is consistent with assumptions generally accepted in the specialist's field, if any; and, |

| | |
|---|---|
| | • If our assumption depends on the entity's intent or ability to carry out specific courses of action, whether management has the intent and ability to carry out those specific courses of action. |
| Data | • Whether the data is appropriate in the context of the requirements of the applicable financial reporting framework, and if applicable, changes from prior periods are appropriate;<br>• Whether the data is relevant to the estimate and sufficiently precise and detailed for use in our independent expectation; and,<br>• Whether the data is sufficiently reliable. |

What do we use for CAR when we intend to perform substantive sampling to test our own independently derived assumptions and / or data? [ISA | 4352.15507]

When we intend to perform substantive sampling, we use a combination of the inherent risk for the selection and application risks and our decision as to whether we will take a controls reliance approach to determine the CAR that applies to our procedures.

# 1.2.3.1.2 Test the entity's methods, assumptions and data, if applicable [ISA | 4353]

## What do we do?

IF we use methods, assumptions or data provided by the entity in developing an independent expectation of an accounting estimate and evaluating related disclosures, THEN test them in the same manner we would employ for testing the entity's process

## Why do we do this?

No matter the source of the methods, assumptions or data, we obtain sufficient appropriate audit evidence to evaluate whether the methods, assumptions and data are appropriate in the context of the applicable financial reporting framework. When we use the entity's method, or assumptions and/or data derived by the entity in developing our own independent expectation of an accounting estimate, we test those elements just as we do when testing the entity's process.

## Execute the Audit

When may we use the entity's methods, assumptions, or data to develop our independent expectation? [ISA | 4353.1300]

We may use the entity's method, assumptions, or data when:

- There are no appropriate alternative methods, assumptions, and/or data related to an accounting estimate, and/or
- There is no reason to develop our own independent expectation of one or more of these elements

#### How do we test the entity's methods, assumptions, or data when used to develop our independent expectation? [ISA | 4353.1400]

We perform the same procedures that we use to test the entity's process.

The procedures we apply for each of the elements are discussed in the following activities:

| Element of an estimate | Perform the Activity |
|---|---|
| Method/model | Test and evaluate the methods used in the entity's estimation process |
| Assumption | Evaluate the assumptions used in the entity's estimation process |
| Data | Evaluate the data used in the entity's estimation process |

#### How do we assess the reliability of audit evidence of methods, assumptions, or data used in an accounting estimate when it is obtained from management's specialist or other third party? [ISA | 4353.15534]

We evaluate the reliability of that evidence consistent with how we evaluate the reliability of audit evidence in general as described in this chapter and the chapter on audit evidence (AS 1105, AU-C 501, ISA 500), but with a heightened awareness to whether or not the third party's work is subject to restrictions, limitations, or disclaimers. In these circumstances, we evaluate the effect of the restrictions, limitations, or disclaimers on the reliability of that evidence. See question, 'What if information obtained from external information sources or other external parties is subject to restrictions, limitations, or disclaimers?' for additional information. When the evidence is received from a management specialist we also perform the activities included in the chapter on using the work of management's specialists (AS 1105, AU-C 501, ISA 500) in conjunction with the other procedures we perform.

# 1.2.3.1.3 Evaluate the data and assumptions obtained by us from a third party, if applicable [ISA | 4354]

## What do we do?

IF we use data or assumptions obtained from a third party to develop an independent expectation of an accounting estimate, THEN evaluate the relevance and reliability of the data and assumptions.

## Why do we do this?

Regardless of the source of the assumptions or data, we obtain sufficient appropriate audit evidence to evaluate whether the assumptions and data are appropriate in the context of the applicable financial reporting framework.

# Execute the Audit

### When might we use data or assumptions from a third party to develop an independent expectation for an accounting estimate? [ISA | 4354.1300]

We might use data or assumptions obtained from a third-party specialist or other third party such as a pricing vendor when specialized skills or knowledge are needed.

> Examples of information commonly obtained from a specialist or other third-party are as follows:
>
> - Pricing information obtained from a third party to develop an independent expectation of the fair value of financial instruments.
> - Contract, law, and regulation interpretation obtained from third-party attorneys.
> - Mineral reserve obtained from third-party engineers.
> - Oil and gas reserves obtained from third-party engineers.
> - Credit ratings obtained from rating agencies.
> - Inflation rates obtained from economic organizations.

### How do we test and evaluate data or assumptions that we obtain from a third party? [ISA | 4354.1400]

We perform the activity, 'Evaluate the relevance and reliability of information used as audit evidence'. For pricing data received from a third-party pricing service we perform the activity, 'Evaluate third-party pricing information from a pricing service'

# 1.2.3.2 Determine whether the range is appropriate and supported [ISA | 4355]

# What do we do?

IF our independent expectation of an accounting estimate consists of a range rather than a point estimate, THEN determine that the range is appropriate for identifying a misstatement and supported by sufficient appropriate audit evidence

# Why do we do this?

If the entity's estimate falls within our range, we are able to conclude that an estimate is reasonable. If the entity's estimate does not fall within our range, then we consider the amount outside of our range to be a misstatement. Accordingly, if we establish our range too broadly - i.e., wider than the evidence suggests - we may not identify a material misstatement when one exists.

# Execute the Audit

### What does 'appropriate for identifying a misstatement' mean with respect to our range when our independent expectation of an accounting estimate consists of a range? [ISA | 4355.1300]

Our range is appropriate for identifying a misstatement when it is sufficiently narrow. This means that all the outcomes within the range are considered reasonable. We use points at both ends of the range that are reasonable in the circumstances, thereby supporting that amounts falling between those two points also are reasonable.

> For example, for actuarial estimates such as insurance reserves, actuaries may develop a range of possible estimates around their selected point estimate. This range may not be symmetrical - for example, the range of reasonable values above the point estimate may be greater than the range below. Ranges of acceptable reserve amounts may vary in size and are frequently material in relation to claim reserves. The range of acceptable reserve amounts around a point estimate for a highly predictable, well established line of business might be relatively narrow; whereas, the range of acceptable reserve amounts around an emerging line of business may be much wider. Additionally, by comparison, the percentage range of reserve variation may be larger for a smaller line of business or one with rapid growth in exposures than for a larger similar line of business or one with stable exposures.

Ordinarily, a range that has been narrowed to be equal to or less than performance materiality is adequate for the purposes of evaluating the reasonableness of entity's point estimate. However, particularly in certain industries, it may not be possible to narrow the range to below such an amount given the estimation uncertainty that is inherent in the estimate.

### Can our range exceed performance materiality?

Yes, in some cases it may be multiples of performance materiality. Particularity when materiality is based on operations (for example, pre-tax income) and is relatively small in relation to assets or other balance sheet measures which are driven by more significant estimates. This situation is more likely to arise in circumstances when the estimation uncertainty related to an accounting estimate is itself multiples of materiality. This can be common for certain types of accounting estimates or in certain industries, such as insurance or banking, where a high degree of estimation uncertainty is more typical and there may be specific requirements in the applicable financial reporting framework in that regard.

Remember that when this is the case, our evaluation of the reasonableness of the disclosures about estimation uncertainty becomes increasingly important, particularly whether such disclosures appropriately convey the high degree of estimation uncertainty and the range of possible outcomes. See activity, 'Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework' for further information on how to evaluate the reasonableness of disclosures.

### How do we narrow our range?

We can narrow our range by performing the following steps:

(1) Narrow the range to a point where every outcome within the range could be a reasonable point estimate of an accounting estimate. We can do this by:

- (a) Eliminating the extreme points in the range we judge to be unlikely to occur - i.e., those points furthest from our point estimate; and
- (b) Eliminating outliers.

(2) Assess whether the total range - i.e., the difference between the two end points of the range - is less than or equal to PM. If so, then we may be able to conclude that our range is sufficiently narrow to identify a material misstatement.

However, for certain types of accounting estimates or in certain industries - for example, an insurance reserve - it may not be possible to narrow the range to below PM. See the third step, when this is the case.

(3) If the total range - i.e., the difference between the two end points of the range - is greater than PM, then document why the range is narrow enough where all outcomes within the range are considered reasonable and the range cannot be narrowed further.

These situations may indicate, however, that the estimation uncertainty related to the accounting estimate is high enough that it gives rise to a significant risk.

#### Do we focus on the reasonableness of each possible outcome in a range individually?

Not necessarily. In many cases, we critically assess whether the high and low ends of a range are relevant and reliable by obtaining sufficient appropriate audit evidence over each end of the range. Doing this helps support that amounts falling between those two points also are reasonable and represent reasonable outcomes.

#### What is an outlier?

An outlier is a data point that differs significantly from other data points. When we identify potential outliers, we assess whether it is appropriate to include or exclude them from our independent expectation. The inappropriate inclusion or exclusion of outliers can distort our range and cause us to draw improper conclusions.

#### How do we determine whether there are outliers within our range to be excluded from our independent expectation?

In narrowing down the range to eliminate outliers, we look for outcomes that do not look reasonable based on the evidence available. We do this by reviewing the outliers and asking whether the possible outlier has a different facts and circumstances that suggests it is appropriate to be excluded from the range or is not a reasonable outcome in the circumstances.

In some cases, outliers may represent information that contradicts or is inconsistent with evidence supporting the entity's methods, assumptions or data related to an accounting estimate, which impacts our overall evaluation of an accounting estimate as a whole. See activity 'Document our resolution of information that is inconsistent with our conclusions' for further information.

> For example, when evaluating projected cash flows, some of the possible scenarios may look extreme. Some may look too optimistic - like winning large contracts, or hitting a massive success with new unproven products - or too pessimistic - like losing most of the client portfolio to competitors. Eliminating those extreme, unlikely scenarios will lead to a more narrow range.
>
> Another example is when evaluating whether or not to include peer data within the range, the entities may not be comparable enough. Two companies may sell the same widgets in the same country, but if one has outsourced most of its manufacturing process abroad while other is still vertically integrated, it may impact the comparability of data between the two.

Whenever outliers are identified and excluded from the range, we document our assessment of the outliers and rationale for excluding them.

# 1.2.3.3 Compare our independent expectation to the entity's estimate [ISA | 4356]

## What do we do?

Compare our independent expectation to the entity's accounting estimate, and evaluate any differences

## Why do we do this?

In order to conclude on the appropriateness of the entity's accounting estimate, we compare our independent expectation to the entity's and assess whether there are any identified audit misstatements.

## Execute the Audit

### How do we evaluate a difference between the entity's point estimate and our point estimate? [ISA | 4356.1300]

When we identify a difference between the entity's point estimate and ours we treat the difference as a misstatement and evaluate that misstatement consistent with the activity 'Accumulate, communicate and evaluate misstatements' which includes the activity 'Determine the amount of the judgmental and projected misstatements' which addresses matters specific to estimates.

### How do we evaluate a difference between the entity's point estimate and our range? [ISA | 4356.1400]

When the entity's point estimate is outside our range, we treat the difference between the recorded accounting estimate and the closest end point of our range as a misstatement and evaluate that misstatement consistent with the activity 'Accumulate, communicate and evaluate misstatements' which includes the activity 'Determine the amount of the judgmental and projected misstatements' which addresses matters specific to estimates.

### What do we do if we think that a difference between our independent expectation and the entity's accounting estimate does not represent a misstatement? [ISA | 4356.1500]

We may consider if it is appropriate to adjust our range. There may be situations where we did not include / consider something that management appropriately did consider and our initial range may not be reasonable. If we adjust our range we document the basis for determining that the point estimate and/or range of an accounting estimate is appropriate, including consideration given to contradictory (inconsistent) audit evidence, management bias, and our consideration of whether the entity's estimate is of equal or greater quality in relation to the independent estimate.

# 1.3 Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework [ISA | 4348]

## What do we do?

Test and evaluate whether the disclosures related to accounting estimates, including those that describe the estimation uncertainty, are in conformity with the applicable financial reporting framework

# Why do we do this?

Estimates are subject to varying degrees of estimation uncertainty whereas actual results and actual outcomes may vary to estimates made by management by a material amount. Disclosures are intended to inform the users of matters that are material and relevant to their investment decisions such as the basis for how an estimate was determined and to describe the level of estimation uncertainty related to an estimate. Performing this activity helps us to determine whether the financial statements contain the information essential for a fair presentation.

# Execute the Audit

### How do we determine whether the disclosures related to an accounting estimate are accurate, complete, and fairly presented? [ISA | 4348.1300]

We perform the activity 'Evaluate the presentation of the financial statements'.

### How do we determine whether the estimation uncertainty is appropriately described in the disclosures to the financial statements in accordance with the applicable financial reporting framework? [ISA | 4348.1500]

We understand two things: what is required by the applicable financial reporting framework and the entity's disclosures relating to the estimation uncertainty. Both of these are knowledge we obtain through our risk assessment procedures.

### Might we use a KPMG specialist to understand whether an accounting estimate is disclosed in accordance with the applicable financial reporting framework? [ISA | 4348.1700]

Yes. This is particularly true when the models or assumptions used are complex or when special skills are used to determine the estimate (e.g., actuarial models).

When we use the work of a KPMG specialist, we obtain an appropriate understanding of the work they performed and the basis for their conclusion in order to determine whether they have addressed the relevant and identified risks of material misstatement. See the chapter on using the work of a KPMG specialist for more information (AS 1210, AS 1201, AU-C 620, ISA 620).

#### When is a model more likely to be considered complex? [ISA | 4348.15556]

Indicators that a model, and the related method, are more complex can include situations where:

- Understanding and applying the method, including designing the model and selecting and using appropriate data and assumptions, calls for specialized skills or knowledge;
- It is difficult to obtain the data to use the model because there are restrictions on the availability or observability of, or access to, data; or
- It is difficult to maintain the integrity (e.g., accuracy, consistency, or completeness) of the data and assumptions in using the model due to multiple valuation attributes, multiple relationships between them, or multiple iterations of the calculation.

### How do we design and perform tests of controls over whether the disclosures related to an accounting estimate conform to the applicable financial reporting framework? [ISA | 4348.15578]

We consider all that is discussed in the standards with respect to controls. See activity, 'Design and implement a response to the RMMs related to an accounting estimate' for further information.

#### What might be a common process risk point related to whether disclosures related to accounting estimates conform to the applicable financial reporting framework? [ISA | 4348.15514]

Process risk points (PRPs) are entity specific, so we understand the process before determining the PRPs. However, given the nature of the risk, the PRPs are likely to be:

- Management has not taken the appropriate steps to understand the required disclosures.
- Management's understanding of the disclosure requirements is incorrect;
- Management has not taken the appropriate steps to make the disclosures; and,
- How management made the disclosures is incorrect.

The PRPs may be described differently or in more detail depending on the complexity of an accounting estimate or the financial reporting framework.

#### What types of controls might an entity have over whether disclosures related to accounting estimates conform to the applicable financial reporting framework? [ISA | 4348.15515]

The entity may have a control that evaluates the disclosure requirements relating to an accounting estimate to determine what disclosures are required under the financial reporting framework. Additionally, the entity may have a control that reviews the disclosures individually and in the aggregate to validate that the disclosures are accurate, complete and fairly presented in accordance with the financial reporting framework. The frequency of the control may be on a quarterly basis which is driven by the reporting requirements of the entity.

### How do we design and perform substantive procedures to test whether disclosures related to accounting estimates conform to the applicable financial reporting framework? [ISA | 4348.1900]

We consider all that is discussed in the standards with respect to substantive procedures (see activity, 'Design and perform substantive procedures for each RMM').

Our procedures are not done through sampling or a substantive analytical procedure; rather, we analyze the disclosures and assess whether they conform to the financial reporting framework using our judgment and are driven by the degree of complexity and materiality.

We also test the mathematical accuracy of the disclosures and reconcile the disclosures to the entity's accounting records. Further, we consider the relevance and test the completeness and accuracy of the information used to prepare the disclosure.

#### Do we perform substantive procedures even when we take a controls based approach? [ISA | 4348.15518]

Yes. This can be accomplished through a dual purpose test or a combination of procedures which might include re-performance of the control in addition to other procedures.

If we perform a dual purpose test, we obtain evidence that management has evaluated the disclosure, as well as independently re-perform that evaluation to determine that the disclosures are accurate, complete and fairly presented in accordance with the applicable financial reporting framework. In these instances, there may not be any incremental evidence beyond what we have already obtained from testing internal controls and the work will satisfy both the control and the substantive objective.

However, based on the our assessed level of CAR, we may choose to perform additional substantive procedures.

What additional types of substantive procedures might we perform over disclosures in the financial statements about estimation uncertainty? [ISA | 4348.15520]

We may develop an independent expectation and compare it to the entity's disclosure. Typically, a manual comparison of the level of estimation uncertainty disclosed by management to our independently developed range could give us audit evidence regarding whether the uncertainty disclosed is reasonable and consistent with the results of our audit procedures to evaluate the estimate. In situations where the range is bigger and there is more estimation uncertainty in an accounting estimate, it may call for more disclosures for the user to understand the risk relative to changes and whether those changes could be material.

May substantive procedures alone provide sufficient appropriate audit evidence? [ISA | 4348.15522]

It depends. If we are not relying on controls, performing an integrated audit, or are not responding to a significant risk, we may determine that testing internal controls is not necessary. In these instances, we may be able to obtain sufficient appropriate audit evidence from substantive procedures alone that allow us to conclude that the disclosures are accurate, complete and are fairly presented in accordance with the applicable financial reporting framework.

When are substantive procedures alone not able to provide sufficient appropriate audit evidence for an accounting estimate? [ISA | 4348.1800]

There may be times when we cannot obtain sufficient appropriate audit evidence from substantive procedures alone, especially when an estimate is more complex and / or a significant amount of information or data elements are electronically initiated, recorded, processed or reported. In these situations, we test controls as part of our response.

> For example, a complex expected credit loss provision may be appropriate for a financial institution or utility entity. In the case of a utility entity, the data used in developing the expected credit loss provision may comprise many small balances resulting from a high volume of transactions. In these circumstances, we may conclude that sufficient appropriate audit evidence cannot be obtained without testing controls around the model used to develop the expected credit loss provision to conduct business, such as the financial services industry.

See activity, 'Test controls when substantive procedures alone cannot provide sufficient audit evidence'.

How might management bias impact the risk that disclosures related to accounting estimates do not conform to the applicable financial reporting framework? [ISA | 4348.2000]

When the applicable financial reporting framework does not specify the disclosures to be made this introduces subjectivity into management's disclosures. This requires management to make judgments which may be susceptible to management bias. Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

How might inconsistent judgments impact the risk that disclosures related to accounting estimates do not conform to the applicable financial reporting framework? [ISA | 4348.15527]

When judgments are inconsistent - either period over period or between similar judgments in different estimates - it may be an indicator of an increased level of inherent risk related to the method, assumption, or data.

Inconsistent judgments may impact our conclusion as to whether our assessed level of CAR remains appropriate.

We also consider whether the audit evidence points to a misstatement and whether the financial statements as a whole are free from material misstatement.

#### What if the inconsistent judgments are intentional? [ISA | 4348.15528]

When management intentionally makes judgments that are inconsistent with one another this is an indicator of management bias. See 'How might inconsistent judgments impact the risk that disclosures related to accounting estimates do not conform to the applicable financial reporting framework?' above for further information how inconsistent judgments may impact our audit approach.

#### How do indicators of management bias that we identify impact our audit approach? [ISA | 4348.8811]

Indicators of possible management bias may impact our conclusion as to whether our previous assessment of the level of CAR.

We also consider whether the audit evidence points to a misstatement rather than simply an indicator of management bias and our conclusion as to whether the financial statements as a whole are free from material misstatement.

#### What if the bias is intentional? [ISA | 4348.15188]

When we identify intentional bias, we consider the possible implications of fraud and the impact on our audit approach. We re-evaluate our risk assessment conclusions and determine whether there are fraud risks we did not previously identify.

See the chapter on Fraud (ISA 240, AU-C 240, AS 2401) for a full list of activities that we perform when we identify intentional management bias.

#### What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4348.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

#### Do we evaluate the consistent application of judgments even when they do not relate to complex models? [ISA | 4348.15532]

Yes. We always understand the consistency of judgments regardless of whether they relate to a complex model.

# Disclosures Related to Accounting Estimates

# International Standards on Auditing: ISA 540.31

## Disclosures Related to Accounting Estimates

31. The auditor shall design and perform further audit procedures to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement at the assertion level for disclosures related to an accounting estimate, other than those related to estimation uncertainty addressed in paragraphs 26(b) and 29(b).

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework [ISA | 4348]

## What do we do?

Test and evaluate whether the disclosures related to accounting estimates, including those that describe the estimation uncertainty, are in conformity with the applicable financial reporting framework

## Why do we do this?

Estimates are subject to varying degrees of estimation uncertainty whereas actual results and actual outcomes may vary to estimates made by management by a material amount. Disclosures are intended to inform the users of matters that are material and relevant to their investment decisions such as the basis for how an estimate was determined and to describe the level of estimation uncertainty related to an estimate. Performing this activity helps us to determine whether the financial statements contain the information essential for a fair presentation.

## Execute the Audit

How do we determine whether the disclosures related to an accounting estimate are accurate, complete, and fairly presented? [ISA | 4348.1300]

We perform the activity 'Evaluate the presentation of the financial statements'.

How do we determine whether the estimation uncertainty is appropriately described in the disclosures to the financial statements in accordance with the applicable financial reporting framework? [ISA | 4348.1500]

We understand two things: what is required by the applicable financial reporting framework and the entity's disclosures relating to the estimation uncertainty. Both of these are knowledge we obtain through our risk assessment procedures.

Might we use a KPMG specialist to understand whether an accounting estimate is disclosed in accordance with the applicable financial reporting framework? [ISA | 4348.1700]

Yes. This is particularly true when the models or assumptions used are complex or when special skills are used to determine the estimate (e.g., actuarial models).

When we use the work of a KPMG specialist, we obtain an appropriate understanding of the work they performed and the basis for their conclusion in order to determine whether they have addressed the relevant and identified risks of material misstatement. See the chapter on using the work of a KPMG specialist for more information (AS 1210, AS 1201, AU-C 620, ISA 620).

#### When is a model more likely to be considered complex? [ISA | 4348.15556]

Indicators that a model, and the related method, are more complex can include situations where:

- Understanding and applying the method, including designing the model and selecting and using appropriate data and assumptions, calls for specialized skills or knowledge;
- It is difficult to obtain the data to use the model because there are restrictions on the availability or observability of, or access to, data; or
- It is difficult to maintain the integrity (e.g., accuracy, consistency, or completeness) of the data and assumptions in using the model due to multiple valuation attributes, multiple relationships between them, or multiple iterations of the calculation.

### How do we design and perform tests of controls over whether the disclosures related to an accounting estimate conform to the applicable financial reporting framework? [ISA | 4348.15578]

We consider all that is discussed in the standards with respect to controls. See activity, 'Design and implement a response to the RMMs related to an accounting estimate' for further information.

#### What might be a common process risk point related to whether disclosures related to accounting estimates conform to the applicable financial reporting framework? [ISA | 4348.15514]

Process risk points (PRPs) are entity specific, so we understand the process before determining the PRPs. However, given the nature of the risk, the PRPs are likely to be:

- Management has not taken the appropriate steps to understand the required disclosures.
- Management's understanding of the disclosure requirements is incorrect;
- Management has not taken the appropriate steps to make the disclosures; and,
- How management made the disclosures is incorrect.

The PRPs may be described differently or in more detail depending on the complexity of an accounting estimate or the financial reporting framework.

#### What types of controls might an entity have over whether disclosures related to accounting estimates conform to the applicable financial reporting framework? [ISA | 4348.15515]

The entity may have a control that evaluates the disclosure requirements relating to an accounting estimate to determine what disclosures are required under the financial reporting framework. Additionally, the entity may have a control that reviews the disclosures individually and in the aggregate to validate that the disclosures are accurate, complete and fairly presented in accordance with the financial reporting framework. The frequency of the control may be on a quarterly basis which is driven by the reporting requirements of the entity.

### How do we design and perform substantive procedures to test whether disclosures related to accounting estimates conform to the applicable financial reporting framework? [ISA | 4348.1900]

We consider all that is discussed in the standards with respect to substantive procedures (see activity, 'Design and perform substantive procedures for each RMM').

Our procedures are not done through sampling or a substantive analytical procedure; rather, we analyze the disclosures and assess whether they conform to the financial reporting framework using our judgment and are driven by the degree of complexity and materiality.

We also test the mathematical accuracy of the disclosures and reconcile the disclosures to the entity's accounting records. Further, we consider the relevance and test the completeness and accuracy of the information used to prepare the disclosure.

#### Do we perform substantive procedures even when we take a controls based approach? [ISA | 4348.15518]

Yes. This can be accomplished through a dual purpose test or a combination of procedures which might include re-performance of the control in addition to other procedures.

If we perform a dual purpose test, we obtain evidence that management has evaluated the disclosure, as well as independently re-perform that evaluation to determine that the disclosures are accurate, complete and fairly presented in accordance with the applicable financial reporting framework. In these instances, there may not be any incremental evidence beyond what we have already obtained from testing internal controls and the work will satisfy both the control and the substantive objective. However, based on the our assessed level of CAR, we may choose to perform additional substantive procedures.

#### What additional types of substantive procedures might we perform over disclosures in the financial statements about estimation uncertainty? [ISA | 4348.15520]

We may develop an independent expectation and compare it to the entity's disclosure. Typically, a manual comparison of the level of estimation uncertainty disclosed by management to our independently developed range could give us audit evidence regarding whether the uncertainty disclosed is reasonable and consistent with the results of our audit procedures to evaluate the estimate. In situations where the range is bigger and there is more estimation uncertainty in an accounting estimate, it may call for more disclosures for the user to understand the risk relative to changes and whether those changes could be material.

#### May substantive procedures alone provide sufficient appropriate audit evidence? [ISA | 4348.15522]

It depends. If we are not relying on controls, performing an integrated audit, or are not responding to a significant risk, we may determine that testing internal controls is not necessary. In these instances, we may be able to obtain sufficient appropriate audit evidence from substantive procedures alone that allow us to conclude that the disclosures are accurate, complete and are fairly presented in accordance with the applicable financial reporting framework.

#### When are substantive procedures alone not able to provide sufficient appropriate audit evidence for an accounting estimate? [ISA | 4348.1800]

There may be times when we cannot obtain sufficient appropriate audit evidence from substantive procedures alone, especially when an estimate is more complex and / or a significant amount of information or data elements are electronically initiated, recorded, processed or reported. In these situations, we test controls as part of our response.

> For example, a complex expected credit loss provision may be appropriate for a financial institution or utility entity. In the case of a utility entity, the data used in developing the expected credit loss provision may comprise many small balances resulting from a high volume of transactions. In these circumstances, we may conclude that sufficient appropriate audit evidence cannot be obtained without testing controls around the model used to develop the expected credit loss provision to conduct business, such as the financial services industry.

See activity, 'Test controls when substantive procedures alone cannot provide sufficient audit evidence'.

### How might management bias impact the risk that disclosures related to accounting estimates do not conform to the applicable financial reporting framework? [ISA | 4348.2000]

When the applicable financial reporting framework does not specify the disclosures to be made this introduces subjectivity into management's disclosures. This requires management to make judgments which may be susceptible to management bias. Bias may be unintentional - which is more common - or it may be intentional. Intentional management bias is fraudulent in nature.

#### How might inconsistent judgments impact the risk that disclosures related to accounting estimates do not conform to the applicable financial reporting framework? [ISA | 4348.15527]

When judgments are inconsistent - either period over period or between similar judgments in different estimates - it may be an indicator of an increased level of inherent risk related to the method, assumption, or data.

Inconsistent judgments may impact our conclusion as to whether our assessed level of CAR remains appropriate.

We also consider whether the audit evidence points to a misstatement and whether the financial statements as a whole are free from material misstatement.

#### What if the inconsistent judgments are intentional? [ISA | 4348.15528]

When management intentionally makes judgments that are inconsistent with one another this is an indicator of management bias. See 'How might inconsistent judgments impact the risk that disclosures related to accounting estimates do not conform to the applicable financial reporting framework?' above for further information how inconsistent judgments may impact our audit approach.

#### How do indicators of management bias that we identify impact our audit approach? [ISA | 4348.8811]

Indicators of possible management bias may impact our conclusion as to whether our previous assessment of the level of CAR.

We also consider whether the audit evidence points to a misstatement rather than simply an indicator of management bias and our conclusion as to whether the financial statements as a whole are free from material misstatement.

#### What if the bias is intentional? [ISA | 4348.15188]

When we identify intentional bias, we consider the possible implications of fraud and the impact on our audit approach. We re-evaluate our risk assessment conclusions and determine whether there are fraud risks we did not previously identify.

See the chapter on Fraud (ISA 240, AU-C 240, AS 2401) for a full list of activities that we perform when we identify intentional management bias.

What do we include in our audit documentation when we identify indicators of management bias? [ISA | 4348.15554]

When we identify bias, we:

- document the indicators of management bias
- document how we addressed the indicators

This documentation assists us in concluding whether our risk assessment and our related assessed level of CAR remain appropriate and evaluating whether the financial statements as a whole are free from material misstatement.

Do we evaluate the consistent application of judgments even when they do not relate to complex models? [ISA | 4348.15532]

Yes. We always understand the consistency of judgments regardless of whether they relate to a complex model.

# Indicators of Possible Management Bias

## International Standards on Auditing: ISA 540.32

### Indicators of Possible Management Bias

32. 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, are indicators of possible management bias. When indicators of possible management bias are identified, the auditor shall evaluate the implications for the audit. Where there is intention to mislead, management bias is fraudulent in nature. (Ref: Para. A133 - A136)

## ISA Application and Other Explanatory Material: ISA 540.A133-A136

### Indicators of Possible Management Bias (Ref: Para. 32)

A133. Management bias may be difficult to detect at an account level and may only be identified by the auditor when considering groups of accounting estimates, all accounting estimates in aggregate, or when observed over a number of accounting periods. For example, if accounting estimates included in the financial statements are considered to be individually reasonable but management's point estimates consistently trend toward one end of the auditor's range of reasonable outcomes that provide a more favorable financial reporting outcome for management, such circumstances may indicate possible bias by management.

A134. 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 development of significant assumptions or the data that yield a point estimate favorable for management objectives.
- Selection of a point estimate that may indicate a pattern of optimism or pessimism.

When such indicators are identified, there may be a risk of material misstatement either at the assertion or financial statement level. 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 management bias.

A135. Indicators of possible management bias may affect the auditor's conclusion as to whether the auditor's risk assessment and related responses remain appropriate. The auditor may also need to consider the implications for other aspects of the audit, including the need to further question the appropriateness of management's judgments in making accounting estimates. Further, indicators of possible management bias may affect the auditor's conclusion as to whether the financial statements as a whole are free from material misstatement, as discussed in ISA 700 (Revised).[55]

---

[55] ISA 700 (Revised), paragraph 11

A136. 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.[56] Fraudulent financial reporting is often accomplished through intentional misstatement of accounting estimates, which may include intentionally understating or overstating accounting estimates. Indicators of possible management bias that may also be a fraud risk factor, may cause the auditor to reassess whether the auditor's risk assessments, in particular the assessment of fraud risks, and related responses remain appropriate.

---

[56] ISA 240, paragraph 33(b)

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Evaluate qualitative aspects of accounting practices, including management bias [ISA | 4459]

## What do we do?

Evaluate qualitative aspects of the entity's accounting practices, including potential bias in management's judgments about the amounts and disclosures in the financial statements.

## Why do we do this?

As we evaluate the results of our audit, we evaluate the qualitative aspects of the entity's accounting practices because:

- issues related to the qualitative aspects of the entity's accounting practices may result in a material misstatement of the financial statements; and
- we communicate the results of this evaluation and the alternative accounting treatments to those charged with governance.

# Execute the Audit

### What does 'qualitative aspects of the accounting practices' mean? [ISA | 4459.1300]

The qualitative aspects of the entity's accounting practices relate to how management operates and makes decisions within the confines of the financial reporting framework - i.e. how management choose between acceptable alternatives.

> Consider a situation in which we are walking to the supermarket and reach a fork in the road where we can choose between walking along a street through a construction site or a path through a park. Both routes take us to the supermarket in roughly the same amount of time. Although going through the construction site may be an acceptable way to reach the supermarket, qualitatively, we may believe the path through the park is a better route because the view and atmosphere are more pleasant.
>
> Similarly, in a financial statement audit, we may identify more than one accounting practice that is acceptable under the applicable financial reporting framework. However, depending on the circumstances, there may be certain practices or alternatives that we consider are the best or most appropriate.

### What is management bias in judgments about the amounts and disclosures in the financial statements? [ISA | 4459.1400]

Bias is an inclination in favor of or against one thing, person, or group compared with another.

> For example, in a basketball game, there may be times when a referee has to quickly decide whether there was a foul during a play. When it is not clear, the referee may be unconsciously biased if one of those teams is his favorite team.

Given management's position, there is a possibility that they might lack neutrality when preparing the financial statements and may be biased in choosing or applying their accounting practices. In other words, management may choose an accounting practice that is acceptable under the financial reporting framework but beneficial to management or the entity.

> Consider a situation in which a tour company advertises a walking tour that includes walking through a nice park on the way to a well-known tourist site. The tour guide has the option of entering the park at the first entrance, maximizing the time in the park, or at the second entrance, which means more time walking along an ordinary street. There is a kiosk that sells snacks and souvenirs at both entrances and the tour company owns the kiosk at the second entrance. Both routes meet the description in the advertisement and they take people to the tourist site in roughly the same amount of time. We may believe that the first route is preferable because it is more in line with what the tourists are expecting. Nevertheless, the tour guide picks the second gate,

which benefits the tour guide but not the paying customers. In this situation, the tour guide chose an option that was acceptable but that was to his benefit.

The potential for bias in management's judgments about the amounts and disclosures in the financial statements is one aspect we are particularly concerned about when we evaluate the qualitative aspects of an entity's accounting practices.


### Does management bias always indicate fraud?

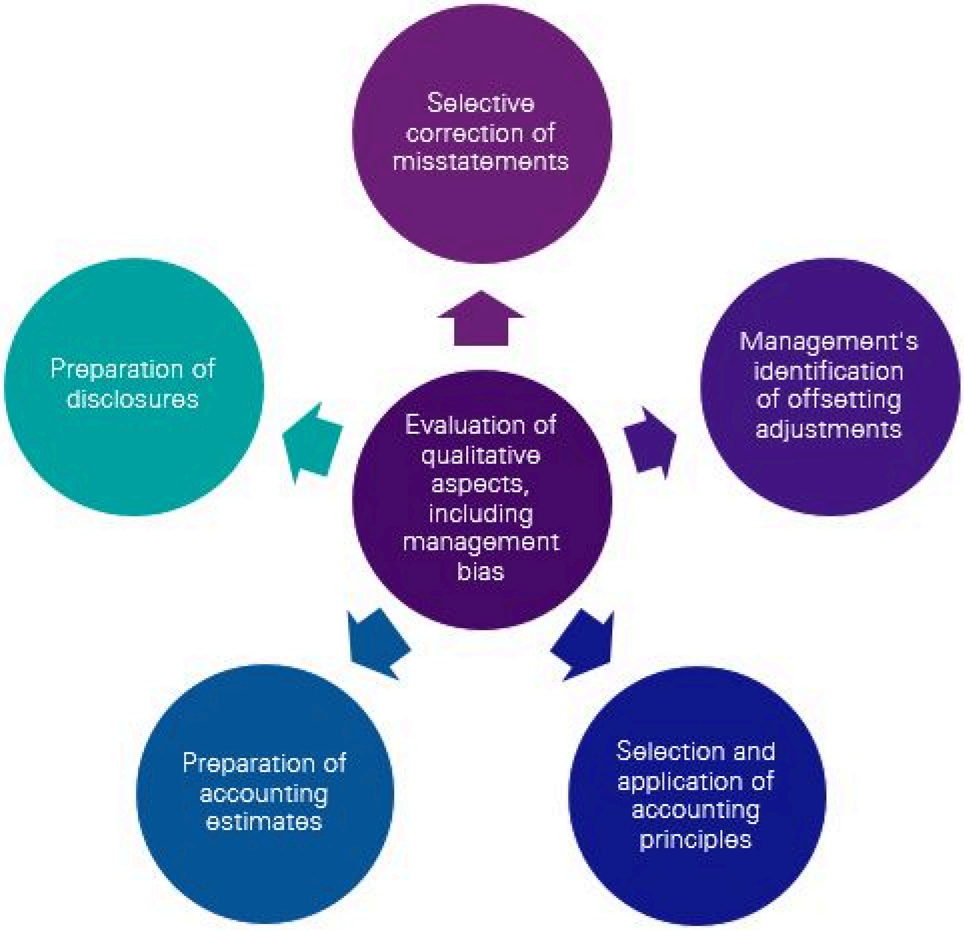
No. Some form of management bias is inherent in subjective decisions. However, when making judgments, management may have no intention to mislead the financial statements' users. Fraud exists only if there is intention to mislead, e.g. manipulation of earnings.

In the example of the basketball game, fraudulent behavior would exist if the referee favored his favorite team on purpose with the conscious intention to give that team an unfair advantage.

## What areas in the financial statements do we focus on during our evaluation of the qualitative aspects of accounting practices, including potential management bias? [ISA | 4459.1600]

Our evaluation focuses on the areas where management is allowed to make a number of judgments about the amounts and disclosures in the financial statements, such as management's:

- responses to misstatements identified;
- selection and application of accounting principles/policies;
- preparation of accounting estimates; and
- preparation of disclosures in the financial statements.

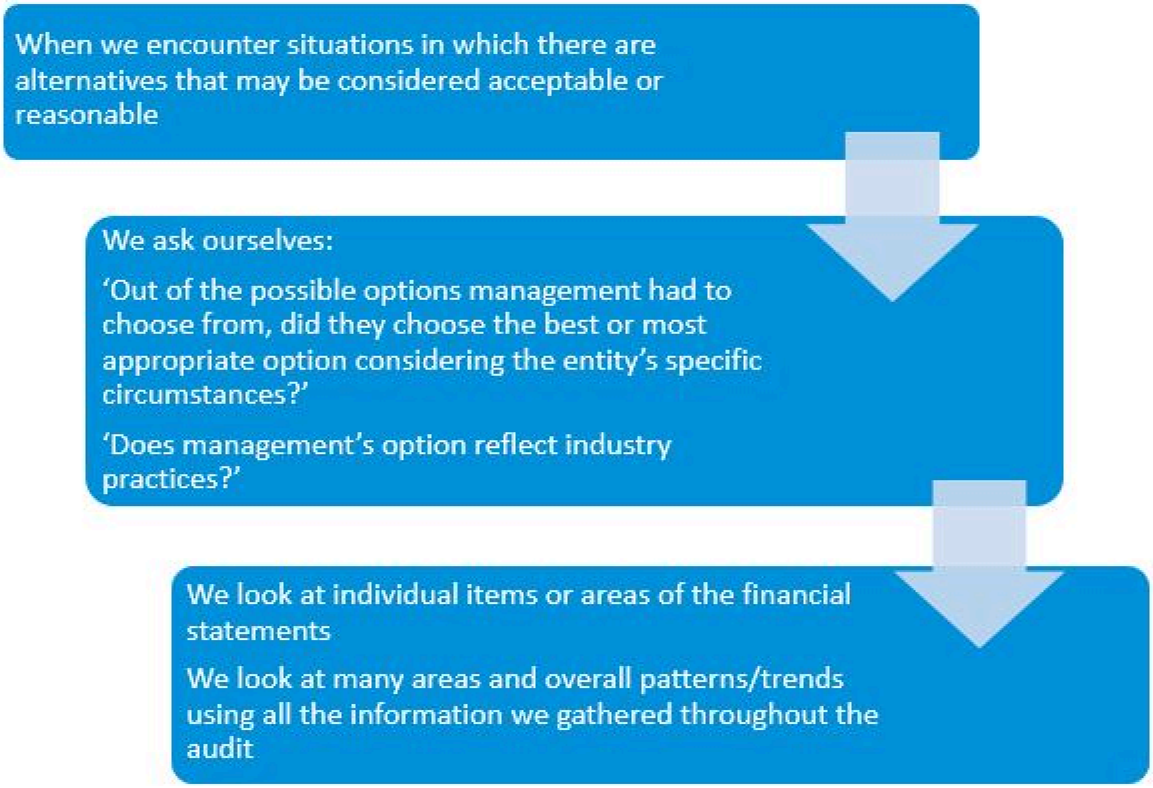



### When do we evaluate the qualitative aspects of accounting practices, including potential management bias? [ISA | 4459.1700]

We evaluate the qualitative aspects of an entity's accounting practices:

- throughout the audit on individual items or areas of the financial statements; and
- toward the end of the audit, looking at many areas and overall patterns/trends.

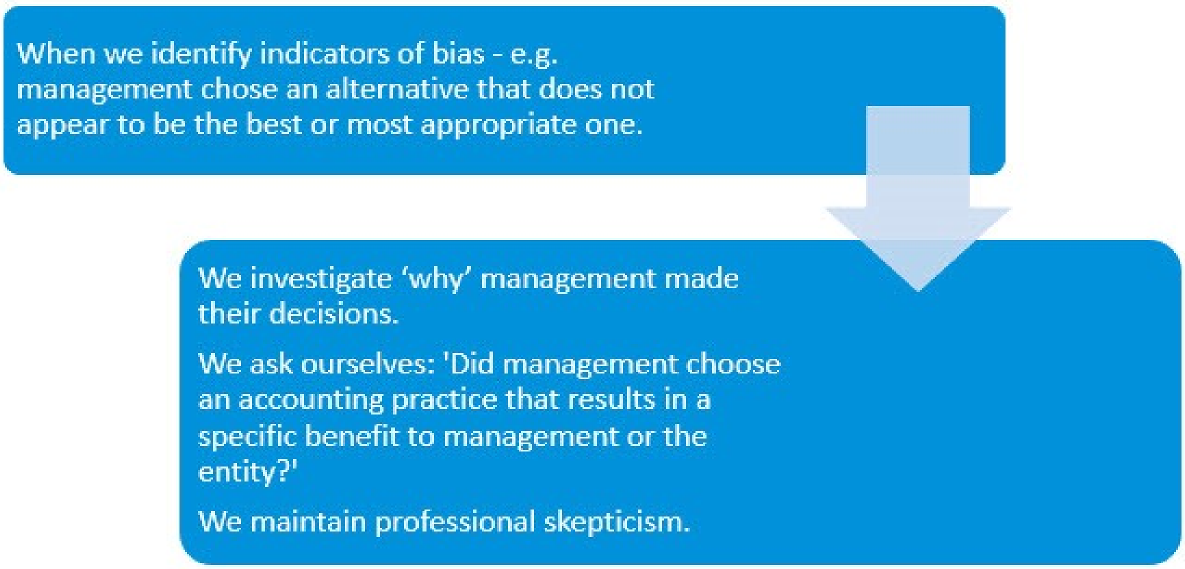
### How do we identify concerns regarding the qualitative aspects of accounting practices, including management bias? [ISA | 4459.15902]




As a practical matter, when we encounter situations in which there are alternatives that may be considered acceptable or reasonable, we often ask ourselves: 'Out of the possible options management had to choose from, did they choose the best or most appropriate option considering the entity's specific circumstances?' 'Does management's option reflect industry practice?' Asking ourselves these questions can help us identify areas in which we may have concerns about the qualitative aspects of an entity's accounting practices.

We do this throughout the audit, looking at individual items or areas of the financial statements. However, issues related to qualitative aspects may not always be apparent by looking at only one or two individual items or areas. As a result, evaluating the qualitative aspects at the end of the audit is often more effective because we can step back and look at many areas and overall patterns/trends using all the information we gathered throughout the audit. Taking a holistic approach is often more effective.

In particular, how do we identify management bias?




Identifying management bias is not easy. Sometimes we will identify only certain indicators of possible bias. In that case, we follow up on them to determine whether there is management bias, how widespread this bias is, and whether we believe there is a fraud risk or actual fraud. We usually achieve this by investigating 'why' management made their decisions and asking ourselves: 'Did management choose an accounting practice that results in a specific benefit to management or the entity?'. Once we understand the 'why', it is easier to determine whether those decisions were biased.

Maintaining professional skepticism is an essential part of our evaluation of whether there is management bias.

# 2 Evaluate management bias in the preparation of accounting estimates [ISA | 4463]

## What do we do?

Evaluate management bias in the preparation of accounting estimates.

## Why do we do this?

Financial statements often contain accounting estimates that impact a number of elements of the financial statements (e.g. assets, liabilities or disclosures). Estimates introduce the potential for management bias (both intentional and unintentional) because:

- estimates are an approximation and generally have a degree of uncertainty associated with them,
- estimates can involve complex processes and methods; and
- management's judgment is involved in their preparation.

The more subjectivity there is in an estimate, the greater the potential for management bias. Given this potential, we specifically evaluate management bias related to accounting estimates.

# Execute the Audit

## How do we evaluate management bias in accounting estimates at various points of the audit? [ISA | 4463.1300]

We evaluate bias in the preparation of accounting estimates in the following ways:

| When? | Procedures | How? |
|---|---|---|
| During our risk assessment | Perform and evaluate a retrospective review of accounting estimates | • comparing the prior period's estimates to actual results, if any, individually and in aggregate. |
| During the audit while we perform the substantive procedures over the estimates. | Evaluate management bias in accounting estimates 'individually' | • evaluating whether the estimate was prepared in a cautious or optimistic manner, and<br>• evaluating whether management is trying to achieve an expected or desired outcome (e.g. increase income, loss, or other key financial statement metrics). |
| During our concluding procedures, while we evaluate the results of the audit. | Evaluate management bias in accounting estimates 'in aggregate'<br><br>Evaluate management bias in the effect of changes in estimates from the prior period to the current period | • evaluating whether many or all of the estimates were recorded toward the same end of the range (i.e. they were all prepared in a cautious manner or they were all prepared in an optimistic manner),<br>• evaluating whether the estimates in the financial statements are grouped at one end of the range of reasonable estimates in the prior period and are grouped at the other |

| | | |
|---|---|---|
| | | end of the range of reasonable estimates in the current period (i.e. they were all prepared in a cautious manner in the prior period and in an optimistic manner in the current period, or vice versa), and<br>• evaluating whether management is trying to achieve an expected or desired outcome (e.g. increase income, loss, or other key financial statement metrics). |

### What do we do if we identify management bias in accounting estimates? [ISA | 4463.15831]

If we identify indicators of bias and/or actual bias in management's judgments when we evaluate the accounting estimates individually, in aggregate or with respect to the effect of changes from the prior period to the current period, we:

- Evaluate whether the bias is material to the financial statements and/or is the result of fraud ;
- Evaluate whether our risk assessments and the related audit responses remain appropriate .

# 2.1 Evaluate management bias in accounting estimates 'individually' [ISA | 4464]

## What do we do?

Evaluate whether the judgments and decisions made by management in the making of an accounting estimate, which is individually reasonable, indicate a possible management bias.

## Why do we do this?

Accounting estimates that we conclude are individually reasonable can still be affected by management bias that result in a material effect to the financial statements.

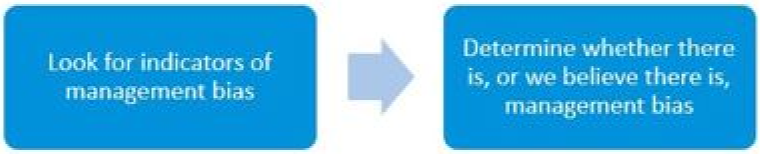
## Execute the Audit

### When might management bias exist in an accounting estimate that is individually reasonable? [ISA | 4464.15821]

Management bias may exist in an accounting estimate that is individually reasonable when a range of reasonable estimates exists.

When there are alternatives that may be considered acceptable or reasonable, management's judgments and decisions in the preparation of the accounting estimate may be biased.

### How do we determine whether there is management bias in an accounting estimate? [ISA | 4464.1400]




The fact that there is an indicator of management bias does not necessarily mean that there was management bias in the preparation of an accounting estimate. An indicator that shows that there may be management bias may be alleviated by another indicator that shows there is no management bias.

There are different types of indicators. Some indicators may point out the fact that there may be management bias and some others may point out the contrary.

We collectively consider all types of indicators and other information we may have about the preparation of the estimate to determine whether there is management bias.

The use of judgment and professional skepticism is key in determining whether there is, or we believe there is, management bias.

### When do we look for indicators of management bias in an accounting estimate? [ISA | 4464.1600]

We look for indicators of management bias in an accounting estimate while we perform audit procedures over the estimate.

Examples of the audit procedures that we perform over the estimates that could help us identify indicators of management bias are:

- Evaluation of whether the method used is appropriate.
- Determination of the reasons for a change in the method from prior period and the appropriateness of the change.
- Evaluation of whether:
  - the data used is internally consistent with its use by the entity in other estimates tested
  - the source of the data used has changed from the prior period and, if so, whether the change is appropriate.
- Evaluation of whether:
  - the entity has a reasonable basis for the significant assumptions used and, when applicable, for its selection of assumptions from a range of potential assumptions
  - the significant assumptions are consistent with 1) relevant industry, regulatory, and other external factors, including economic conditions, 2) existing market information, 3) historical or recent experience, taking into account changes in conditions and events affecting the entity and 4) other significant assumptions used by the entity.
- Evaluation of management's sensitivity analysis for critical accounting estimates.

### What indicators of management bias may we identify in an accounting estimate and what do we do to identify them? [ISA | 4464.1700]

Indicators of management bias in the method, data and significant assumptions chosen by management to prepare the estimate - i.e. management chose alternatives that do not appear to be the most appropriate. These are indicators at the element level.

Indicator at the estimate level – management prepared the estimate as a whole in a cautious or optimistic manner.

The indicators of management bias are usually present in the areas of the estimate where management has to use judgment (e.g. selecting specific methods, data and assumptions).

These indicators point out the fact that there may be management bias.

See sub-question 'What do we do to identify indicators of management bias at the element level and at the estimate level? ' for further information on these indicators and how we identify them.

Management's responses when we investigate why management:

- chose the methods, data and assumptions used
- prepared the estimate in a cautious or optimistic manner - e.g. why many or all elements are cautious or optimistic making the estimate as a whole cautious or optimistic.

This type of indicator may further point out that there may be management bias or may point out the contrary.

If we identify indicators of management bias in the methods, data and assumptions used, it does not automatically mean that there is management bias. Investigating why management made its decisions may provide further information.

We may begin our investigation by inquiring of management. Based on management's responses, further audit procedures may be necessary to corroborate management's explanations or obtain further evidence.

The reasonableness, or lack of reasonableness, in management's responses, considering everything we know about the entity, provides another indicator.

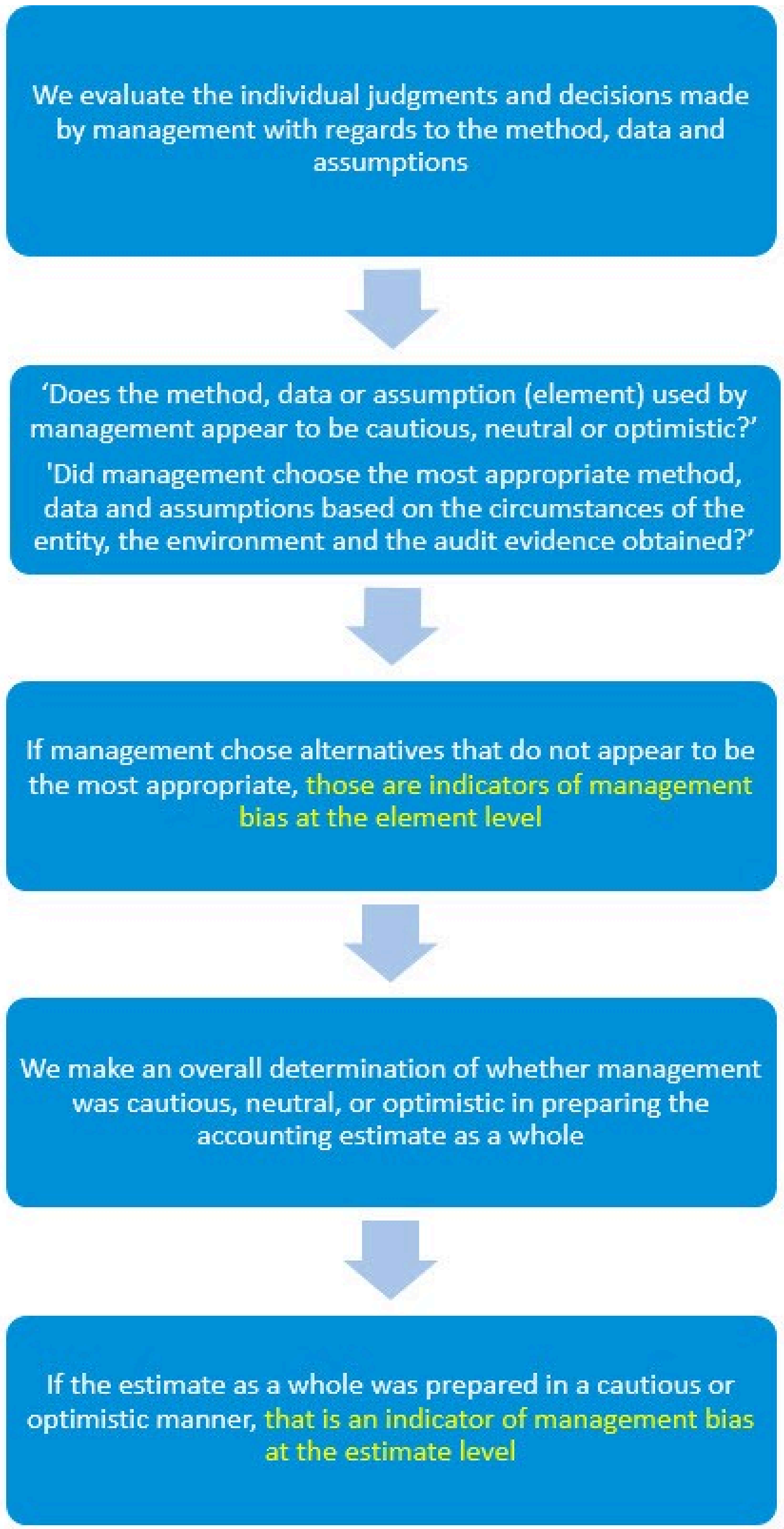
Answer to the question:

'Does the estimate appear to be prepared in a way that results in a specific benefit to management or the entity - e.g. it may affect bonuses, analyst expectations or debt covenants?'

Asking ourselves this question provides another indicator.

This type of indicator may further point out that there may be management bias or may point out the contrary.

### What do we do to identify indicators of management bias at the element level and at the estimate level? [ISA | 4464.15824]




To evaluate the judgments and decisions made by management in preparing the accounting estimate, it is useful to ask ourselves:

- 'Does the method, data or assumption (element) used by management appear to be cautious, neutral or optimistic?' or 'Are the elements at the higher or lower end of the range of reasonable elements?'; and
- 'Did management choose the most appropriate method, data and assumptions based on the circumstances of the entity, the environment and the audit evidence obtained?'

If management chose alternatives that do not appear to be the most appropriate, those are indicators of management bias at the element level.

Examples of indicators of management bias in methods, data and assumptions include:

- use of a method that yields a more favorable result over other methods
- changes in an accounting estimate, or the method for making it, and management has made a subjective assessment that there has been a change in circumstances
- use of an entity's own assumptions for fair value accounting estimates and those assumptions are inconsistent with observable marketplace assumptions
- selection or construction of significant assumptions that yield a point estimate favorable for management objectives (e.g. all the assumptions are 'leaning' the same way)
- use of assumptions that are inconsistent with industry and current economic conditions.

If there is an indicator of management bias in the method, assumptions or data, such fact probably makes the estimate cautious or optimistic.

| | Estimate that is a liability | Estimate that is an asset |
|---|---|---|
| **Cautious estimate** | The estimate is in the higher end of the range of reasonable estimated amounts. | The estimate is in the lower end of the range of reasonable estimated amounts. |
| **Optimistic estimate** | The estimate is in the lower end of the range of reasonable estimated amounts. | The estimate is in the higher end of the range of reasonable estimated amounts. |

Once we have this information for each indicator of bias, we make an overall determination of whether, based on our judgment, we believe management was cautious, neutral, or optimistic in preparing the accounting estimate as a whole.

We make this overall determination by considering:

- the total amount of methods, data and assumptions used in the preparation of the estimate;
- the total amount of methods, data and assumptions used that indicate management bias;
- whether the indicators of bias make the estimate cautious or optimistic and their relative significance in the calculation of the amount of the estimate.

If we determine that the estimate as a whole was prepared in a cautious or optimistic manner, instead of in a neutral manner, this is an indicator of management bias at the estimate level.

This information, together with other indicators, will help us determine whether there is, or we believe there is, management bias. The fact that management prepared an accounting estimate in a cautious or optimistic manner does not necessarily mean there is bias. There may be other indicators that point out the contrary.

# Example

How does an engagement team evaluate management bias in an estimate? [ISA | 4464.1900]

**Fact pattern**

Entity ABC is a manufacturing company 'with stable operations and revenues over the past six years. However, the economy has recently declined.

Historically, the entity has determined the allowance for doubtful accounts using its own historical collection ratios over the past three years.

When the engagement team performs audit procedures, they notice that the entity did not adjust its method and/or the collectability assumptions to take into account the declining economic conditions when determining the allowance for doubtful accounts. Consequently, the allowance remained stable, even though the engagement team expected it to increase during the current period because of the recent economic downturn.

**Analysis**

The engagement team inquires of management about this. Management acknowledges the economic downturn but do not believe it will affect the entity's customers. However, there is no rationale or justification for their explanation.

Since there is no valid reason for management to exclude this from their collectability assumptions, it could indicate that management is trying to avoid increasing the allowance. As such, the engagement team concludes that there is an indicator of possible management bias in the preparation of the allowance for doubtful accounts.

# 2.2 Evaluate management bias in accounting estimates 'in aggregate' [ISA | 4465]

# What do we do?

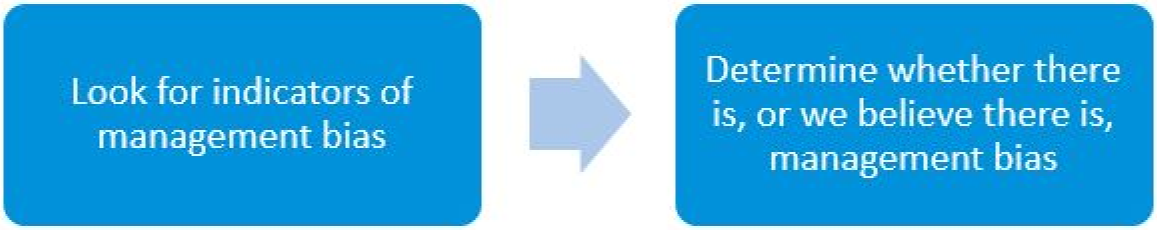
**IF** accounting estimates are individually reasonable but recorded towards the same end of the range,
**THEN** evaluate whether it indicates potential management bias.

# Why do we do this?

We evaluate management bias in accounting estimates 'in aggregate' to help us identify indications of management bias that we might miss by only evaluating estimates individually. Sometimes, management bias may be more evident through the evaluation of the cumulative effect in the financial statements of multiple estimates.

# Execute the Audit

### How do we determine whether there is management bias in the accounting estimates in aggregate? [ISA | 4465.1400]




The fact that there is an indicator of management bias does not necessarily mean that there was management bias in the preparation of the accounting estimates. An indicator that shows that there may be management bias may be alleviated by another indicator that shows there is no management bias.

There are different types of indicators. Some indicators may point out the fact that there may be management bias and some others may point out the contrary.

We collectively consider all types of indicators and other information we may have about the preparation of the estimates to determine whether there is management bias.

The use of judgment and professional skepticism is key in determining whether there is, or we believe there is, management bias.

### When do we look for indicators of management bias in the accounting estimates in aggregate? [ISA | 4465.1500]

We look for indicators of management bias in the accounting estimates in aggregate towards the end of the audit when we have already performed audit procedures on all estimates and evaluated management bias on all estimates individually.

### What indicators of management bias in the accounting estimates in aggregate may we identify and what do we do to identify them? [ISA | 4465.1600]

The main indicator of management bias in the accounting estimates in aggregate is:

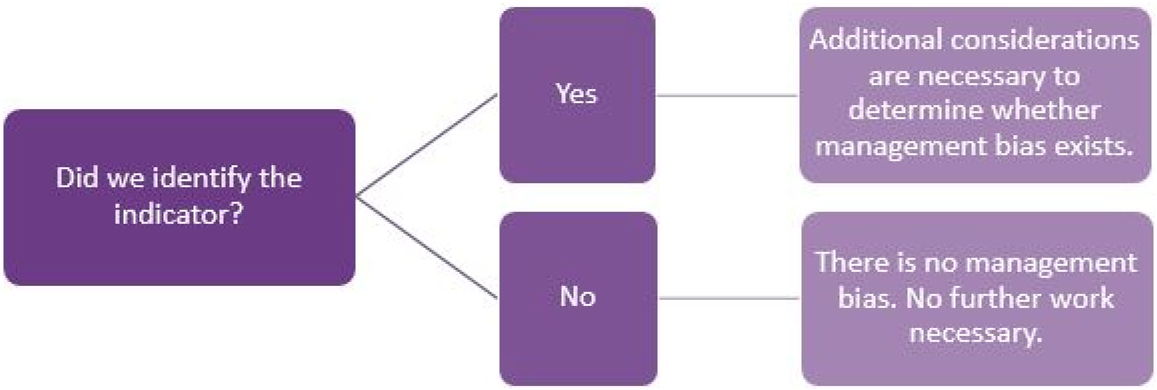
> Many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner), resulting in a specific effect to the financial statements (e.g. increasing income, loss, or other key financial statement metrics)

When we evaluated whether there was management bias in the accounting estimates individually, we determined whether the estimates were prepared in a cautious, neutral or optimistic manner.

This information will now help us determine whether many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner), resulting in a specific effect to the financial statements (e.g. increasing income, loss, or other key financial statement metrics).

When this indicator does not exist, it means that there is no management bias in the accounting estimates in aggregate and no further work is necessary in this respect.

If we identify this indicator of management bias, it does not automatically mean that there is management bias. We evaluate further indicators to determine whether there is, or we believe there is, management bias.




### What are the other indicators that could help us determine whether there is management bias in the accounting estimates in aggregate? [ISA | 4465.15891]

> Management's responses when we investigate the reasons for which management prepared the estimates that way

This type of indicator may further point out that there may be management bias or may point out the contrary.

If we determine that many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner), it does not automatically mean that there is management bias. Investigating why management prepared the estimates that way may provide further information.

We may begin our investigation by inquiring of management. Based on management's responses, further audit procedures may be necessary to corroborate management's explanations or obtain further evidence.

The reasonableness, or lack of reasonableness, in management's responses, considering everything we know about the entity, provides another indicator.

> Answer to the question:
>
> 'Is the effect caused by those estimates recorded toward the same end of the range favorable to management or the entity - e.g. they may affect bonuses, analyst expectations or debt covenants?'

Asking ourselves these questions provides another indicator.

This type of indicator may further point out that there may be management bias or may point out the contrary.

The fact that many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner) does not necessarily mean that there is management bias if there is no clear benefit to management or the entity.

## Example

# 2.3 Evaluate management bias in the effect of changes in estimates from the prior period to the current period [ISA | 4466]

## What do we do?

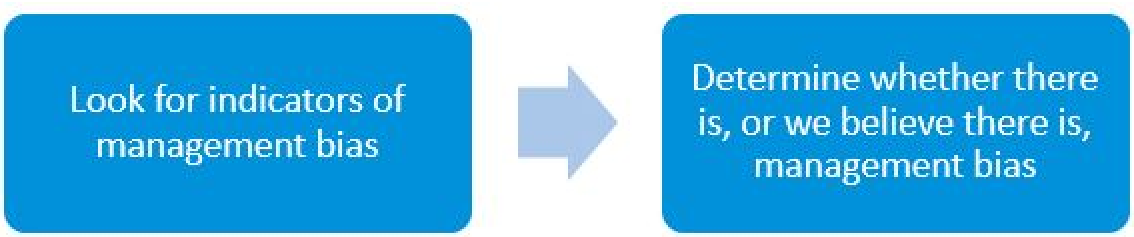
**IF** the recorded estimates are grouped at one end of the range in the prior year and are grouped at the other end of the range in the current year, **THEN** evaluate whether management is using swings in estimates to achieve a desired outcome.

## Why do we do this?

Management bias may not be evident to us when we only focus on accounting estimates in the current period, because management bias can also arise from the cumulative effect of changes in accounting estimates from period to period.

## Execute the Audit

### How do we determine whether there is management bias in the effect of changes in accounting estimates from one period to the next? [ISA | 4466.15808]




The fact that there is an indicator of management bias does not necessarily mean that there was management bias in the preparation of accounting estimates. An indicator that shows that there may be management bias may be alleviated by another indicator that shows there is no management bias.

There are different types of indicators. Some indicators may point out the fact that there may be management bias and some others may point out the contrary.

We collectively consider all types of indicators and other information we may have about the preparation of the estimates to determine whether there is management bias.

The use of judgment and professional skepticism is key in determining whether there is, or we believe there is, management bias.

### When do we look for indicators of management bias in the effect of changes in accounting estimates from one period to the next? [ISA | 4466.15809]

We look for indicators of management bias in the effect of changes in accounting estimates from one period to the next towards the end of the audit when we have already performed audit procedures on all estimates and evaluated management bias on all estimates individually and in aggregate.

### What indicators of management bias may we identify in the changes in accounting estimates from one period to the next and what do we do to identify them? [ISA | 4466.15810]

The main indicator of management bias in the changes in accounting estimates from one period to the next is:

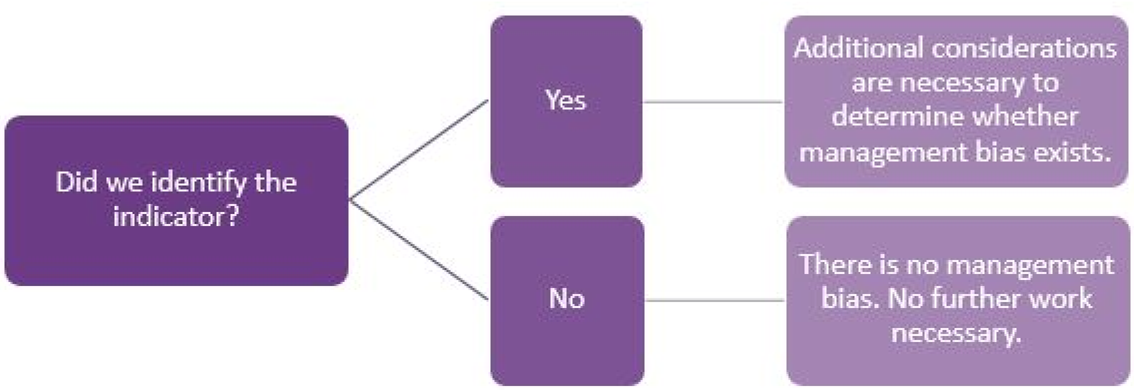
> Many or all of the estimates were recorded toward one end of the range in the prior period and the other end of the range in the current period (i.e. they are prepared in a cautious manner in the prior period and in an optimistic manner in the current period, or vice versa)

When we evaluated whether there was management bias in the accounting estimates individually, we determined whether the estimate was prepared in a cautious, neutral or optimistic manner.

This information, together with the equivalent information from the prior period, will now help us determine whether many or all of the estimates were recorded toward one end of the range in the prior period and the other end of the range in the current period (i.e. they are prepared in a cautious manner in the prior period and in an optimistic manner in the current period or vice versa).

When this indicator does not exist, it means that there is no management bias in the changes in accounting estimates from one period to the next and no further work is necessary in this respect.

If we identify this indicator of management bias, it does not automatically mean that there is management bias. We evaluate further indicators to determine whether there is, or we believe there is, management bias.



What are the other indicators that could help us determine whether there is management bias in the changes in accounting estimates from one period to the next? [ISA | 4466.15811]

Management's responses when we investigate the reasons for which management prepared the estimates that way

This type of indicator may further point out that there may be management bias or may point out the contrary.

If we determine many or all of the estimates were recorded toward one end of the range in the prior period and the other end of the range in the current period (i.e. they are prepared in a cautious manner in the prior period and in an optimistic manner in the current period, or vice versa), it does not automatically mean that there is management bias. Investigating why management prepared the estimates that way may provide further information.

We may begin our investigation by inquiring of management. Based on management's responses, further audit procedures may be necessary to corroborate management's explanations or obtain further evidence.

The reasonableness, or lack of reasonableness, in management's responses, considering everything we know about the entity, provides another indicator.

Answer to the question:

'Is the effect caused by those estimates recorded toward the same end of the range in the prior period and the other end in the current period favorable to management or the entity - e.g. they may affect bonuses, analyst expectations or debt covenants?'

Asking ourselves this question provides another indicator.

This type of indicator may further point out that there may be management bias or may point out the contrary.

## Example

# 2.4 Evaluate whether the bias is material to the financial statements and/or is the result of fraud [ISA | 4468]

## What do we do?

**IF** we identify - or we believe that there is - management bias, **THEN** evaluate whether the effect of management bias is material to the financial statements as a whole AND evaluate whether the bias is the result of fraud.

# Why do we do this?

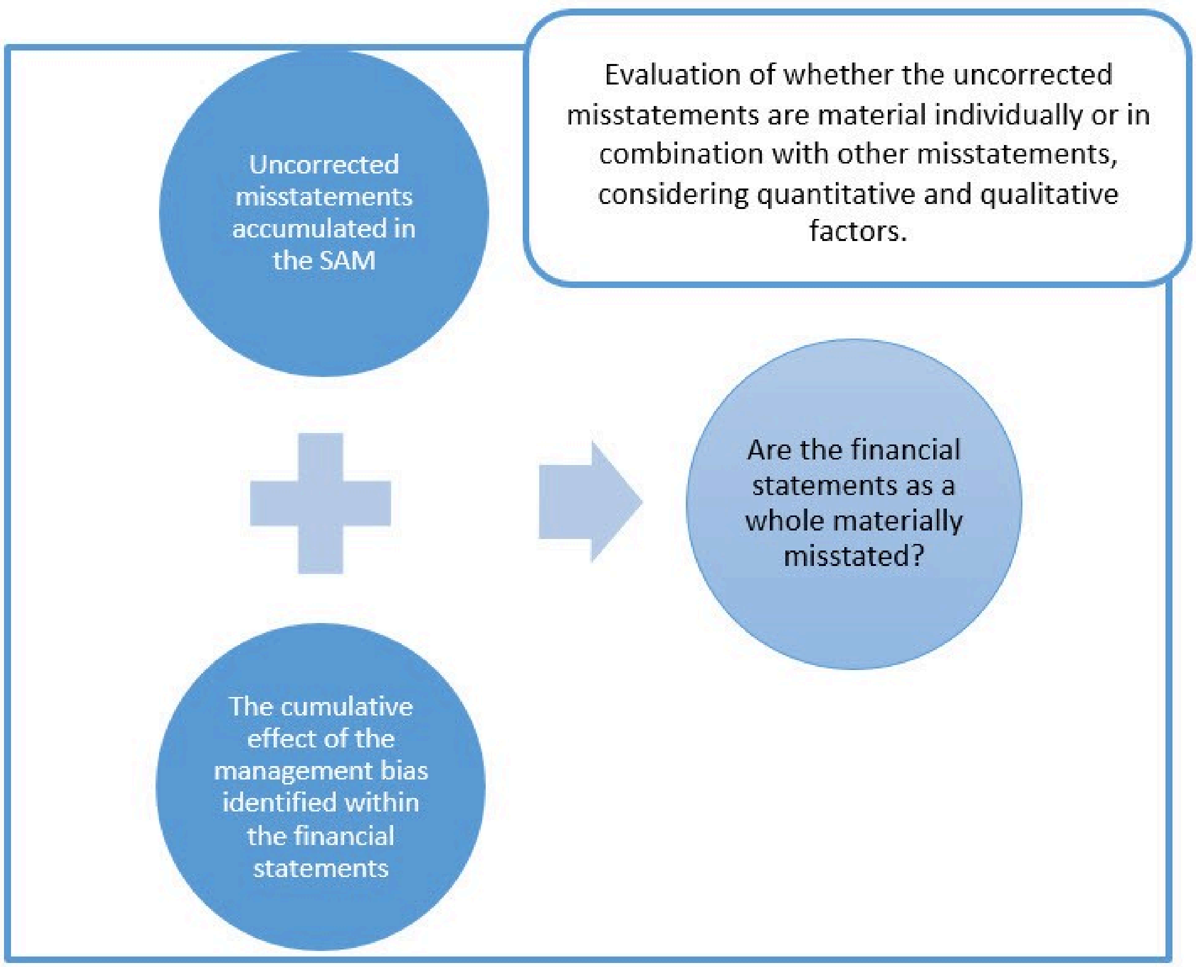
If we identify management bias, the effect of that bias may cause the financial statements to be materially misstated. In addition, if the bias represents fraud, there are additional implications for the audit.

# Execute the Audit

### How do we evaluate whether the effect of management bias is material to the financial statements as a whole and whether it is the result of fraud? [ISA | 4468.1400]

To evaluate whether the effect of the bias is material to the financial statements as a whole, we consider the uncorrected misstatements accumulated, including the cumulative effect of the management bias identified within the financial statements.

This evaluation can be different depending on whether the amount of the misstatement can be more easily determined. When we are unable to determine the amount of the misstatement generated from management bias, we estimate the cumulative effect of management bias identified in the financial statements.



To evaluate whether the bias is the result of fraud, we look for indicators of fraud. Activity 'Evaluate whether misstatements are the result of fraud and the implications ' includes useful information that may also apply to a situation in which the amount of the misstatement is not known.

This consideration becomes more relevant when there are many misstatements that are close to being material to the financial statements as a whole and when adding the effect of the bias in our evaluation, we realize that in combination with the other misstatements, it makes the financial statements materially misstated.

See activity 'Evaluate whether uncorrected misstatements are material and the implications ' for additional information on our evaluation of whether the uncorrected misstatements are material individually or in combination with other misstatements, considering quantitative and qualitative factors.

### What amount does management record if they decide to correct the misstatement? [ISA | 4468.1600]

Management may choose to correct misstatements that result from bias that we identified. However, if bias exists in accounting estimates, additional analysis may be necessary for management to determine the appropriate amount to record and support their adjustment (see activity 'Evaluate management's examination of an account or disclosure in response to misstatements detected by us ' for further information about what we do when management further examines an account or disclosure in response to misstatements detected by us).

It is not appropriate for management to use our work papers or analysis as support for their estimates or adjustments recorded.

# 2.5 Evaluate whether our risk assessments and the related audit responses remain appropriate [ISA | 4469]

## What do we do?

**IF** we identify indicators of bias or actual bias in management's judgments, **THEN** evaluate whether our risk assessments, including, in particular, the assessment of fraud risks, and the related audit responses remain appropriate.

## Why do we do this?

If we identify indicators of bias or actual bias, there could be a risk of other biases, other issues in the financial statements or additional risks that we did not identify when we were planning the audit. This is particularly relevant when considering our fraud risk assessments, as the bias may be intentional and represent fraud.

## Execute the Audit

### How do we re-evaluate our risk assessments? [ISA | 4469.1300]

When we identify indicators of bias or actual bias, we re-evaluate our risk assessments. This includes not only the specific area (e.g. a specific account or disclosure) where the bias exists, but also other areas where similar biases could exist.

> For example, if we identify management bias in the warranty estimate, we re-evaluate our risk assessments not only for the warranty estimate, but also in other estimates and areas prone to bias.

See this activity for additional information about revising our risk assessment: 'Continue to assess RMMs, and revise audit approach as necessary '.

What is a common indicator of a higher risk of management bias in other areas of the financial statements?

The fact that management is aggressive with the selection and application of accounting principles/policies is an indicator that the risk of management bias in other areas may be higher.

# Overall Evaluation Based on Audit Procedures Performed

## International Standards on Auditing: ISA 540.33-36

### Overall Evaluation Based on Audit Procedures Performed

33. In applying ISA 330 to accounting estimates,[19] the auditor shall evaluate, based on the audit procedures performed and audit evidence obtained, whether: (Ref: Para A137 - A138)

(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) 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; and

(c) Sufficient appropriate audit evidence has been obtained.

---

[19] ISA 330, paragraphs 25 - 26

34. In making the evaluation required by paragraph 33(c), the auditor shall take into account all relevant audit evidence obtained, whether corroborative or contradictory.[20] If the auditor is unable to obtain sufficient appropriate audit evidence, the auditor shall evaluate the implications for the audit or the auditor's opinion on the financial statements in accordance with ISA 705 (Revised).[21]

---

[20] ISA 500, paragraph 11

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

## Determining Whether the Accounting Estimates are Reasonable or Misstated

35. The auditor shall determine whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated. ISA 450[22] provides guidance on how the auditor may distinguish misstatements (whether factual, judgmental, or projected) for the auditor's evaluation of the effect of uncorrected misstatements on the financial statements. (Ref: Para. A12 - A13, A139 - A144)

---

[22] ISA 450, paragraph A6

36. In relation to accounting estimates, the auditor shall evaluate:

(a) In the case of a fair presentation framework, whether management has included disclosures, beyond those specifically required by the framework, that are necessary to achieve the fair presentation of the financial statements as a whole;[23] 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.[24]

---

[23] See also ISA 700 (Revised), paragraph 14.

[24] See also ISA 700 (Revised), paragraph 19.

# ISA Application and Other Explanatory Material: ISA 540.A137-A144 | ISA 540.A12-A13

### *Concept of "Reasonable"* (Ref: Para. 9, 35)

A12. 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.

A13. The term "applied appropriately" as used in paragraph 9 means in a manner that not only complies with the requirements of the applicable financial reporting framework but, in doing so, reflects judgments that are consistent with the objective of the measurement basis in that framework.

## **Overall Evaluation Based on Audit Procedures Performed** (Ref: Para. 33)

A137. 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.[57] In relation to accounting estimates, information may come to the auditor's attention through performing procedures to obtain audit evidence that differs significantly from the information on which the risk assessment was based. For example, the auditor may have identified that the only reason for an assessed risk of material misstatement is the subjectivity involved in making the accounting estimate. However, while performing procedures to respond to the assessed risks of material misstatement, the auditor may discover that the accounting estimate is more complex than originally contemplated, which may call into question the assessment of the risk of material misstatement (for example, the inherent risk may need to be re-assessed on the higher end of the spectrum of inherent risk due to the effect of complexity) and therefore the auditor may need to perform additional further audit procedures to obtain sufficient appropriate audit evidence.[58]

---

[57] ISA 330, paragraph A60

[58] See also ISA 315 (Revised), paragraph 31.

A138. With respect to accounting estimates that have not been recognized, a particular 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.

A139. In determining whether, based on the audit procedures performed and evidence obtained, management's point estimate and related disclosures are reasonable, or are misstated:

- When the audit evidence supports a range, the size of the range may be wide and, in some circumstances, may be multiples of materiality for the financial statements as a whole (see also paragraph A125). Although a wide range may be appropriate in the circumstances, it may indicate that it is important for the auditor to reconsider whether sufficient appropriate audit evidence has been obtained regarding the reasonableness of the amounts within the range.
- The audit evidence may support a point estimate that differs from management's point estimate. In such circumstances, the difference between the auditor's point estimate and management's point estimate constitutes a misstatement.
- The audit evidence may support a range that does not include management's point estimate. In such circumstances, the misstatement is the difference between management's point estimate and the nearest point of the auditor's range.

A140. Paragraphs A110 - A114 provide guidance to assist the auditor in evaluating management's selection of a point estimate and related disclosures to be included in the financial statements.

A141. When the auditor's further audit procedures include testing how management made the accounting estimate or developing an auditor's point estimate or range, the auditor is required to obtain sufficient appropriate audit evidence about disclosures that describe estimation uncertainty in accordance with paragraphs 26(b) and 29(b) and other disclosures in accordance with paragraph 31. The auditor then considers the audit evidence obtained about disclosures as part of the overall evaluation, in accordance with paragraph 35, of whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated.

A142. ISA 450 also provides guidance regarding qualitative disclosures[59] and when misstatements in disclosures could be indicative of fraud.[60]

---

59 ISA 450, paragraph A17

60 ISA 450, paragraph A22

A143. 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 presentation[61] includes the consideration of the overall presentation, structure and content of the financial statements, and whether the financial statements, including the related notes, represent the transactions and events in a manner that achieves fair presentation. For example, when an accounting estimate is subject to a higher degree of estimation uncertainty, the auditor may determine that additional disclosures are necessary to achieve fair presentation. If management does not include such additional disclosures, the auditor may conclude that the financial statements are materially misstated.

---

61 ISA 700 (Revised), paragraph 14

A144. ISA 705 (Revised)[62] 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.

---

62 ISA 705 (Revised), paragraphs 22 - 23

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Evaluate and document the audit results [ISA | 4376]

## What do we do?

Evaluate and document the results of audit procedures performed on the accounting estimate

## Why do we do this?

After completing our audit procedures for each of the related RMMs for an estimate, we evaluate whether the accounting estimate is reasonable in the context of the applicable financial reporting framework or not. This includes assessing whether our assessments about the risk of material misstatement at the assertion level remain appropriate and whether we have obtained sufficient appropriate audit evidence.

## Execute the Audit

### What do we do when we conclude that an individual method, assumption, or data is inappropriate? [ISA | 4376.1300]

If the method, assumption, or data selected by management is not appropriate or not appropriately applied, it may be necessary to reassess our inherent risk and assessment of CAR as well as our planned audit procedures.  This may include revising the entity's method, assumption, or data, or it may include developing an independent expectation.

Once we completed our testwork, we consider whether:

- a misstatement exists for the estimate as a whole; and
- control deficiencies exist.

We follow the guidance for determining whether a misstatement exists in activities 'Accumulate, communicate and evaluate misstatements' and 'Determine the amount of the judgmental and projected misstatements'. We also follow the guidance for determining whether control deficiencies exist and how severe they are in the activities 'Evaluate the existence and severity of control deficiencies' and 'Conclude on our assessment of control risk'.

### How do we evaluate the results of our audit procedures performed on each accounting estimate? [ISA | 4376.15538]

We evaluate the following matters by performing the listed activities:

| Matter | Activities |
|---|---|
| Whether our RMM assessments remain appropriate, including when indicators of management bias have been identified. | See activity 'Evaluate whether our risk assessments and the related audit responses remain appropriate' for further information on how we evaluate our risk assessment when indicators of bias are identified. |
| Whether 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. | We do this throughout the procedures we perform for each accounting estimate, including specific procedures performed for over disclosures. See activity 'Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework'. |
| In the case of a fair presentation framework:<br>• Whether the presentation of the financial statements, including the disclosures and whether the financial statements contain the information essential for a fair presentation of the financial statements in conformity with the applicable financial reporting framework;<br>• Whether management has included disclosures, beyond those specifically required by the framework, that are | See activity 'Evaluate whether the financial statements are presented fairly' and related sub-activities for further information. |

| | |
|---|---|
| necessary to achieve the fair presentation of the financial statements as a whole. | |
| In the case of a compliance framework:<br>Whether the disclosures are those that are necessary for the financial statements not to be misleading. | See activity 'IF the compliance framework financial statements are misleading, THEN determine whether, and how to communicate in the auditor's report' for further information. |
| Whether the accounting estimate and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated. | See activity 'Accumulate, communicate and evaluate misstatements' and related sub-activities for information on misstatements.<br>In particular, see activity 'Determine the amount of the judgmental and projected misstatements' for information on how to determine the amount of a misstatement in an accounting estimate. |
| Evaluating the qualitative aspects of the entity's accounting practices, including potential bias in management's judgments about the amounts and disclosures in the financial statements.<br>Evaluating potential bias in accounting estimates includes evaluating bias in estimates individually and in aggregate. It also includes evaluating the effect of changes in estimates from the prior period to the current period. | See activity 'Evaluate qualitative aspects of accounting practices and respond to the evaluation' and related sub-activities for further information.<br>In particular, see activities:<br>• 'Evaluate qualitative aspects of accounting practices, including management bias'; and<br>• 'Evaluate management bias in the preparation of accounting estimates' and related sub-activities. |
| Whether we obtained sufficient appropriate audit evidence. In making the evaluation, we take into account all relevant audit evidence obtained, whether corroborative or contradictory.<br>If we are unable to obtain sufficient appropriate audit evidence, we evaluate the implications for the | See activity 'Evaluate the sufficiency and appropriateness of audit evidence' and related sub-activities for further information. |

| | |
|---|---|
| audit or our opinion on the financial statements. | |

# Written Representations

## International Standards on Auditing: ISA 540.37

### Written Representations

37. The auditor shall request written representations from management[25] and, when appropriate, those charged with governance about whether the methods, significant assumptions and the data used in making the accounting estimates and the related disclosures are appropriate to achieve recognition, measurement or disclosure that is in accordance with 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. A145)

---

[25] ISA 580, *Written Representations*

## ISA Application and Other Explanatory Material: ISA 540.A145

### **Written Representations** (Ref: Para. 37)

A145. Written representations about specific accounting estimates may include representations:

- That the significant judgments made in making the accounting estimates have taken into account all relevant information of which management is aware.
- About the consistency and appropriateness in the selection or application of the methods, assumptions and data used by management in making the accounting estimates.
- 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 are reasonable in the context of the applicable financial reporting framework.
- That appropriate specialized skills or expertise 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.
- When accounting estimates are not recognized or disclosed in the financial statements, about the appropriateness of management's decision that the recognition or disclosure criteria of the applicable financial reporting framework have not been met.

## How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Obtain written representations for all financial statement periods [ISA | 3851]

## What do we do?

Obtain written representations from management for all financial statement periods covered by the auditor's report

## Why do we do this?

While management representations do not provide sufficient appropriate audit evidence on their own, they complement the evidence we obtain from other auditing procedures. Specifically, they serve as a written record of management's acknowledgement that they have fulfilled their responsibilities, their understanding and evaluation of audit differences and their honesty and cooperation with us during the audit. Accordingly, failure of management to provide written representations requested by the auditor can have serious implications on the audit and on our report.

## Execute the Audit

### Which financial statement period(s) do management's written representations relate to? [ISA | 3851.1300]

The written representations relate to all financial statement periods covered in the audit report, including prior periods that are presented in the financial statements.

#### Why do we obtain management's written representations about prior periods that have already been reported?

Management reaffirms to us that the written representations from previous period(s) remain appropriate before we sign our audit opinion in the current year, as our audit opinion relates to all periods presented in the financial statements. If a restatement has been made to correct a material misstatement in the prior period that affects the comparative financial statements, then we draft a specific representation for management to review and also reaffirm.

#### What written representations do we obtain from management if we are issuing more than one audit report?

We obtain representations from management for all audit reports issued, either in one representation letter, listing the applicable set of financial statements, or in separate representation letters for each set of financial statements.

### Who prepares the management representation letter? [ISA | 3851.1600]

We prepare the MRL template and provide it to management for their review and signature.

### How do we prepare the management representation letter? [ISA | 3851.15774]

We first select the appropriate KPMG example MLR template https://alex.kpmg.com/AROWeb/document/lfc/GSC_INTL_AUDDOC_DOCSEAUDIT_TOC/toc/GSC_INTL_AUDDOC_DOCSEAUDIT_TOC?tocref=GSC_INTL_AUDDOC_DOCSEAUDIT_TOC, depending on the applicable auditing standards, financial reporting framework used by the entity and legal and regulatory framework in which the entity operates.

We then determine any additional representations to include in the MLR template. Attachment 1 provides additional representations that we may include, depending on the other circumstances that are applicable to the entity. At a minimum, we include all required representations from the auditing standards, which are included in the KPMG example MLR template.

In some circumstances, we use nationally-tailored versions of the base representation letter and/or listing of additional representations.

Once we have compiled all applicable representations into the MRL template, we provide it to management.

### How do we determine which additional representations, beyond those which are required, are appropriate in the circumstances of our audit? [ISA | 3851.1800]

We select additional representations based on the specific facts and circumstances of the audit and the entity we audit. This can include additional representations to address a variety of topics, such as:

- specific circumstances related to the engagement and basis of presentation of the financial statements (e.g. US GAAP, IFRS);
- specific types of transactions, balances and disclosures present at the entity;
- the nonexistence of transactions/balances/disclosures or circumstances that commonly exist for entities or entities within a particular industry;
- management's intent (e.g., intention to reinvest undistributed earnings of a foreign subsidiary) or plans (e.g., going concern);
- oral representations made to us by management, explicitly or implicitly, during the course of our audit (e.g., disclosure of unique sales terms);
- information presented with the audited financial statements that is not contemplated by the base letter (e.g., supplemental information, adjustments to a prior period that are audited by us as the successor auditor);
- specialized circumstances or disclosures (e.g., restatement, restructuring); and
- management's selection and application of accounting policies, for example non-GAAP policies.

### When might it be appropriate for management to modify the representations we have requested from them? [ISA | 3851.2100]

We expect that management will not make any major revisions to the letter template we provide. We review the signed letter that is provided back to us to allow us to make sure we agree with final version, including any revisions management may have made or proposed.

In some cases, management may modify a representation to further describe and represent relevant facts and circumstances, but not to change or limit its meaning or contradict the auditing standards.

Base representations (i.e. required representations), are not to be removed or modified by management unless it adds an "except for" clause to highlight a matter already disclosed in the financial statements and/or disclosed to the auditor. If management modifies the base representations, refer to activity 'Consider the effect if management refuses to provide representations ' to determine what to do.

**Examples of representations modified by management:**

| | Default Language: | Example Modified Language: |
|---|---|---|

| | | |
|---|---|---|
| **Scenario 1** : *An event subsequent to the balance sheet has been disclosed in financial statements* | To the best of our knowledge and belief, no events have occurred subsequent to the balance-sheet date and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements. | To the best of our knowledge and belief, except as discussed in Note X to the financial statements, no events have occurred subsequent to the balance-sheet date and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements. |
| **Scenario 2:** *Management plans to dispose of a specific business segment* | The company has no plans or intentions that may materially affect the carrying value or classification of assets and liabilities. | The company has no plans or intentions that may materially affect the carrying value or classification of assets and liabilities, except for its plans to dispose of segment A, as disclosed in Note X to the financial statements, which are discussed in the minutes of the December 7, 20X1 meeting of the board of directors. |
| **Scenario 3:** *Management has received a communication of an allegation of fraud or suspected fraud* | We have no knowledge of any allegations of fraud or suspected fraud affecting the entity received in communications from employees, analysts, regulators, short sellers, or others. | Except for the allegation discussed in the minutes of the December 7, 20X1 meeting of the board of directors (or disclosed to you at our meeting on October 15, 20X1), we have no knowledge of any allegations of fraud or suspected fraud affecting the company received in communications from employees, former employees, analysts, regulators, short sellers, or others. |

If we think management may have questions as to the meaning of certain terminology used in the MRL template, we may consider providing those definitions to management or requesting that they include the definitions in the MRL response to confirm their understanding.

### How does the management representation letter address materiality? [ISA | 3851.2200]

Management representations may be limited to matters that are considered individually or in the aggregate to be material to the financial statements. In order for management to exclude "immaterial" items from its representations, we first come to a common understanding with management as to what is material. Materiality may be different for different representations, similar to the concept of having different materiality considerations for specific areas of the audit.

A discussion of materiality may be included explicitly in the representation letter, in either qualitative or quantitative terms.

### Does the concept of materiality apply to all management representations?

No. Materiality does not apply to:

- representations not directly related to financial statement amounts;
- any representations regarding the possible effects of fraud on other aspects of the audit; or
- items that involve an omission or misstatement of accounting information that, based on the circumstance, would change or influence the judgment of a reasonable person relying on the financial statements if the omission or misstatement were adjusted.

The following table sets out some examples of representations in which materiality would not be applicable.

| | Representation |
|---|---|
| **Example 1** | We confirm that we are responsible for the fair presentation in the [consolidated] financial statements of financial position, results of operations, and cash flows in conformity with generally accepted accounting principles [or other applicable accounting framework]. |
| **Example 2** | We have made available to you all -<br>(a) Financial records and related data, including the names of all related parties and all relationships and transactions with related parties.<br>(b) Minutes of the meetings of stockholders, directors, and committees of directors, or summaries of actions of recent meetings for which minutes have not yet been prepared. |
| **Example 3** | There have been no communications from regulatory agencies concerning non-compliance with or deficiencies in financial reporting practices. |
| **Example 4** | We acknowledge our responsibility for the design and implementation of programs and controls to prevent and detect fraud. |

## Do we attach any information to the management representation letter? [ISA | 3851.15776]

Yes. We attach a summary of uncorrected misstatements, which includes the nature, amount, and effect of the uncorrected misstatements, excluding those misstatements that are clearly trivial. We also include a listing of omissions of amounts or disclosures in the financial statements.

We use the KPMG template, Summary of Audit Misstatements (SAM) - uncorrected misstatements section for the summary of uncorrected misstatements unless law, regulation or custom specifies a different format.

While not required, we also may choose to attach a summary of corrected misstatements.

How is the management representation letter adjusted when management disagrees with an uncorrected misstatement? [ISA | 3851.15778]

If management does not agree with a misstatement we have included on the SAM - uncorrected misstatements section attached to the MRL, they may modify the representation about uncorrected audit misstatements as follows:

*We do not agree that items ... and ... constitute misstatements because [description of reasons].*

# Communication with Those Charged With Governance, Management, or Other Relevant Parties

## International Standards on Auditing: ISA 540.38

### Communication with Those Charged With Governance, Management, or Other Relevant Parties

38. In applying ISA 260 (Revised)[26] and ISA 265,[27] 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 regarding accounting estimates and take into account whether the reasons given to the risks of material misstatement relate to estimation uncertainty, or the effects of complexity, subjectivity or other inherent risk factors in making accounting estimates and related disclosures. In addition, in certain circumstances, the auditor is required by law or regulation to communicate about certain matters with other relevant parties, such as regulators or prudential supervisors. (Ref: Para. A146 - A148)

---

[26] ISA 260 (Revised), *Communication with Those Charged with Governance*, paragraph 16(a)

[27] ISA 265, paragraph 9

## ISA Application and Other Explanatory Material: ISA 540.A146-A148

## Communication with Those Charged With Governance, Management or Other Relevant Parties (Ref: Para. 38)

A146. 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.[63] Appendix 2 includes matters specific to accounting estimates that the auditor may consider communicating to those charged with governance.

---

[63] ISA 260 (Revised), paragraph 16(a)

A147. ISA 265 requires the auditor to communicate in writing to those charged with governance significant deficiencies in internal control identified during the audit.[64] Such significant deficiencies may include those related to controls over:

(a) The selection and application of significant accounting policies, 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 models obtained from an external provider, and any adjustments that may be required.

---

[64] ISA 265, paragraph 9

A148. 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, assessing and responding to risks of material misstatement.

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Communicate our views about significant qualitative aspects of accounting practices [ISA | 1248]

## What do we do?

Communicate with those charged with governance our views about significant qualitative aspects of the entity's accounting practices.

# Why do we do this?

Communicating to those charged with governance the significant findings from the audit helps them to exercise their oversight responsibilities. In addition, this communication provides an opportunity for us to request further information from those charged with governance in order to follow up on the audit evidence obtained or obtain additional audit evidence.

# Execute the Audit

### What do we communicate regarding our views about significant qualitative aspects of the entity's accounting practices? [ISA | 1248.1300]

We communicate with those charged with governance our views about significant qualitative aspects of the entity's accounting practices, including accounting policies, accounting estimates and financial statement disclosures.

We explain to those charged with governance why we consider a significant accounting practice, that is acceptable under the applicable financial reporting framework, not to be the most appropriate to the particular circumstances of the entity when this situation exists.

### Where does the information to communicate our views about significant qualitative aspects of the entity's accounting practices come from? [ISA | 1248.1400]

We gather the information to communicate our views about significant qualitative aspects of the entity's accounting practices while performing procedures specified in ISA 700.12 and ISA 540.32.

### What may those charged with governance be interested in specific to accounting for estimates and related disclosures? [ISA | 1248.159600]

Those charged with governance may be interested in our views on the degree to which complexity, subjectivity, or other inherent risk factors affect the selection or application of the methods, assumptions, and data used in making a significant accounting estimate, as well as our evaluation of whether management's point estimate and related disclosures in the financial statements are reasonable in the context of the applicable financial reporting framework. Open and constructive communication about qualitative aspects of the entity's significant accounting practices may also include comment on the acceptability of significant accounting practices and the quality of the disclosures. When applicable, this may include whether a significant accounting practice of the entity relating to accounting estimates is considered by us to not be the most appropriate to the particular circumstances of the entity, for example, when an alternative acceptable method for making an accounting estimate would, in our judgment, be more appropriate.

Appendix 2 of ISA 540, "Auditing Accounting Estimates and Related Disclosures," includes matters specific to accounting estimates that we may consider communicating to those charged with governance.

### Is management present in our discussions with those charged with governance when we communicate our views about the significant qualitative aspects of the entity's accounting practices? [ISA | 1248.1500]

Since management has the primary responsibility for establishing an entity's accounting practices, they are an active participant in our discussions with those charged with governance when we communicate our views about the significant qualitative aspects of the entity's accounting practices.

What matters may we include in our communication to those charged with governance regarding our views about the significant qualitative aspects of the entity's accounting practices? [ISA | 1248.1600]

Appendix 2 of ISA 260 identifies matters that we may include in our communication about the significant qualitative aspects of the entity's accounting practices.

Do we perform communications about accounting estimates to other third parties? [ISA | 1248.1700]

In certain circumstances, we are required by law or regulation to communicate about accounting estimates directly with other relevant parties, such as 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 our views on significant aspects of the entity's operations including the entity's costs estimates. This communication may be helpful to us in identifying, assessing and responding to risks of material misstatement.

# 2 Communicate control deficiencies [ISA | 4136]

## What do we do?

Communicate control deficiencies to management and those charged with governance.

## Why do we do this?

The communications with those charged with governance and management are an integral part of every audit. We perform these communications because they foster improved financial reporting, which benefits stakeholders.

## Execute the Audit

What are the reasons the communications of control deficiencies matter? [ISA | 4136.1300]

There are several reasons for which our communications matter:

- Communicating control deficiencies to those charged with governance assists them in fulfilling their oversight responsibilities.
- Our communications with management recognize management's responsibility for the preparation and fair presentation of the financial statements, and for the design, implementation and operating effectiveness of internal controls.
- Our communications make management and those charged with governance aware of the entity's control deficiencies, which gives them a better chance to correct them. Improved financial reporting benefits stakeholders.
- Communications with management and those charged with governance give them the opportunity to explain why the deficiencies occurred so that we are able to obtain additional

information and enhance our understanding of the deficiencies and their potential impact on the audit. The audit benefits from robust two-way communications with management and those charged with governance.

#### Who are those charged with governance? [ISA | 4136.1400]

Those charged with governance are the person(s) or organization(s) - e.g. a corporate trustee - with responsibility for overseeing the strategic direction of the entity and the obligations related to the accountability of the entity. This includes oversight of the entity's internal control related to the achievement of the entity's objectives, including reliability of financial reporting, effectiveness and efficacy of operations and compliance with applicable laws and regulations.

Those charged with governance may include management personnel - e.g. executive members of a governance board or an owner-manager.

#### What steps do we take when communicating control deficiencies to management and those charged with governance? [ISA | 4136.1500]

When communicating control deficiencies to management and those charged with governance, we take the following steps:

- Determine what control deficiencies to communicate to whom
- Determine when to communicate control deficiencies
- Determine form of communications about control deficiencies

# 2.1 Determine what control deficiencies to communicate to whom [ISA | 4137]

## What do we do?

Communicate significant deficiencies to management and those charged with governance, and control deficiencies to management.

## Why do we do this?

Different parties within the entity may be more appropriately placed to respond to the control deficiencies. The severity of the deficiency therefore determines the party to which we communicate it.

## Execute the Audit

#### To whom do we communicate each type of control deficiency? [ISA | 4137.1300]

Our conclusion on the severity of the control deficiencies determines to whom we communicate them. The table below shows to whom we communicate control deficiencies depending on their severity.

| Severity of deficiencies | Communications to | |
|---|---|---|

| | **Those charged with governance** | **Management** |
|---|---|---|
| **Significant deficiencies** | X | X |
| **Other control deficiencies that merit management's attention** | | X |

How do we determine whether a control deficiency merits management's attention? [ISA | 4137.11049]

To determine whether a control deficiency merits management's attention we think about the likelihood and potential magnitude of misstatements that may arise in the financial statements as a result of those deficiencies.

Do we communicate other control deficiencies to management if others have already communicated those deficiencies? [ISA | 4137.11050]

Not necessarily. It is good practice to communicate all deficiencies that we are aware of to management. However, it is not necessary to communicate deficiencies of a lesser magnitude than a significant deficiency if those have already been communicated to management by internal auditors or others within the entity.

Can we communicate other control deficiencies to those charged with governance? [ISA | 4137.11051]

Yes. In some circumstances, those charged with governance may wish to be made aware of the details of other deficiencies in internal control we have communicated to management, or be briefly informed of the nature of the other deficiencies.

Alternatively, we may consider it appropriate to inform those charged with governance of the communication of the other deficiencies to management.

What are examples of control deficiencies related to accounting estimates? [ISA | 4137.11052]

Examples of control deficiencies related to accounting estimates include those related to controls over:

- the selection and application of significant accounting policies or principles, and the selection and application of methods, assumptions and data;
- risk management and related systems;
- data integrity, including when data is obtained from an external information source; and
- the use, development and validation of models, including models obtained from an external provider, and any adjustments that may be required.

Do we communicate control deficiencies that we identified during the audit and that management have already remediated? [ISA | 4137.1400]

Yes. We communicate deficiencies that we identified during the audit regardless of whether they have been remediated.

### Do we communicate control deficiencies that management and those charged with governance do not intend to remediate? [ISA | 4137.1500]

Yes. For control deficiencies identified in the current year audit, management and those charged with governance may have chosen not to remediate them because of cost or other considerations. Nevertheless, we communicate control deficiencies identified in the current year audit regardless of management's and those charged with governance's intent with respect to the deficiencies.

For deficiencies identified in the prior year audit that management and those charged with governance chose not to remediate, we may choose to not repeat the communication of those control deficiencies in the current period. It may, however, be appropriate for us to re-communicate these if there has been a change in management, or if new information has come to our attention that alters our prior understanding or assessment of the deficiencies.

### Group Audit | What do we consider when determining what control deficiencies to communicate to group management and those charged with governance of the group in a group audit? [ISA | 4137.1600]

As the group auditor, in making the determination of what control deficiencies to communicate to group management and those charged with governance of the group, we consider:

- deficiencies identified by the group auditor at both the group level and component level; and
- deficiencies at the component level identified by component auditors and communicated to the group auditor in connection with the audit procedures performed.

### Component Audit | When may it be appropriate for us, as the component auditor, to discuss identified control deficiencies with management of the entity or business unit? [ISA | 4137.159629]

When we, as the component auditor, identify a deficiency in internal control, it may be appropriate for us to discuss the deficiency with component management to obtain information on:

- the cause of the deficiency,
- the factors to evaluate its severity and
- the effect of compensating controls, if any.

Obtaining this information may be helpful in assisting the group auditor to determine the severity of the deficiency in relation to the group audit.

### Component Audit | When may it be appropriate for us, as component auditors, to communicate identified control deficiencies to those charged with governance of the entity or business unit? [ISA | 4137.159665]

Component auditors performing audit procedures at a component for the purpose of a group audit are not required to communicate control deficiencies identified as a result of performing such procedures with TCWG. However, component auditors may decide to make such communications when:

- they believe the deficiency may be a significant deficiency either to the component or the group,
- when the cause of the deficiency involves component management or
- when the component auditor concludes it would otherwise be helpful to inform those charged with governance of the deficiency.

### Can we communicate other internal control matters to management and those charged with governance? [ISA | 4137.1700]

Yes. Nothing precludes us from communicating to those charged with governance or management other internal control matters that we have identified during the audit, even if they are not required to be communicated.

> Examples of other internal control matters are those in which the controls and processes could be improved even if no deficiencies were identified.

### Do we repeat communications about significant deficiencies made in the prior period? [ISA | 4137.10000]

It depends. If a previously communicated significant deficiency remains, we repeat the communications as part of the current-period audit.

> For example, in a previous audit we communicated a significant deficiency to management and those charged with governance regarding the absence of controls over a significant risk related to revenue recognition. If in the current-period audit remedial action has not yet been taken and that significant deficiency remains, we repeat the prior period communication.

However, if the situation for which the significant deficiency relates no longer exists, we do not repeat the communication.

> For example, in a previous audit we communicated a significant deficiency to management and those charged with governance regarding the absence of controls in a part of a business that was disposed of in the current period. As the entity no longer operates the business, we do not repeat the prior period communication.

### Why do we repeat the communications made in the prior period if the significant deficiency remains? [ISA | 4137.159732]

We repeat the communications made in the prior period if the significant deficiency remains because the current-period communications:

- remind management and those charged with governance about the significant deficiency that was previously communicated but not remediated;
- give management the opportunity to explain why they did not remediate the significant deficiency; and
- assists those charged with governance in fulfilling their oversight responsibilities.

A failure to act, in the absence of a rational explanation, may in itself represent a significant deficiency.

### How do we perform the current-period communications? [ISA | 4137.159733]

The current-period communications may repeat the description from the previous communication, or simply refer to the previous written communications and the date of those communications.

### Can we issue written communications stating that no significant deficiencies were noted during the audit of the financial statements? [ISA | 4137.1900]

Yes, if not prohibited by law, regulation or member firm policy. If management or those charged with governance request written communication stating that no significant deficiencies were noted during the audit of the financial statements, we may communicate that no significant deficiencies came to our attention.

However, a written communication indicating that no significant deficiencies were identified during the audit does not provide any assurance about the effectiveness of an entity's internal control. Consequently, we include language in the written communication which enables those charged with governance and management to understand the context of the communication.

# 2.2 Determine when to communicate control deficiencies [ISA | 4138]

## What do we do?

Communicate control deficiencies in a timely manner.

## Why do we do this?

Timely and relevant communications may:

- permit management and those charged with governance to correct the deficiencies timely;
- permit us to obtain additional information about the deficiency from management and/or those charged with governance timely; and
- help us to meet client expectations.

## Execute the Audit

### When do we communicate control deficiencies? [ISA | 4138.1300]

We make our communications of control deficiencies in a timely manner and can occur at any point during the audit depending on significance.

If we communicate the deficiencies at the end of the audit:

- for listed entities, we issue our written communication before the date of approval of the financial statements.
- for other entities, we may issue the written communication at a later date but no later than 60 days from the date of the auditor's report.

#### What does "in a timely manner" mean? [ISA | 4138.11059]

In a timely manner means that we act promptly, at the soonest appropriate time.

For example, if an engagement team identifies a significant deficiency, some considerations related to determining when an appropriate time to communicate this deficiency to those charged with governance include:

- How soon our next planned two-way communication with those charged with governance is planned;
- Whether timely remediation of the significant deficiency is necessary to enable us to place reliance on the control for our current year audit;

- Whether the significant deficiency relates to prevention or detection of fraud or non-compliance with laws and regulations, or whether failure to remedy on a timely basis could result in loss or fraud

### Why might we communicate deficiencies during the course of the audit rather than at the end of the audit? [ISA | 4138.1400]

Communicating the deficiencies to management and/or those charged with governance during the course of the audit rather than at the end of the engagement may enable them to take corrective action as soon as possible. At the end of the engagement, it may be too late.

> Consider a situation in which a student is earning poor grades and may fail the class if his performance continues. The teacher may decide that communicating the student's performance to his parents sooner rather than later may be beneficial so that they are able to help their child to improve. Communicating the child's grades to the parents through the report card at the end of the school period may be too late to enable the parents to assist.

Timely communications also help to avoid surprises at period-end. Therefore, the more timely and professional our communications are, the better client relationships we will have.

### How do we determine whether to issue an interim communication? [ISA | 4138.1500]

We base the decision about whether to issue an interim communication on:

- Severity: the relative significance or severity of the matters noted; and
- Urgency for correction: the urgency with which management and/or those charged with governance may need to correct the deficiency.

We may also think of the following factors when we determine whether to issue an interim communication:

- Additional information: whether it is necessary to obtain additional information about the deficiency from management and/or those charged with governance;
- Management's awareness: whether management is already aware of the deficiency and has begun corrective action; and
- Oversight responsibilities: whether the communication will be an important factor in enabling those charged with governance to discharge their oversight responsibilities.

> For example, if a significant deficiency calls into question the integrity or competence of management, or there is evidence of fraud or intentional non-compliance with laws and regulations by management, we may:
>
> - decide to communicate in writing with those charged with governance first and
> - work with them to determine the timing of communication to management, based on those charged with governance's response and planned actions.

### If we communicate matters at an interim date, do we repeat the communications at the end of the audit? [ISA | 4138.1600]

Not necessarily. If we communicate control deficiencies during the course of the audit, a communication compiling or summarizing all prior communications of deficiencies at the end of the audit is not necessary. However, we may nevertheless consider it appropriate to provide management and/or those charged with governance with a complete list of control deficiencies, especially if they request us to.

# 2.3 Determine form of communications about control deficiencies [ISA | 4139]

## What do we do?

Determine the form of the communications and, if applicable, prepare the written communications.

## Why do we do this?

Communicating in writing underscores the importance of our communications of control deficiencies.

## Execute the Audit

### What form do our communications of control deficiencies take? [ISA | 4139.1300]

The form of the communications depends on the severity of the deficiency.

| | Form of communication |
|---|---|
| **Significant deficiencies** | In writing |
| **Control deficiencies** | In writing or orally |

Even if the control deficiencies are communicated orally, we document the nature and extent of our conversations in our audit documentation.

We may communicate the significant deficiencies orally in the first instance to assist management and/or those charged with governance in taking timely remedial action. Doing so, however, does not relieve us of the responsibility to communicate the significant deficiencies in writing, even if the entity remediated those deficiencies during the audit.

Although we communicate significant deficiencies in writing and we may communicate control deficiencies in writing as well, having a dialogue with those charged with governance is also a key factor in effective two-way communications.

### What minimum elements do we include in our written communications of significant deficiencies? [ISA | 4139.1400]

Our written communications of significant deficiencies include:

- a description of the deficiencies and an explanation of their potential effects; and
- a statement explaining that:

(i) the purpose of the audit was for us to express an opinion on the financial statements;
(ii) the audit included consideration of internal control relevant to the preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control; and
(iii) the matters being reported are limited to those deficiencies that we have identified during the audit and that we have concluded are of sufficient importance to merit being reported to those charged with governance.

#### How do we explain the potential effects of the control deficiencies? [ISA | 4139.11073]

The potential effects of control deficiencies may be evident from the description of the deficiencies. If that is not the case, we may describe the potential effects in terms of the:

- control objectives and types of errors the control was designed to prevent, or detect and correct; or
- risks of misstatement that the control was designed to address.

In any case, it is not necessary to quantify the potential effects.

### What other elements might we include in our written communication of control deficiencies? [ISA | 4139.1500]

We may also include:

- a statement that if we had performed more extensive procedures on internal control, we might have identified more deficiencies to be reported, or concluded that some of the reported deficiencies need not, in fact, have been reported;
- a statement that such communication has been provided for the purposes of those charged with governance, and that it may not be suitable for other purposes;
- suggestions for remedial action on the deficiencies;
- If management's response is included in a document containing our written communications, a statement as to whether or not we have undertaken any steps to determine whether management's responses have been implemented.

Law or regulation may require us or management to furnish a copy of our written communication on significant deficiencies to appropriate regulatory authorities. When this is the case, our written communication may also identify such regulatory authorities.

#### Can management include a written response in a document containing our written communications? [ISA | 4139.11074]

Yes. Management may wish to, or may be required by a regulator to, prepare a written response to our communication about control deficiencies identified during the audit.

This response may include:

- a description of corrective actions that the entity took;
- the entity's plans to implement new controls; or
- a statement indicating that management believes the cost of correcting a control deficiency would exceed the benefits.

### Can employed KPMG specialists and/or specific team members be involved in preparing written communications of control deficiencies? [ISA | 4139.1600]

Yes. When we identify deficiencies in internal control that arise from the work performed by employed KPMG specialists and/or specific team members, we may involve that person in preparing or reviewing the content of the communications to management and/or those charged with governance.

> For example, specific team members with expertise in IT may be actively involved in the communications about control deficiencies that relate to information technology.

# Documentation

## International Standards on Auditing: ISA 540.39

### Documentation

39. The auditor shall include in the audit documentation:[28] (Ref: Para. A149 - A152)

(a) Key elements of the auditor's understanding of the entity and its environment, including the entity's internal control related to the entity's accounting estimates;

(b) The linkage of the auditor's further audit procedures with the assessed risks of material misstatement at the assertion level,[29] taking into account the reasons (whether related to inherent risk or control risk) given to the assessment of those risks;

(c) The auditor's response(s) when management has not taken appropriate steps to understand and address estimation uncertainty;

(d) Indicators of possible management bias related to accounting estimates, if any, and the auditor's evaluation of the implications for the audit, as required by paragraph 32; and

(e) Significant judgments relating to the auditor's determination of whether the accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated.

---

[28] ISA 230, *Audit Documentation*, paragraphs 8 - 11, A6, A7 and A10

[29] ISA 330, paragraph 28(b)

## ISA Application and Other Explanatory Material: ISA 540.A149-A152

### **Documentation** (Ref: Para. 39)

A149. ISA 315 (Revised)[65] and ISA 330[66] provide requirements and guidance on documenting the auditor's understanding of the entity, risk assessments and responses to assessed risks. This guidance is based on the requirements and guidance in ISA 230.[67] In the context of auditing accounting estimates, the auditor is required to prepare audit documentation about key elements of the auditor's understanding of the entity and its environment related to accounting estimates. In addition, the auditor's judgments about the assessed risks of material misstatement related to accounting estimates, and the auditor's responses, may likely be further supported by documentation of communications with those charged with governance and management.

---

[65] ISA 315 (Revised), paragraphs 32 and A152 - A155

[66] ISA 330, paragraphs 28 and A63

[67] ISA 230, paragraph 8(c)

A150. In documenting the linkage of the auditor's further audit procedures with the assessed risks of material misstatement at the assertion level, in accordance with ISA 330, this ISA requires that the auditor take into account the reasons given to the risks of material misstatement at the assertion level. Those reasons may relate to one or more inherent risk factors or the auditor's assessment of control risk. However, the auditor is not required to document how every inherent risk factor was taken into account in identifying and assessing the risks of material misstatement in relation to each accounting estimate.

A151. The auditor also may consider documenting:

- When management's application of the method involves complex modeling, whether management's judgments have been applied consistently and, when applicable, that the design of the model meets the measurement objective of the applicable financial reporting framework.
- When the selection and application of methods, significant assumptions, or the data is affected by complexity to a higher degree, the auditor's judgments in determining whether specialized skills or knowledge are required to perform the risk assessment procedures, to design and perform procedures responsive to those risks, or to evaluate the audit evidence obtained. In these circumstances, the documentation also may include how the required skills or knowledge were applied.

A152. Paragraph A7 of ISA 230 notes that, although there may be no single way in which the auditor's exercise of professional skepticism is documented, the audit documentation may nevertheless provide evidence of the auditor's exercise of professional skepticism. For example, in relation to accounting estimates, when the audit evidence obtained includes evidence that both corroborates and contradicts management's assertions, the documentation may include how the auditor evaluated that evidence, including the professional judgments made in forming a conclusion as to the sufficiency and appropriateness of the audit evidence obtained. Examples of other requirements in this ISA for which documentation may provide evidence of the exercise of professional skepticism by the auditor include:

- Paragraph 13(d), regarding how the auditor has applied an understanding in developing the auditor's own expectation of the accounting estimates and related disclosures to be included in the entity's financial statements and how that expectation compares with the entity's financial statements prepared by management;
- Paragraph 18, which requires further audit procedures to be designed and performed to obtain sufficient appropriate evidence in a manner that is not biased toward obtaining audit evidence that may be corroborative or towards excluding audit evidence that may be contradictory;
- Paragraphs 23(b), 24(b), 25(b) and 32, which address indicators of possible management bias; and
- Paragraph 34, which addresses the auditor's consideration of all relevant audit evidence, whether corroborative or contradictory.

# How do we comply with the Standards? [ISA | KAEGHDWC]

# 1 Understand the entity and its environment, including the entity's ICFR related to accounting estimates [ISA | 1108]

## What do we do?

Obtain an understanding of the entity and its environment, including the entity's internal control over financial reporting as it relates to accounting estimates

## Why do we do this?

We perform procedures to obtain an understanding of the entity and its environment, the applicable financial reporting framework and the entity's internal control so that we understand the nature and type of accounting estimates included in the entity's financial statements, the measurement basis of such accounting estimates and the nature and extent of disclosures that may be relevant.

This understanding gives us the ability to identify and assess risks of material misstatement so that we can plan an appropriate audit response.

## Execute the Audit

### What do we understand about the entity and its environment that is relevant to us identifying and assessing risks related to accounting estimates? [ISA | 1108.1400]

As part of our understanding of the entity and its environment, we specifically understand the following matters that can impact accounting estimates:

- the entity's transactions or other events and conditions that may give rise to the need for, or changes in, accounting estimates to be recognized or disclosed in the financial statements,
- 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,
- the requirements of the applicable financial reporting framework related to accounting estimates (including the recognition criteria, measurement bases, and the related presentation and disclosure requirements) and how they apply in the context of the nature and circumstances of the entity and its environment, and
- regulatory factors relevant to the entity's accounting estimates, including, when applicable, regulatory frameworks.

#### What specific inquiries do we make that are relevant to understanding the entity and its environment related to accounting estimates? [ISA | 1108.15221]

We make inquires of management about changes in circumstances that may give rise to new, or the need to revise existing, accounting estimates.

### How do we use what we learned from our understanding about the entity and its environment? [ISA | 1108.15224]

We use our understanding of the entity and its environment, specifically our understanding of those matters that impact estimates, to develop an expectation of the nature of the accounting estimates and related disclosures that we expect to see in the entity's financial statements.

Ultimately, our expectations and what we learn about the estimates will help us to better identify and assess RMMs related to estimates.

The following are examples of what we might learn from our understanding:

| Topic | What we might learn |
|---|---|
| **Transactions or other events and conditions that may give rise to the need for, or changes in, accounting estimates** | That the entity has engaged in new types of transactions this year that give rise to new accounting estimates or the need to change processes for developing accounting estimates within the financial statements, such as:<br>• introduction of a new product line<br>• completion of a business combination<br>• introduction of a workforce incentive plan<br>• that the terms of transactions have changed, such as re-negotiation of contract terms with significant suppliers and/or vendors<br>• that new events or conditions have occurred |
| **Requirements of the applicable financial reporting framework related to accounting estimates** | That the financial reporting framework may prescribe certain things that could impact accounting estimates, such as:<br>• the criteria or conditions that must be met for recognition<br>• the basis of measurement, such as amortized cost or fair value<br>• the method used for the measurement<br>• the requirements that are permitted for presentation and disclosure related to estimation uncertainty<br>• other elements of an accounting framework (e.g. hedge accounting)<br>• changes in the applicable financial reporting framework that require a change to the entity's accounting policies<br>• regulatory factors<br>• providing guidance for management on determining point estimates where alternatives exist.<br>• requiring the disclosure of information concerning the relevant assumptions to which an accounting estimate is particularly sensitive,<br>• not permitting recognition where there is a high degree of measurement uncertainty, and instead requiring certain disclosures. |
| **Regulatory factors relevant to the** | That the regulatory factors allow us to identify the applicable regulatory framework(s) which helps us determine whether the applicable regulatory framework(s): |

| | |
|---|---|
| **entity's accounting estimates** | • specify the criteria for recognition or require use of a particular method of measurement,<br>• specify or provide guidance about disclosures in addition to the requirements of the financial reporting framework,<br>• provide an indication of areas for which there may be possible management bias to meet regulatory requirements.<br>• requirements are not consistent with the requirements of the financial reporting framework.<br><br>For example, regulators may seek to influence the minimum levels for expected credit loss provisions, providing pressure for them to be higher. This may affect the degree to which management bias impacts the estimate and our assessment of the RMM. |

## What do we understand about accounting estimates when obtaining an understanding of ICFR? [ISA | 1108.11958]

As part of understanding ICFR, we specifically understand the following matters related to estimates:

- How the entity's board of directors exercises oversight over management's process for making accounting estimates
- How management identifies the need for, and applies, specialized skills or knowledge related to accounting estimates, including with respect to the use of a specialist
- How the entity's risk assessment process identifies and addresses risks related to accounting estimates, including susceptibility to management bias

### How do we use what we learned about accounting estimates when obtaining an understanding of ICFR? [ISA | 1108.15226]

We use our understanding of ICFR, specifically our understanding of those matters that impact estimates, to better identify and assess RMMs related to estimates.

The following are examples of what we might learn from our understanding:

| Topic | What we might learn |
|---|---|
| **How the entity's board of directors exercises oversight over management's process for making accounting estimates** | There is information that impacts our evaluation of whether:<br>• a culture of honesty and ethical behavior has been created<br>• strengths in the control environment collectively provide an appropriate foundation for the other elements of ICFR<br><br>For example, we may seek certain information about those charged with governance that impacts our evaluation such as information about whether they: |

<table>
<tr><td></td><td>
<ul>
<li>have the skills or knowledge to understand the characteristics of a particular method or the model to make the estimate, or the risks related to the estimate;</li>
<li>are independent from management, have the necessary information required to evaluate on a timely basis how management made the estimate, and the authority to call into question management's actions;</li>
<li>oversee managements process for making the accounting estimate, including the use of models; and</li>
<li>oversee the monitoring activities undertaken by management</li>
</ul>
</td></tr>
<tr><td>How management identifies the need for, and applies, specialized skills or knowledge related to accounting estimates, including with respect to the use of a specialist</td><td>
Whether management has the appropriate skills or knowledge to develop the estimates within their financial statements. In cases where they don't have the appropriate skills or knowledge that they have engaged the proper specialists to assist them with the preparation of an accounting estimate.
For example, we may learn about:
<ul>
<li>the specialized nature of a matter requires the skills of a specialist, such as:<br>- Mineral or hydrocarbon reserves in extractive industries<br>- Complex contractual terms</li>
<li>the complex nature of the models used to apply the requirements of the financial reporting framework requires the skills of a specialist or service provider, such as fair value models used for Level 3 investments</li>
<li>the unusual or infrequent nature of the condition, transaction or event requiring the accounting estimate</li>
</ul>
</td></tr>
<tr><td>The entity's risk assessment process relating to accounting estimates, including susceptibility to management bias</td><td>
Information that helps us understand how management identifies and addresses risks related to estimates. We consider the evidence obtained from obtaining an understanding of the entity's risk assessment process when we identify and assess RMMs related to estimates.
For example, this information may provide us with an understanding of, or changes in, the following:
<ul>
<li>The requirements of the applicable financial reporting framework related to accounting estimates</li>
</ul>
</td></tr>
</table>

- the availability or nature of data sources relevant to making the accounting estimate or that may affect the reliability of the data used
- the entity's information systems or IT environment
- key personnel in the process to monitor or develop estimate
- aspects of the process that are most susceptible to management bias

### How do we understand the entity and its environment, including the entity's ICFR related to accounting estimates? [ISA | 1108.15227]

We obtain this understanding while we are performing our risk assessment procedures, which include:

- Obtain an understanding of the entity and its environment,
- Obtain an understanding of ICFR,
- Discuss the potential for material misstatement due to fraud, which includes brainstorming among the key engagement team members about how the financial statements could be manipulated through management bias in accounting estimates in significant accounts and disclosures; and,
- Consider other information relevant to identifying and assessing RMMs
- Perform analytical procedures
- Inquire of those charged with governance, management and others about RMMs

#### What might we learn about accounting estimates from our other risk assessment procedures? [ISA | 1108.15228]

We learn about matters such as:

- Risks raised in client and engagement acceptance or continuance "CEAC"
- Prior audit adjustments related to estimates
- Prior indicators of management bias
- Fluctuations in accounting estimates and the reasons for them
- The need for, or changes in, accounting estimates

Similar to our other risk assessment procedures we learn about information that gives us the ability to *identify* and *assess* risks of material misstatement so that we can plan an appropriate audit response.

# 2.C Core and Less Complex | Understand the process by which an accounting estimate is developed [ISA | 7702]

## What do we do?

Perform a walkthrough or perform inquiry and observation or inspection procedures to obtain an understanding of the process by which an accounting estimate is developed, including identifying the elements of an accounting estimate (method(s), assumptions and data)

# Why do we do this?

Performing a walkthrough or performing inquiry and observation or inspection procedures allows us to obtain an understanding of the entity's process used to develop an estimate and helps us identify and assess the potential risks inherent in an estimate. Once we understand the process, we are able to identify the various elements of an estimate and ultimately evaluate the risk associated with each element.

# Execute the audit

### Core and Less Complex | How do we obtain an understanding of the process for developing an accounting estimate? [ISA | 7702.15275]

We obtain an understanding of the entity's process for developing an accounting estimate, either by:

- performing a walkthrough; or
- performing inquiry and observation or inspection.

See activity 'Understand business processes'.

### Core and Less Complex | What incremental items do we understand when obtaining our understanding of the process for estimates? [ISA | 7702.15276]

In addition to those items we normally understand, we also understand a few additional items for accounting estimates, including how management:

- Identifies the relevant methods, assumptions, or data, the sources of the relevant methods, assumptions, and data (including IT systems and IT layers), and the changes to them, that are appropriate in the context of the applicable financial reporting framework, including how management:
  - selects or designs, and applies, the methods used, including the use of models;
  - selects the assumptions to be used, including consideration of alternatives, and identifies relevant assumptions; and
  - selects the data to be used;
- Performs a retrospective review of the estimate and responds to the results of the retrospective review;
- Understands the degree of estimation uncertainty, including through considering the range of possible measurement outcomes;
- Addresses the estimation uncertainty, including selecting a point estimate and related disclosures for inclusion in the financial statements; and
- Identifies when to use, and apply, specialized skills or knowledge related to accounting estimates.

#### Core and Less Complex | Financial Instruments | Is there anything incremental we might understand specific to investments? [ISA | 7702.15277]

Our understanding of process activities regarding investments may include the following considerations:

- management's process to determine the estimated value of the investments, including the selection and consistent application of the relevant accounting principles and valuation methods (e.g. cost, investee financial results (including equity method investments that are a significant component), or fair value measurement);
- the availability of information used in determining the estimated value (e.g. including any details of underlying investments of a hedge fund or investment partnership that may be available to the entity, the use of the investee's unaudited financial information in determining value);
- the frequency of management interaction with the fund manager and the nature of such interactions, including the extent to which they enable management to estimate value as of the balance sheet date;
- the competence and experience of the entity's personnel assigned to monitor and estimate the value of the entity's investments, particularly alternative investments or securities using complex valuation methods;
- the availability of a service auditor's report on the service organization surrounding the controls and procedures in place at a service provider, in the determination of unit values and shareholder transactions such as for common/collective trust funds;
- the use of an investment advisor to monitor the valuation of investments, including underlying investments, and/or to monitor markets or market indicators and their effect on the estimated values of the entity's investment;
- the availability of audited financial statements of the investee entity and whether such statements are as of the same date as the investor entity's financial statements, the timing of when such audited financial statements of the investee entity become available, and whether the audits of the investee entity are conducted by qualified and reputable independent auditors; and
- the use of management's specialists to assist in estimating fair value.

### Core and Less Complex | What else might we do to help us better prepare and plan for obtaining our understanding of the process for developing accounting estimates? [ISA | 7702.15278]

To better prepare for and plan for obtaining our understanding of the process for developing accounting estimates, we also think about the following:

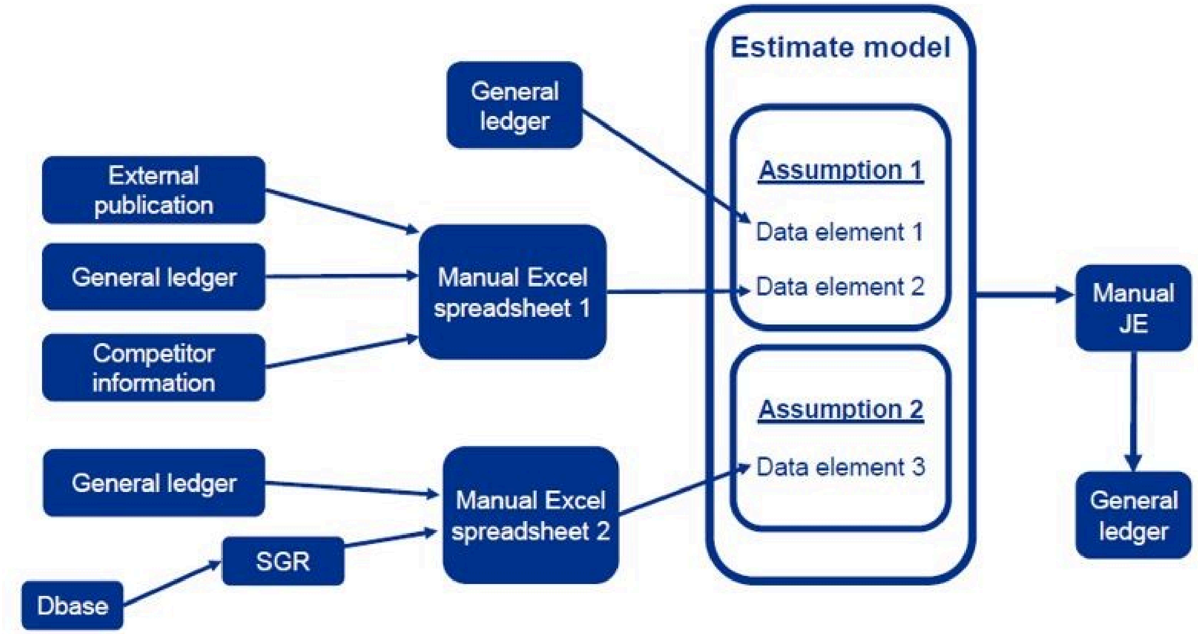
- deconstruct the accounting estimate into the different elements so that we identify 100% of the elements. One practicable way of accomplishing this is by "walking backwards" through an accounting estimate, from the general ledger back to all of the individual elements that led to it being recorded; and
- disaggregate an accounting estimate so that either our walkthrough or inquiry and observation or inspection cover the individual components of the estimate.

### Core and Less Complex | What if a new accounting estimate has arisen in the current period? [ISA | 7702.15279]

When a new accounting estimate has arisen in the current year it may not be possible to perform such robust planning early in the audit process. In these instances, having discussions with management as early as possible can help us plan better and efficiently and effectively obtain our understanding of the process by which the new accounting estimate is developed.

## Core and Less Complex | How might we document our understanding of the process for developing accounting estimates? [ISA | 7702.15280]

We may choose to include a diagram of the method/model, assumptions, and data that are used to develop an accounting estimate similar to the following:




A diagram can help summarize the key aspects of how management develops and records an accounting estimate.

## Core and Less Complex | What is management's responsibility to perform a retrospective review? [ISA | 7702.15281]

Management is responsible for monitoring the reasonableness of its accounting estimates on an on-going basis. Management's process will likely vary depending on the degree of complexity, subjectivity and estimation uncertainty related to an estimate and may include performing a retrospective review related to the estimate as whole or focused on the elements of an estimate.

### Core and Less Complex | What if management does not perform a retrospective review? [ISA | 7702.15282]

When management does not prepare a retrospective review, we evaluate the implications on our audit - primarily whether it impacts our assessment of inherent risk or our ability to rely on the entity's controls.

In situations where certain assumptions or data could be reasonably determined without using hindsight, the lack of a retrospective review may have no implications on our audit related to those assumption or data. Conversely, in situations where we would expect an assumption or data to be adjusted based on the historical experience of the entity, the lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the assumption or data.

Similarly, in situations where the entity's model(s) are not complex or dependent on updates being made in the future, the lack of a retrospective review may have no implications on our audit.

However, other models call for the design and calibration to be periodically evaluated and a lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the model.

# 2.E Enhanced | Perform a walkthrough to understand the process by which an accounting estimate is developed [ISA | 7712]

## What do we do?

Perform a walkthrough to obtain an understanding of the process by which an accounting estimate is developed, including identifying the elements of an accounting estimate (method(s), assumptions and data)

## Why do we do this?

Performing a walkthrough allows us to obtain an understanding of the entity's process used to develop an estimate and helps us identify and assess the potential risks inherent in an estimate. Once we understand the process, we are able to identify the various elements of an estimate and ultimately evaluate the risk associated with each element.

## Execute the Audit

### Enhanced | How do we obtain an understanding of the process for developing an accounting estimate? [ISA | 7712.15455]

We obtain an understanding of the entity's process for developing an accounting estimate that may have an RMM (where there is a reasonable possibility that an RMM exists) within the process based on the applicable International-Enhanced methodology as follows:

| Applicable International-Enhanced methodology | Processes | Obtain an understanding of the process by: |
|---|---|---|
| International-Enhanced PIE methodology | All processes and sub-processes | Performing a walkthrough |
| International-Enhanced Non-PIE methodology | Processes, or sub-processes, where we evaluate D&I of process control activities that address RMMs | Performing a walkthrough |
| | Processes, or sub-processes, where we do | Either performing (i) a walkthrough or (ii) through |

| | | |
|---|---|---|
| | not evaluate D&I of process control activities that address RMMs | inquiry and observation or inspection. Walkthroughs are encouraged. |

See question 'Which control activities do we obtain an understanding of and are relevant to the audit?' for guidance on when we evaluate D&I of process control activities that address RMMs.

See activity 'Perform a walkthrough to understand the business processes' for guidance on performing a walkthrough.

See activity 'Understand the process by which an accounting estimate is developed' for guidance on understanding the process by which an accounting estimate is developed through inquiry and observation or inspection.

### Enhanced | When do we perform and document our walkthrough of the entity's process for developing an accounting estimate? [ISA | 7712.15461]

We perform and document our walkthrough in conjunction with our walkthrough of the entity's business process.

### Enhanced | What incremental items do we understand when performing our walkthrough for estimates? [ISA | 7712.15469]

In addition to those items we normally understand as part of our walkthrough, we also understand a few additional items for accounting estimates, including how management:

- Identifies the relevant methods, assumptions, or data, the sources of the relevant , assumptions, and data (including IT systems and IT layers), and changes to them, that are appropriate in the context of the applicable financial reporting framework, including how management:
  - selects or designs, and applies, the methods used, including the use of models;
  - selects the assumptions to be used, including consideration of alternatives, and identifies relevant assumptions; and
  - selects the data to be used;
- Performs a retrospective review of the estimate and responds to the results of the retrospective review;
- Understands the degree of estimation uncertainty, including through considering the range of possible measurement outcomes;
- Addresses the estimation uncertainty, including selecting a point estimate and related disclosures for inclusion in the financial statements; and
- Identifies when to use, and apply, specialized skills or knowledge related to accounting estimates.

### Enhanced | Financial Instruments | Is there anything incremental we might understand specific to investments? [ISA | 7712.15473]

Our understanding of process activities regarding investments may include additional considerations, such as:

- management's process to determine the estimated value of the investments, including the selection and consistent application of the relevant accounting principles and valuation methods (e.g. cost, investee financial results, or fair value measurement);
- the availability of information used in determining the estimated value (e.g. including any details of underlying investments of a hedge fund or investment partnership that may be available to the entity, the use of the investee's unaudited financial information in determining value);
- the frequency of management interaction with the fund manager and the nature of such interactions, including the extent to which they enable management to estimate value as of the balance sheet date;
- the competence and experience of the entity's personnel assigned to monitor and estimate the value of the entity's investments, particularly alternative investments or securities using complex valuation methods;
- the availability of a service auditor's report on the service organization surrounding the controls and procedures in place at a service provider, in the determination of unit values and shareholder transactions such as for common/collective trust funds;
- the use of an investment advisor to monitor the valuation of investments, including underlying investments, and/or to monitor markets or market indicators and their effect on the estimated values of the entity's investment;
- the availability of audited financial statements of the investee entity and whether such statements are as of the same date as the investor entity's financial statements, the timing of when such audited financial statements of the investee entity become available, and whether the audits of the investee entity are conducted by qualified and reputable independent auditors; and
- the use of management's specialists to assist in estimating fair value.

### Enhanced | What else might we do to help us better prepare for and plan our walkthrough of the process for developing accounting estimates? [ISA | 7712.15474]

To better prepare for and plan our walkthrough for estimates, we may find it helpful to:

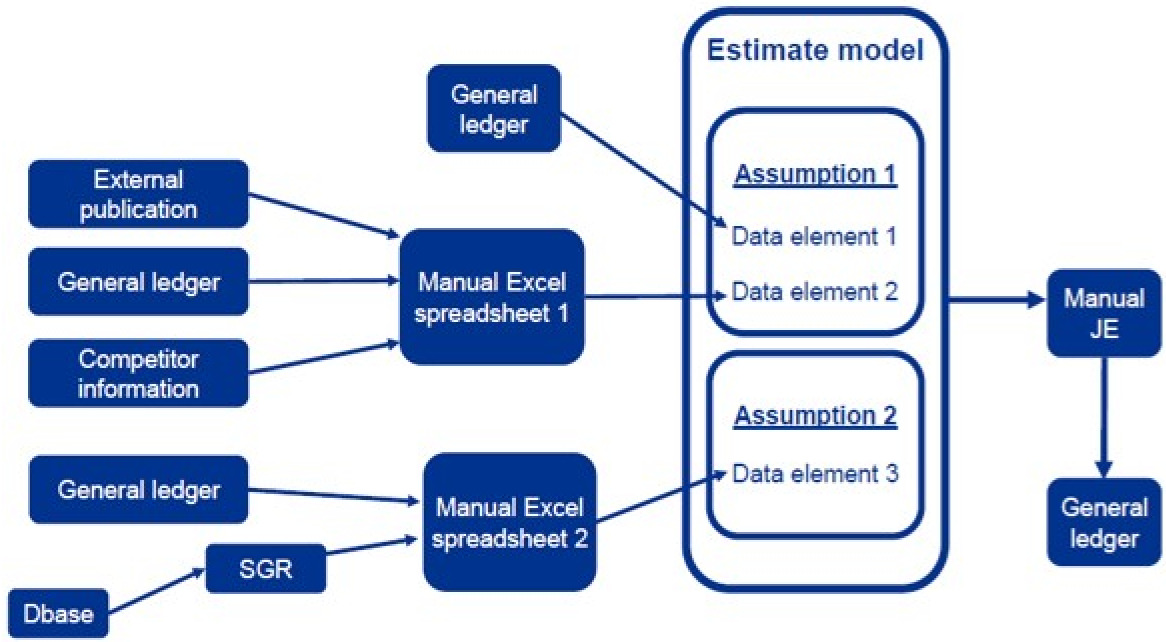
- deconstruct the accounting estimate into the different elements so that we identify 100% of the elements. One practicable way of accomplishing this is by "walking backwards" through an accounting estimate, from the general ledger back to all of the individual elements that led to it being recorded; and
- disaggregate the accounting estimate so that our walkthrough(s) covers the individual components of the estimate.

### Enhanced | What if a new accounting estimate has arisen in the current period? [ISA | 7712.15475]

When a new accounting estimate has arisen in the current year, it may not be possible to perform such robust planning early in the audit process. In these instances, having discussions with management as early as possible can help us plan better and efficiently and effectively obtain our understanding of the process by which the new accounting estimate is developed.

### Enhanced | How might we document our understanding of the process for developing accounting estimates? [ISA | 7712.15478]

We may choose to include a diagram of the method/model, assumptions, and data that are used to develop an accounting estimate similar to the following:




A diagram can help summarize the key aspects of how management develops and records an accounting estimate.

## Enhanced | What is management's responsibility to perform a retrospective review? [ISA | 7712.15479]

Management is responsible for monitoring the reasonableness of its accounting estimates on an on-going basis. Management's process will likely vary depending on the degree of complexity, subjectivity and estimation uncertainty related to an estimate and may include performing a retrospective review related to the estimate as whole or focused on the elements of an estimate.

### Enhanced | What if management does not perform a retrospective review? [ISA | 7712.15480]

When management does not prepare a retrospective review, we evaluate the implications on our audit - primarily whether it impacts our assessment of inherent risk or our ability to rely on the entity's controls.

In situations where certain assumptions or data could be reasonably determined without using hindsight, the lack of a retrospective review may have no implications on our audit related to those assumption or data. Conversely, in situations where we would expect an assumption or data to be adjusted based on the historical experience of the entity, the lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the assumption or data.

Similarly, in situations where the entity's model(s) are not complex or dependent on updates being made in the future, the lack of a retrospective review may have no implications on our audit. However, other models call for the design and calibration to be periodically evaluated and a lack of a retrospective review may have more significant implications on our ability to rely on controls or our assessment of inherent risk related to the model.

# 3 Understand how management understands and addresses estimation uncertainty [ISA | 1118]

## What do we do?

Obtain an understanding of how management understands and addresses the degree of estimation uncertainty for an accounting estimate

## Why do we do this?

Risk assessment is essential to our ability to properly audit accounting estimates. The appropriateness and sufficiency of our audit response depend on our ability to identify and assess the relevant risks related to accounting estimates.

We cannot perform a proper risk assessment without understanding how management understands and addresses estimation uncertainty, which impacts both the elements of an accounting estimate and the accounting estimate as a whole.

## Execute the Audit

### What is 'estimation uncertainty?' [ISA | 1118.15263]

Estimation uncertainty is the susceptibility of an accounting estimate and related disclosures to an inherent lack of precision in measurement. Estimation uncertainty is an inherent risk factor and arises when there are constraints on the availability of knowledge (or data) necessary to develop an estimate which limits the precision of an estimate.

As estimation uncertainty increases, so too does the risk of material misstatement to the financial statements.

'Estimation uncertainty' is also referred to as 'measurement uncertainty'.

#### Where does estimation uncertainty arise in accounting estimates? [ISA | 1118.1400]

Estimation uncertainty is commonly associated with the assumptions used to develop an accounting estimate, however, the other elements of an accounting estimate can also give rise to estimation uncertainty.

> For example, there may be subjectivity or judgement in determining an appropriate method/model to use in determining an accounting estimate leading to estimation uncertainty. There also may be subjectivity and judgement in selecting a data set or deciding if it is appropriate for certain data to be excluded from the population, which can lead to estimation uncertainty.

Estimation uncertainty can also be related to an accounting estimate as a whole through the aggregate effect of the uncertainty that arises through the individual elements.

### How might management understand the degree of estimation uncertainty related to an accounting estimate? [ISA | 1118.1500]

As part of management's process for developing an accounting estimate, management may understand the degree of estimation uncertainty in a variety of ways, such as considering:

- alternative methods, relevant assumptions or sources of relevant data that are appropriate in the context of the applicable financial reporting framework,
- possible alternative outcomes - for example, performing a sensitivity analysis to determine the effect of changes in the data or assumptions on an accounting estimate, and
- the outcome of accounting estimates made in previous periods, and how management has appropriately responded to differences.

## How might management address estimation uncertainty? [ISA | 1118.1600]

Management addresses estimation uncertainty by 1) selecting an appropriate point estimate and 2) making appropriate disclosures in their financial statements regarding estimation uncertainty.

### What is a point estimate? [ISA | 1118.1700]

The point estimate is the amount selected by management for recognition or disclosure in the financial statements.

Said another way, the point estimate is the output of management's process to record or disclose an estimate in the financial statements after all data and assumptions have been selected and applied to the method/model, including any adjustments to the output method/model. This process likely includes management considering where estimation uncertainty, subjectivity and/or complexity impacts the elements of an estimate and the resulting range of measurement outcomes.

### What methods are there for selecting an appropriate point estimate? [ISA | 1118.1800]

To select a point estimate, management may:

- Record the output of a model directly in the financial statements; or
- Prior to recording the point estimate in the financial statements;
  - Make adjustments to the output of the model;
  - Weight the outputs of multiple models; or
  - Select from within a range of possible outcomes

These same options are available to us when we test management's estimate by developing our own independent expectation.

### How might the applicable financial reporting framework impact the point estimate selected by management? [ISA | 1118.15206]

The applicable financial reporting framework may:

- Prescribe the point estimate that is to be used after consideration of the alternative outcomes and assumptions
- Prescribe a specific measurement method

### How might the applicable financial reporting framework impact the related disclosures regarding estimation uncertainty? [ISA | 1118.15208]

The applicable financial reporting framework may prescribe disclosures or disclosure objectives related to accounting estimates that:

- Describe the amount as an estimate

- Explain the nature and limitations of the process for making an estimate, including the variability in reasonably possible outcomes
- Describe significant accounting policies related to an accounting estimate
- Describe significant or critical judgments, including significant forward-looking assumptions or other sources of estimation uncertainty
- Describe the method of estimation used, including any applicable model and the basis for its selection.
- Describe the 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.

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. In certain circumstances, additional disclosures beyond those explicitly required by the financial reporting framework may be necessary in order to achieve fair presentation, or in the case of a compliance framework, for the financial statements not to be misleading.

## How do we obtain an understanding about whether management has taken appropriate steps to understand and address estimation uncertainty? [ISA | 1118.15210]

We understand estimation uncertainty as part of understanding management's process for developing an accounting estimate, as well as through our retrospective review. As we do this, we discuss with management elements of an accounting estimate that are impacted by estimation uncertainty - i.e. those elements that are subjective and/or complex such that they require management to make judgments.

### What do we understand about how management understands the degree of estimation uncertainty related to an accounting estimate? [ISA | 1118.15211]

We understand estimation uncertainty as part of understanding management's process for developing an accounting estimate. This includes understanding how management considered the range of possible outcomes, as well as other specific matters, such as:

- alternative methods, relevant assumptions or sources of relevant data that are appropriate in the context of the applicable financial reporting framework
- possible alternative outcomes - for example, performing a sensitivity analysis to determine the effect of changes in the data or assumptions on an accounting estimate
- the outcome of accounting estimates made in previous periods, and how management has appropriately responded to differences

### What does our understanding about how management addresses estimation uncertainty entail? [ISA | 1118.15212]

Our understanding entails how management selects its point estimate from a range of possible measurement outcomes. This may require management to make adjustments to the output of the model.

We also understand management's disclosures related to estimation uncertainty. Management's disclosures are another way in which management addresses estimation uncertainty within their financial statements. For example, management may disclose the amount that they accrued related to potential litigation AND additional disclosures about the range of potential losses and why they selected their point estimate.

### What if management has not taken appropriate steps to understand or address estimation uncertainty? [ISA | 1118.15214]

If based on the evidence obtained and our judgement, we determine that management has not taken the appropriate steps to understand or address the estimation uncertainty, we:

- Request management to perform additional procedures to understand estimation uncertainty or to address it by reconsidering the selection of their point estimate or considering providing additional disclosures relating to the estimation uncertainty; and
- Evaluate management's response.

#### What do we do if we determine that management's response to our request does not sufficiently address estimation uncertainty? [ISA | 1118.15215]

We:

- 'Develop an independent expectation of an accounting estimate,' to the extent possible; and
- Evaluate whether a deficiency in internal control exists and, if so, communicate to TCWG in accordance with the applicable communication requirements.

# 4 Determine whether to test an accounting estimate using one or a combination of three substantive approaches [ISA | 4333]

## What do we do?

Determine whether to test an accounting estimate using one or a combination of three substantive approaches.

## Why do we do this?

We test an accounting estimate using one or a combination of three substantive approaches. Our determination of which approach(es) to use depends on which will most effectively provide sufficient appropriate audit evidence.

## Execute the Audit

### What are the three substantive approaches used to test an accounting estimate? [ISA | 4333.1300]

We test an accounting estimate using one or a combination of the following approaches:

(1) Test and evaluate the entity's process for developing an accounting estimate;
(2) Develop an independent expectation of an accounting estimate; and
(3) Evaluate events and transactions occurring after the measurement date to test an accounting estimate.

We may use any of the three approaches (individually or in combination) to substantively test an accounting estimate as a whole OR the differing elements of an accounting estimate.

## How do we determine which of the three substantive approaches to use when we have an RMM associated with selection risk? [ISA | 4333.1400]

Ultimately, the approach, or combination of approaches, used is determined based on which approach we believe best provides sufficient appropriate audit evidence.

Our decision as to which response to use, individually or in combination, will be influenced by:

- The nature of an accounting estimate, including whether it arises from routine or non-routine transactions
- Whether the procedure is expected to effectively provide us with sufficient appropriate audit evidence
- Our assessment of the RMM(s) related to an estimate
- The availability of audit evidence from events occurring up to the date of the auditor's report that is relevant to events and conditions at the measurement date.

The work that we performed as part of our risk assessment, including any testing of internal controls, will help inform our decisions about the approach we take to audit an estimate. We design our further audit procedures considering the level of CAR that we have determined for each of the methods, assumptions, and data. We are careful not to bias the design of our procedures such that we only seek to obtain corroborative evidence or exclude audit evidence that is contradictory.

### Which approach do we use when we have only identified an RMM associated with the application of the methods, assumptions, and data? [ISA | 4333.8764]

When we have only identified an RMM associated with the application of the methods, assumptions, and data, we use the 'Test and evaluate the entity's process for developing an accounting estimate' substantive approach. We apply this approach by performing the activity 'Test and evaluate the application of the methods, assumptions, and data'.

### How does our assessment of inherent risk affect the substantive procedures we perform for accounting estimates? [ISA | 4333.15562]

Inherent risk serves as a practical measure that we can use to gauge the level of audit procedures to perform. However, it is ultimately our assessed level of CAR that helps us determine the nature, timing and extent of our audit procedures to address each of the risks related to the methods, assumptions and data (see activities 'Assess CAR for the selection of the individual methods, assumptions, and data, if applicable' and 'Assess CAR for the application of the methods, assumptions, and data, if applicable'). We obtain more persuasive audit evidence the higher our assessment of risk.

For estimates, as our assessment of risk increases, we also consider whether to apply more than one of the testing approaches (i.e. increase the quantity of evidence) and/or we consider the source of the audit evidence (i.e. increase the quality of evidence).

## When might the three substantive approaches to testing an accounting estimate be appropriate? [ISA | 4333.1500]

The following table provides the circumstances for when each approach may be appropriate:

| Approach | Circumstances when the approach may be appropriate |
| --- | --- |

| | |
|---|---|
| Test the entity's process used to develop an accounting estimate | This may be appropriate, for example, when:<br>• an accounting estimate is derived from the routine processing of data by the entity's accounting system;<br>• our review of similar accounting estimates made in the prior period financial statements suggests that management's current period process is likely to be effective;<br>• an accounting estimate is based on a large population of items of a similar nature that individually are not significant;<br>• the applicable financial reporting framework specifies how management is expected to make the accounting estimate;<br>• the accounting estimate is a fair value accounting estimate developed on a model that uses observable and unobservable inputs;<br>• the data and significant assumptions underlying the estimate are largely based on an entity's internal information (e.g., sales projections or employee data); and<br>• the estimate is generated using a customized entity-specific model. |
| Develop an independent expectation for comparison to the entity's estimate | This may be appropriate, for example, when:<br>• an accounting estimate is not derived from the routine processing of data by an accounting system;<br>• our review of similar accounting estimates made in the prior period financial statements suggests that management's current period process is not expected to be effective;<br>• the entity's controls within and over management's process for making accounting estimates are not well designed or properly implemented;<br>• events or transactions between the period end and the date of the auditor's report have not been properly taken into account, when it is appropriate for management to do so, and such events or transactions appear to contradict management's point estimate.;<br>• there are appropriate alternative assumptions or sources of relevant data that can be used in developing our point estimate or a range; and<br>• Management has not taken appropriate steps to understand and address the estimation uncertainty.<br>Even when the entity's controls are well designed and properly implemented, developing a point estimate or a range may be an effective or efficient response to the assessed risks. In other situations, we may consider this approach as part of determining whether further procedures are appropriate and, if so, their nature and extent. |

| | |
|---|---|
| Evaluate audit evidence from events or transactions occurring after the measurement date related to an accounting estimate for comparison to the entity's estimate. | This may be appropriate, for example, when such events or transactions:<br>• are expected to occur; and<br>• can provide relevant and reliable audit evidence that confirms or contradicts an accounting estimate.<br>For example, this may be an appropriate response if litigation has been settled, the entity has sold an impaired asset, or receivables have been collected. |

### When testing internal controls, do we have to use a 'Test and evaluate the entity's process for developing an accounting estimate' substantive approach? [ISA | 4333.159429]

No, testing internal controls does not solely drive the substantive approach to be used to test an accounting estimate.

However, the work we perform as part of our risk assessment, including any testing of controls, will help inform our decisions about the substantive approach to take to test the accounting estimate.

For example, we obtain an understanding of the entity's process and test controls. The entity's controls are properly designed, implemented, and operating effectively. However, based on the nature of the accounting estimate, we determined, in this case, that developing an auditor's point estimate or a range is the more efficient and effective way to respond to the risk and provide us with sufficient appropriate audit evidence. Therefore, while we use a controls approach over relevant elements, we use a 'Develop an independent expectation for comparison to the entity's estimate' substantive approach to obtain our substantive audit evidence related to the accounting estimate.

### Which substantive approach do we use when we have an RMM associated with application risk? [ISA | 4333.159430]

Consistent with the selection risk, the approach, or combination of approaches, used is determined based on which approach we believe best provides sufficient appropriate audit evidence.

When addressing an RMM for application risk for an estimate where we have also identified an RMM for selection risk, we may align our substantive approach to be consistent for both risks, as follows.

| Selection Risk | Application Risk |
|---|---|
| Test the entity's process for developing an accounting estimate | Direct test application by:<br>- Testing the entity's calculation as a whole<br>- Testing the entity's calculations using a sample approach<br>- Performing a substantive analytical procedure |

| | |
|---|---|
| Develop an independent expectation of the accounting estimate | Indirect test: This approach indirectly tests the application of the methods, assumptions and data so no further audit procedures need to be performed. |
| Evaluate events and transactions occurring after the measurement date to test an accounting estimate | Indirect test: This approach indirectly tests the application of the methods, assumptions and data so no further audit procedures need to be performed. |

Ultimately, the substantive approach, or combination of approaches, used is determined based on which approach we believe best provides sufficient appropriate audit evidence.

Our decision as to which response to use, individually or in combination, will be influenced by:

- The nature of an accounting estimate, including whether it arises from routine or non-routine transactions
- Whether the procedure is expected to effectively provide us with sufficient appropriate audit evidence
- Our assessment of the RMM(s) related to an estimate
- The availability of audit evidence from events occurring up to the date of the auditor's report that is relevant to events and conditions at the measurement date.

| **Approach** | **Circumstances when the approach may be appropriate** |
|---|---|
| Test the entity's calculations for the estimate as a whole | This may be appropriate, for example, when:<br>• a single accounting estimate is determined using a model, whether configured within an entity's IT system(s) or created using end-user computing applications; or<br>• a single accounting estimate is developed by a management's specialist |
| Test the entity's calculations using a sampling approach | This may be appropriate, for example, when:<br>• an accounting estimate is made up of a population of items for which the application of the model and related calculations is consistent across the items in the population<br>• the population of items is derived from the routine processing of data by the entity's accounting system |
| Perform a substantive analytical procedure | This may be appropriate, for example, when: |

| | |
|---|---|
| | • the application is consistent period over period and there is a plausible and sufficiently predictable relationship upon which to develop our expectation for the estimate and we have evaluated the reliability of the data used to develop our expectation |
| Other | This may be appropriate, for example, when:<br>• the estimate is developed by a management's specialist using a proprietary model that we cannot access. Refer to 'What if the management's specialist's model is proprietary and we cannot access it?' in activity 'Test whether the calculations are made in accordance with the method and are mathematically accurate' |
| Indirect test: This approach indirectly tests the application of the methods, assumptions and data so no further audit procedures need to be performed. | This may be appropriate, for example, when:<br>• we select a 'Develop an independent expectation for comparison to the entity's estimate'<br>• we select an 'Evaluate audit evidence from events or transactions occurring after the measurement date related to the accounting estimate for comparison to the entity's estimate' |

### When are substantive procedures alone not able to provide sufficient appropriate audit evidence for an accounting estimate? [ISA | 4333.1800]

There may be times when we cannot obtain sufficient appropriate audit evidence from substantive procedures alone, especially when an estimate is more complex and / or a significant amount of information or data elements are electronically initiated, recorded, processed or reported. In these situations, we test controls as part of our response.

> For example, a complex expected credit loss provision may be appropriate for a financial institution or utility entity. In the case of a utility entity, the data used in developing the expected credit loss provision may comprise many small balances resulting from a high volume of transactions. In these circumstances, we may conclude that sufficient appropriate audit evidence cannot be obtained without testing controls around the model used to develop the expected credit loss provision to conduct business, such as the financial services industry.

See activity, 'Test controls when substantive procedures alone cannot provide sufficient audit evidence'.

# 5 Evaluate management bias in accounting estimates 'individually' [ISA | 4464]

# What do we do?

Evaluate whether the judgments and decisions made by management in the making of an accounting estimate, which is individually reasonable, indicate a possible management bias.

# Why do we do this?

Accounting estimates that we conclude are individually reasonable can still be affected by management bias that result in a material effect to the financial statements.

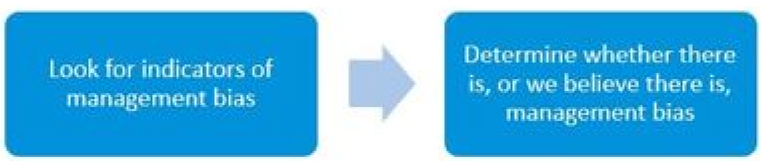
# Execute the Audit

### When might management bias exist in an accounting estimate that is individually reasonable? [ISA | 4464.15821]

Management bias may exist in an accounting estimate that is individually reasonable when a range of reasonable estimates exists.

When there are alternatives that may be considered acceptable or reasonable, management's judgments and decisions in the preparation of the accounting estimate may be biased.

### How do we determine whether there is management bias in an accounting estimate? [ISA | 4464.1400]




The fact that there is an indicator of management bias does not necessarily mean that there was management bias in the preparation of an accounting estimate. An indicator that shows that there may be management bias may be alleviated by another indicator that shows there is no management bias.

There are different types of indicators. Some indicators may point out the fact that there may be management bias and some others may point out the contrary.

We collectively consider all types of indicators and other information we may have about the preparation of the estimate to determine whether there is management bias.

The use of judgment and professional skepticism is key in determining whether there is, or we believe there is, management bias.

### When do we look for indicators of management bias in an accounting estimate? [ISA | 4464.1600]

We look for indicators of management bias in an accounting estimate while we perform audit procedures over the estimate.

Examples of the audit procedures that we perform over the estimates that could help us identify indicators of management bias are:

- Evaluation of whether the method used is appropriate.

- Determination of the reasons for a change in the method from prior period and the appropriateness of the change.
- Evaluation of whether:
  - the data used is internally consistent with its use by the entity in other estimates tested
  - the source of the data used has changed from the prior period and, if so, whether the change is appropriate.
- Evaluation of whether:
  - the entity has a reasonable basis for the significant assumptions used and, when applicable, for its selection of assumptions from a range of potential assumptions
  - the significant assumptions are consistent with 1) relevant industry, regulatory, and other external factors, including economic conditions, 2) existing market information, 3) historical or recent experience, taking into account changes in conditions and events affecting the entity and 4) other significant assumptions used by the entity.
- Evaluation of management's sensitivity analysis for critical accounting estimates.

### What indicators of management bias may we identify in an accounting estimate and what do we do to identify them? [ISA | 4464.1700]

Indicators of management bias in the method, data and significant assumptions chosen by management to prepare the estimate - i.e. management chose alternatives that do not appear to be the most appropriate. These are indicators at the element level.

Indicator at the estimate level – management prepared the estimate as a whole in a cautious or optimistic manner.

The indicators of management bias are usually present in the areas of the estimate where management has to use judgment (e.g. selecting specific methods, data and assumptions).

These indicators point out the fact that there may be management bias.

See sub-question 'What do we do to identify indicators of management bias at the element level and at the estimate level? ' for further information on these indicators and how we identify them.

Management's responses when we investigate why management:

— chose the methods, data and assumptions used

— prepared the estimate in a cautious or optimistic manner - e.g. why many or all elements are cautious or optimistic making the estimate as a whole cautious or optimistic.

This type of indicator may further point out that there may be management bias or may point out the contrary.

If we identify indicators of management bias in the methods, data and assumptions used, it does not automatically mean that there is management bias. Investigating why management made its decisions may provide further information.

We may begin our investigation by inquiring of management. Based on management's responses, further audit procedures may be necessary to corroborate management's explanations or obtain further evidence.

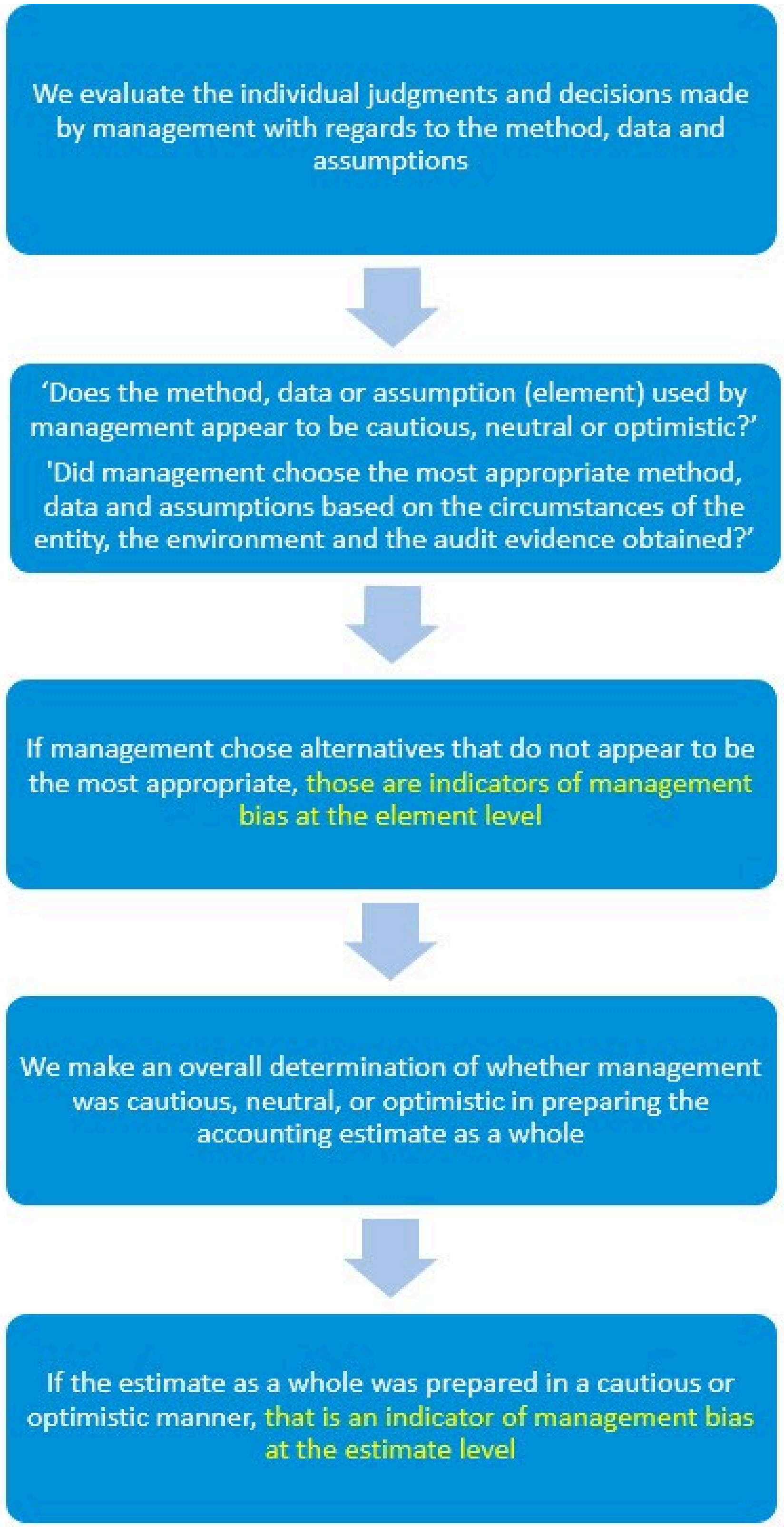
The reasonableness, or lack of reasonableness, in management's responses, considering everything we know about the entity, provides another indicator.

> Answer to the question:
>
> 'Does the estimate appear to be prepared in a way that results in a specific benefit to management or the entity - e.g. it may affect bonuses, analyst expectations or debt covenants?'

Asking ourselves this question provides another indicator.

This type of indicator may further point out that there may be management bias or may point out the contrary.

What do we do to identify indicators of management bias at the element level and at the estimate level? [ISA | 4464.15824]




To evaluate the judgments and decisions made by management in preparing the accounting estimate, it is useful to ask ourselves:

- 'Does the method, data or assumption (element) used by management appear to be cautious, neutral or optimistic?' or 'Are the elements at the higher or lower end of the range of reasonable elements?'; and
- 'Did management choose the most appropriate method, data and assumptions based on the circumstances of the entity, the environment and the audit evidence obtained?'

If management chose alternatives that do not appear to be the most appropriate, those are indicators of management bias at the element level.

Examples of indicators of management bias in methods, data and assumptions include:

- use of a method that yields a more favorable result over other methods
- changes in an accounting estimate, or the method for making it, and management has made a subjective assessment that there has been a change in circumstances
- use of an entity's own assumptions for fair value accounting estimates and those assumptions are inconsistent with observable marketplace assumptions
- selection or construction of significant assumptions that yield a point estimate favorable for management objectives (e.g. all the assumptions are 'leaning' the same way)
- use of assumptions that are inconsistent with industry and current economic conditions.

If there is an indicator of management bias in the method, assumptions or data, such fact probably makes the estimate cautious or optimistic.

| | Estimate that is a liability | Estimate that is an asset |
|---|---|---|
| **Cautious estimate** | The estimate is in the higher end of the range of reasonable estimated amounts. | The estimate is in the lower end of the range of reasonable estimated amounts. |
| **Optimistic estimate** | The estimate is in the lower end of the range of reasonable estimated amounts. | The estimate is in the higher end of the range of reasonable estimated amounts. |

Once we have this information for each indicator of bias, we make an overall determination of whether, based on our judgment, we believe management was cautious, neutral, or optimistic in preparing the accounting estimate as a whole.

We make this overall determination by considering:

- the total amount of methods, data and assumptions used in the preparation of the estimate;
- the total amount of methods, data and assumptions used that indicate management bias;
- whether the indicators of bias make the estimate cautious or optimistic and their relative significance in the calculation of the amount of the estimate.

If we determine that the estimate as a whole was prepared in a cautious or optimistic manner, instead of in a neutral manner, this is an indicator of management bias at the estimate level.

This information, together with other indicators, will help us determine whether there is, or we believe there is, management bias. The fact that management prepared an accounting estimate in a cautious or optimistic manner does not necessarily mean there is bias. There may be other indicators that point out the contrary.

# Example

How does an engagement team evaluate management bias in an estimate? [ISA | 4464.1900]

**Fact pattern**

Entity ABC is a manufacturing company 'with stable operations and revenues over the past six years. However, the economy has recently declined.

Historically, the entity has determined the allowance for doubtful accounts using its own historical collection ratios over the past three years.

When the engagement team performs audit procedures, they notice that the entity did not adjust its method and/or the collectability assumptions to take into account the declining economic conditions when determining the allowance for doubtful accounts. Consequently, the allowance remained stable, even though the engagement team expected it to increase during the current period because of the recent economic downturn.

**Analysis**

The engagement team inquires of management about this. Management acknowledges the economic downturn but do not believe it will affect the entity's customers. However, there is no rationale or justification for their explanation.

Since there is no valid reason for management to exclude this from their collectability assumptions, it could indicate that management is trying to avoid increasing the allowance. As such, the engagement team concludes that there is an indicator of possible management bias in the preparation of the allowance for doubtful accounts.

# 6 Evaluate management bias in accounting estimates 'in aggregate' [ISA | 4465]

# What do we do?

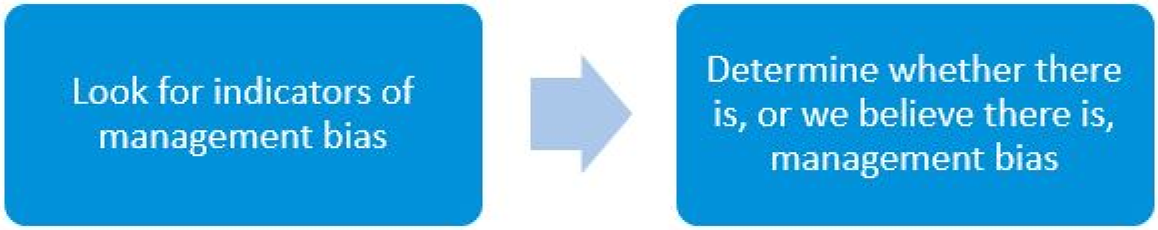
**IF** accounting estimates are individually reasonable but recorded towards the same end of the range,
**THEN** evaluate whether it indicates potential management bias.

# Why do we do this?

We evaluate management bias in accounting estimates 'in aggregate' to help us identify indications of management bias that we might miss by only evaluating estimates individually. Sometimes, management bias may be more evident through the evaluation of the cumulative effect in the financial statements of multiple estimates.

# Execute the Audit

## How do we determine whether there is management bias in the accounting estimates in aggregate? [ISA | 4465.1400]




The fact that there is an indicator of management bias does not necessarily mean that there was management bias in the preparation of the accounting estimates. An indicator that shows that there may be management bias may be alleviated by another indicator that shows there is no management bias.

There are different types of indicators. Some indicators may point out the fact that there may be management bias and some others may point out the contrary.

We collectively consider all types of indicators and other information we may have about the preparation of the estimates to determine whether there is management bias.

The use of judgment and professional skepticism is key in determining whether there is, or we believe there is, management bias.

## When do we look for indicators of management bias in the accounting estimates in aggregate? [ISA | 4465.1500]

We look for indicators of management bias in the accounting estimates in aggregate towards the end of the audit when we have already performed audit procedures on all estimates and evaluated management bias on all estimates individually.

## What indicators of management bias in the accounting estimates in aggregate may we identify and what do we do to identify them? [ISA | 4465.1600]

The main indicator of management bias in the accounting estimates in aggregate is:

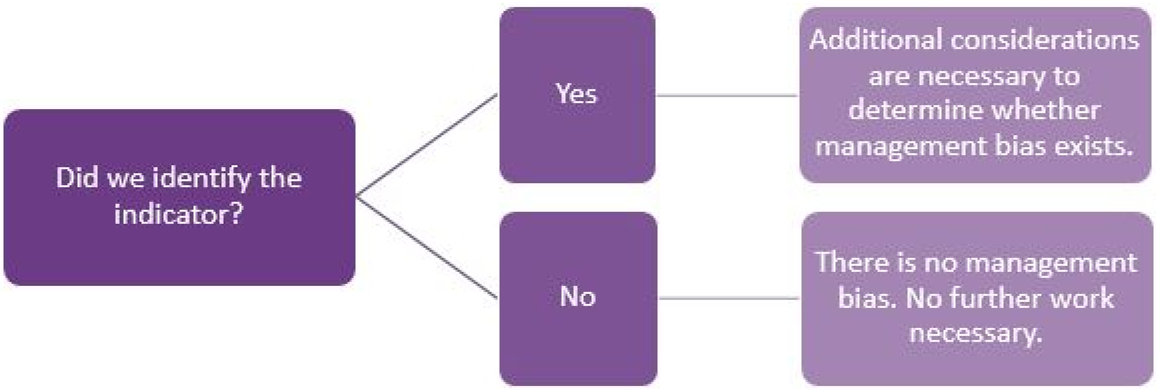
> Many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner), resulting in a specific effect to the financial statements (e.g. increasing income, loss, or other key financial statement metrics)

When we evaluated whether there was management bias in the accounting estimates individually, we determined whether the estimates were prepared in a cautious, neutral or optimistic manner.

This information will now help us determine whether many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner), resulting in a specific effect to the financial statements (e.g. increasing income, loss, or other key financial statement metrics).

When this indicator does not exist, it means that there is no management bias in the accounting estimates in aggregate and no further work is necessary in this respect.

If we identify this indicator of management bias, it does not automatically mean that there is management bias. We evaluate further indicators to determine whether there is, or we believe there is, management bias.




What are the other indicators that could help us determine whether there is management bias in the accounting estimates in aggregate? [ISA | 4465.15891]

Management's responses when we investigate the reasons for which management prepared the estimates that way

This type of indicator may further point out that there may be management bias or may point out the contrary.

If we determine that many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner), it does not automatically mean that there is management bias. Investigating why management prepared the estimates that way may provide further information.

We may begin our investigation by inquiring of management. Based on management's responses, further audit procedures may be necessary to corroborate management's explanations or obtain further evidence.

The reasonableness, or lack of reasonableness, in management's responses, considering everything we know about the entity, provides another indicator.

Answer to the question:

'Is the effect caused by those estimates recorded toward the same end of the range favorable to management or the entity - e.g. they may affect bonuses, analyst expectations or debt covenants?'

Asking ourselves these questions provides another indicator.

This type of indicator may further point out that there may be management bias or may point out the contrary.

The fact that many or all of the estimates were recorded toward the same end of the range (i.e. prepared consistently in a cautious or optimistic manner) does not necessarily mean that there is management bias if there is no clear benefit to management or the entity.

## Example

# 7 Evaluate management bias in the effect of changes in estimates from the prior period to the current period [ISA | 4466]

## What do we do?

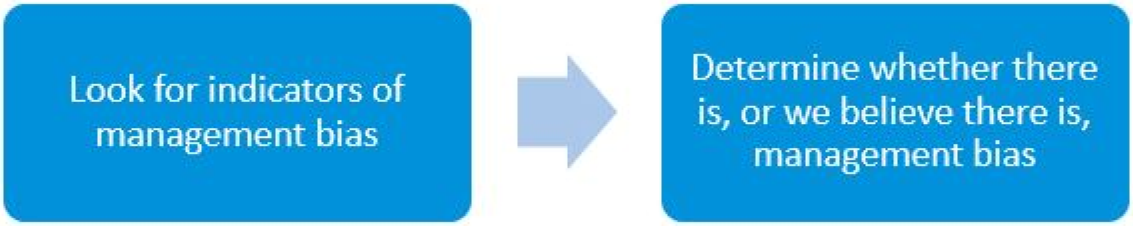
**IF** the recorded estimates are grouped at one end of the range in the prior year and are grouped at the other end of the range in the current year, **THEN** evaluate whether management is using swings in estimates to achieve a desired outcome.

## Why do we do this?

Management bias may not be evident to us when we only focus on accounting estimates in the current period, because management bias can also arise from the cumulative effect of changes in accounting estimates from period to period.

## Execute the Audit

How do we determine whether there is management bias in the effect of changes in accounting estimates from one period to the next? [ISA | 4466.15808]




The fact that there is an indicator of management bias does not necessarily mean that there was management bias in the preparation of accounting estimates. An indicator that shows that there may be management bias may be alleviated by another indicator that shows there is no management bias.

There are different types of indicators. Some indicators may point out the fact that there may be management bias and some others may point out the contrary.

We collectively consider all types of indicators and other information we may have about the preparation of the estimates to determine whether there is management bias.

The use of judgment and professional skepticism is key in determining whether there is, or we believe there is, management bias.

### When do we look for indicators of management bias in the effect of changes in accounting estimates from one period to the next? [ISA | 4466.15809]

We look for indicators of management bias in the effect of changes in accounting estimates from one period to the next towards the end of the audit when we have already performed audit procedures on all estimates and evaluated management bias on all estimates individually and in aggregate.

### What indicators of management bias may we identify in the changes in accounting estimates from one period to the next and what do we do to identify them? [ISA | 4466.15810]

The main indicator of management bias in the changes in accounting estimates from one period to the next is:

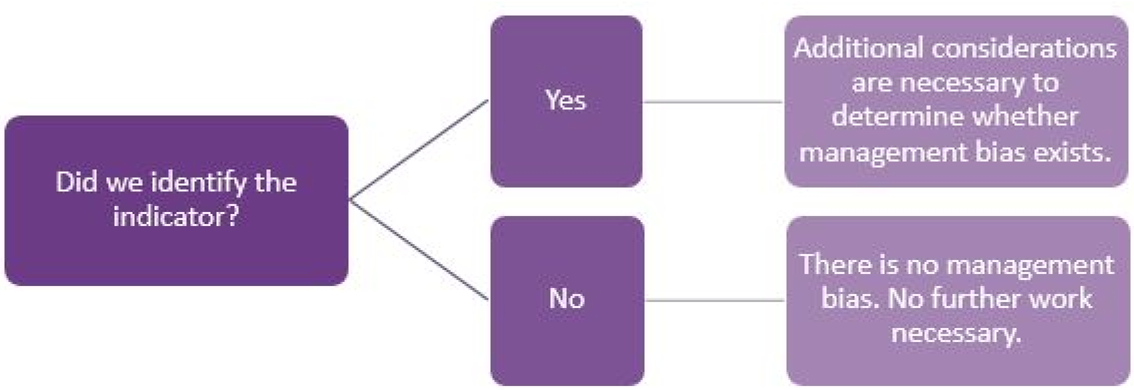
> Many or all of the estimates were recorded toward one end of the range in the prior period and the other end of the range in the current period (i.e. they are prepared in a cautious manner in the prior period and in an optimistic manner in the current period, or vice versa)

When we evaluated whether there was management bias in the accounting estimates individually, we determined whether the estimate was prepared in a cautious, neutral or optimistic manner.

This information, together with the equivalent information from the prior period, will now help us determine whether many or all of the estimates were recorded toward one end of the range in the prior period and the other end of the range in the current period (i.e. they are prepared in a cautious manner in the prior period and in an optimistic manner in the current period or vice versa).

When this indicator does not exist, it means that there is no management bias in the changes in accounting estimates from one period to the next and no further work is necessary in this respect.

If we identify this indicator of management bias, it does not automatically mean that there is management bias. We evaluate further indicators to determine whether there is, or we believe there is, management bias.



### What are the other indicators that could help us determine whether there is management bias in the changes in accounting estimates from one period to the next? [ISA | 4466.15811]

> Management's responses when we investigate the reasons for which management prepared the estimates that way

This type of indicator may further point out that there may be management bias or may point out the contrary.

If we determine many or all of the estimates were recorded toward one end of the range in the prior period and the other end of the range in the current period (i.e. they are prepared in a cautious manner in the prior period and in an optimistic manner in the current period, or vice versa), it does not automatically mean that there is management bias. Investigating why management prepared the estimates that way may provide further information.

We may begin our investigation by inquiring of management. Based on management's responses, further audit procedures may be necessary to corroborate management's explanations or obtain further evidence.

The reasonableness, or lack of reasonableness, in management's responses, considering everything we know about the entity, provides another indicator.

> Answer to the question:
>
> 'Is the effect caused by those estimates recorded toward the same end of the range in the prior period and the other end in the current period favorable to management or the entity - e.g. they may affect bonuses, analyst expectations or debt covenants?'

Asking ourselves this question provides another indicator.

This type of indicator may further point out that there may be management bias or may point out the contrary.

## Example

# 8 Evaluate whether the bias is material to the financial statements and/or is the result of fraud [ISA | 4468]

## What do we do?

**IF** we identify - or we believe that there is - management bias, **THEN** evaluate whether the effect of management bias is material to the financial statements as a whole AND evaluate whether the bias is the result of fraud.

# Why do we do this?

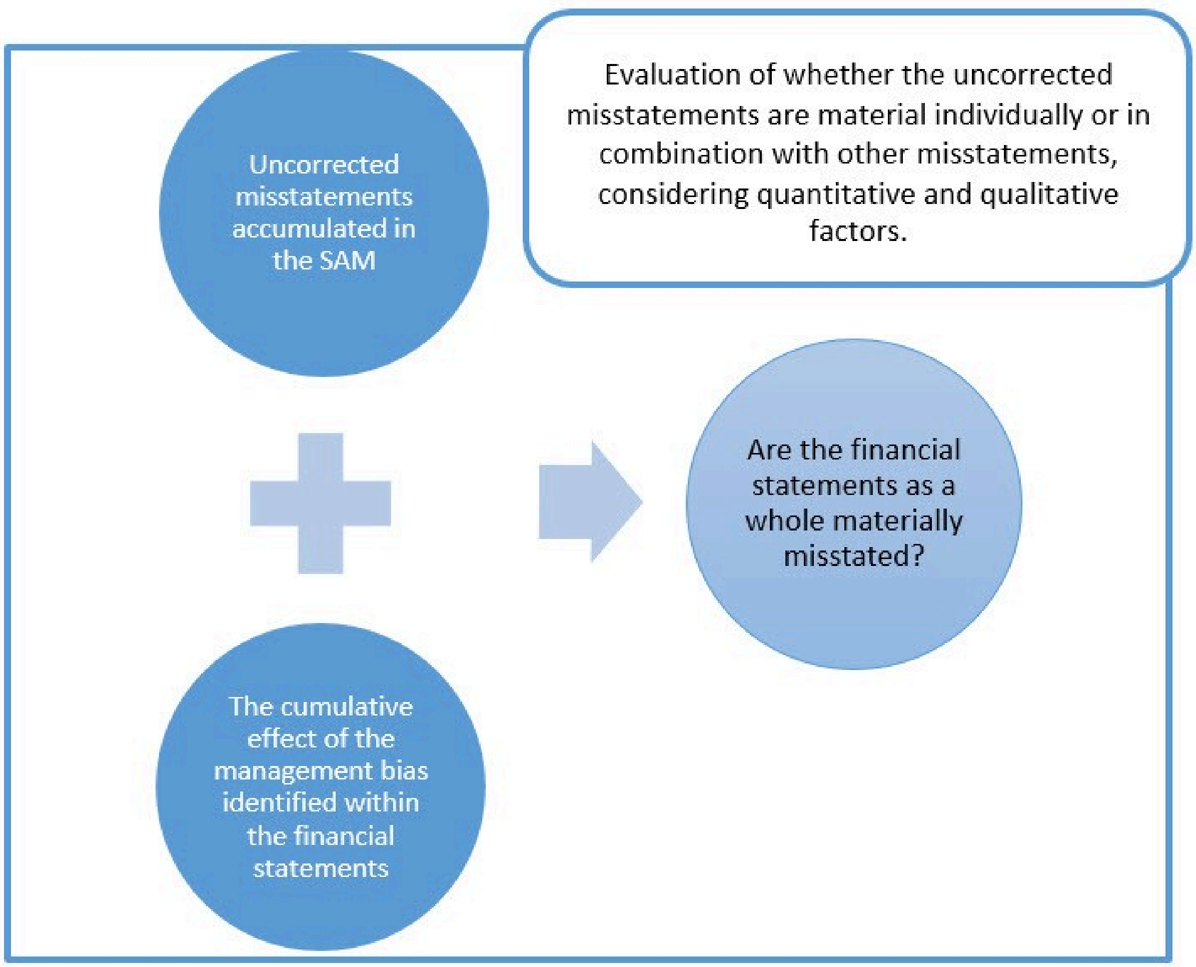
If we identify management bias, the effect of that bias may cause the financial statements to be materially misstated. In addition, if the bias represents fraud, there are additional implications for the audit.

# Execute the Audit

### How do we evaluate whether the effect of management bias is material to the financial statements as a whole and whether it is the result of fraud? [ISA | 4468.1400]

To evaluate whether the effect of the bias is material to the financial statements as a whole, we consider the uncorrected misstatements accumulated, including the cumulative effect of the management bias identified within the financial statements.

This evaluation can be different depending on whether the amount of the misstatement can be more easily determined. When we are unable to determine the amount of the misstatement generated from management bias, we estimate the cumulative effect of management bias identified in the financial statements.



To evaluate whether the bias is the result of fraud, we look for indicators of fraud. Activity 'Evaluate whether misstatements are the result of fraud and the implications ' includes useful information that may also apply to a situation in which the amount of the misstatement is not known.

This consideration becomes more relevant when there are many misstatements that are close to being material to the financial statements as a whole and when adding the effect of the bias in our evaluation, we realize that in combination with the other misstatements, it makes the financial statements materially misstated.

See activity 'Evaluate whether uncorrected misstatements are material and the implications ' for additional information on our evaluation of whether the uncorrected misstatements are material individually or in combination with other misstatements, considering quantitative and qualitative factors.

### What amount does management record if they decide to correct the misstatement? [ISA | 4468.1600]

Management may choose to correct misstatements that result from bias that we identified. However, if bias exists in accounting estimates, additional analysis may be necessary for management to determine the appropriate amount to record and support their adjustment (see activity 'Evaluate management's examination of an account or disclosure in response to misstatements detected by us ' for further information about what we do when management further examines an account or disclosure in response to misstatements detected by us).

It is not appropriate for management to use our work papers or analysis as support for their estimates or adjustments recorded.

# 9 Evaluate whether our risk assessments and the related audit responses remain appropriate [ISA | 4469]

## What do we do?

**IF** we identify indicators of bias or actual bias in management's judgments, **THEN** evaluate whether our risk assessments, including, in particular, the assessment of fraud risks, and the related audit responses remain appropriate.

## Why do we do this?

If we identify indicators of bias or actual bias, there could be a risk of other biases, other issues in the financial statements or additional risks that we did not identify when we were planning the audit. This is particularly relevant when considering our fraud risk assessments, as the bias may be intentional and represent fraud.

## Execute the Audit

### How do we re-evaluate our risk assessments? [ISA | 4469.1300]

When we identify indicators of bias or actual bias, we re-evaluate our risk assessments. This includes not only the specific area (e.g. a specific account or disclosure) where the bias exists, but also other areas where similar biases could exist.

> For example, if we identify management bias in the warranty estimate, we re-evaluate our risk assessments not only for the warranty estimate, but also in other estimates and areas prone to bias.

See this activity for additional information about revising our risk assessment: 'Continue to assess RMMs, and revise audit approach as necessary '.

What is a common indicator of a higher risk of management bias in other areas of the financial statements?

The fact that management is aggressive with the selection and application of accounting principles/ policies is an indicator that the risk of management bias in other areas may be higher.

# 10 Evaluate and document the audit results [ISA | 4376]

# What do we do?

Evaluate and document the results of audit procedures performed on the accounting estimate

# Why do we do this?

After completing our audit procedures for each of the related RMMs for an estimate, we evaluate whether the accounting estimate is reasonable in the context of the applicable financial reporting framework or not. This includes assessing whether our assessments about the risk of material misstatement at the assertion level remain appropriate and whether we have obtained sufficient appropriate audit evidence.

# Execute the Audit

What do we do when we conclude that an individual method, assumption, or data is inappropriate? [ISA | 4376.1300]

If the method, assumption, or data selected by management is not appropriate or not appropriately applied, it may be necessary to reassess our inherent risk and assessment of CAR as well as our planned audit procedures.  This may include revising the entity's method, assumption, or data, or it may include developing an independent expectation.

Once we completed our testwork, we consider whether:

- a misstatement exists for the estimate as a whole; and
- control deficiencies exist.

We follow the guidance for determining whether a misstatement exists in activities 'Accumulate, communicate and evaluate misstatements' and 'Determine the amount of the judgmental and projected misstatements'. We also follow the guidance for determining whether control deficiencies exist and how severe they are in the activities 'Evaluate the existence and severity of control deficiencies' and 'Conclude on our assessment of control risk'.

How do we evaluate the results of our audit procedures performed on each accounting estimate? [ISA | 4376.15538]

We evaluate the following matters by performing the listed activities:

| Matter | Activities |
|---|---|
| Whether our RMM assessments remain appropriate, including when indicators of management bias have been identified. | See activity 'Evaluate whether our risk assessments and the related audit responses remain appropriate' for further information on how we evaluate our risk assessment when indicators of bias are identified. |
| Whether 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. | We do this throughout the procedures we perform for each accounting estimate, including specific procedures performed for over disclosures. See activity 'Test and evaluate whether the disclosures related to accounting estimates conform with the applicable financial reporting framework'. |
| In the case of a fair presentation framework:<br>• Whether the presentation of the financial statements, including the disclosures and whether the financial statements contain the information essential for a fair presentation of the financial statements in conformity with the applicable financial reporting framework;<br>• Whether management has included disclosures, beyond those specifically required by the framework, that are necessary to achieve the fair presentation of the financial statements as a whole. | See activity 'Evaluate whether the financial statements are presented fairly' and related sub-activities for further information. |
| In the case of a compliance framework:<br>Whether the disclosures are those that are necessary for the financial statements not to be misleading. | See activity 'IF the compliance framework financial statements are misleading, THEN determine whether, and how to communicate in the auditor's report' for further information. |

| | |
|---|---|
| Whether the accounting estimate and related disclosures are reasonable in the context of the applicable financial reporting framework, or are misstated. | See activity 'Accumulate, communicate and evaluate misstatements' and related sub-activities for information on misstatements.<br>In particular, see activity 'Determine the amount of the judgmental and projected misstatements' for information on how to determine the amount of a misstatement in an accounting estimate. |
| Evaluating the qualitative aspects of the entity's accounting practices, including potential bias in management's judgments about the amounts and disclosures in the financial statements.<br>Evaluating potential bias in accounting estimates includes evaluating bias in estimates individually and in aggregate. It also includes evaluating the effect of changes in estimates from the prior period to the current period. | See activity 'Evaluate qualitative aspects of accounting practices and respond to the evaluation' and related sub-activities for further information.<br>In particular, see activities:<br>• 'Evaluate qualitative aspects of accounting practices, including management bias'; and<br>• 'Evaluate management bias in the preparation of accounting estimates' and related sub-activities. |
| Whether we obtained sufficient appropriate audit evidence. In making the evaluation, we take into account all relevant audit evidence obtained, whether corroborative or contradictory.<br>If we are unable to obtain sufficient appropriate audit evidence, we evaluate the implications for the audit or our opinion on the financial statements. | See activity 'Evaluate the sufficiency and appropriateness of audit evidence' and related sub-activities for further information. |

# Appendix 1 - Inherent Risk Factors

## International Standards on Auditing: ISA 540.Appendix 1

## Appendix 1 Inherent Risk Factors

(Ref: Para. 2, 4, 12(c), A8, A66)

# Introduction

1. In identifying, assessing and responding to the risks of material misstatement at the assertion level for an accounting estimate and related disclosures, this ISA requires the auditor to take into account the degree to which the accounting estimate is subject to estimation uncertainty, and the degree to which the selection and application of the methods, assumptions and data used in making the accounting estimate, and the selection of management's point estimate and related disclosures for inclusion in the financial statements, are affected by complexity, subjectivity or other inherent risk factors.

2. Inherent risk related to an accounting estimate is the susceptibility of an assertion about the accounting estimate to material misstatement, before consideration of controls. Inherent risk results from inherent risk factors, which give rise to challenges in appropriately making the accounting estimate. This Appendix provides further explanation about the nature of the inherent risk factors of estimation uncertainty, subjectivity and complexity, and their inter-relationships, in the context of making accounting estimates and selecting management's point estimate and related disclosures for inclusion in the financial statements.

# Measurement Basis

3. The measurement basis and the nature, condition and circumstances of the financial statement item give rise to relevant valuation attributes. When the cost or price of the item cannot be directly observed, an accounting estimate is required to be made by applying an appropriate method and using appropriate data and assumptions. The method may be specified by the applicable financial reporting framework, or is selected by management, to reflect the available knowledge about how the relevant valuation attributes would be expected to influence the cost or price of the item on the measurement basis.

# Estimation Uncertainty

4. Susceptibility to a lack of precision in measurement is often referred to in accounting frameworks as measurement uncertainty. Estimation uncertainty is defined in this ISA as susceptibility to an inherent lack of precision in measurement. It arises when the required monetary amount for a financial statement item that is recognized or disclosed in the financial statements cannot be measured with precision through direct observation of the cost or price. When direct observation is not possible, the next most precise alternative measurement strategy is to apply a method that reflects the available knowledge about cost or price for the item on the relevant measurement basis, using observable data about relevant valuation attributes.

5. However, constraints on the availability of such knowledge or data may limit the verifiability of such inputs to the measurement process and therefore limit the precision of measurement outcomes. Furthermore, most accounting frameworks acknowledge that there are practical constraints on the information that should be taken into account, such as when the cost of obtaining it would exceed the benefits. The lack of precision in measurement arising from these constraints is inherent because it cannot be eliminated from the measurement process. Accordingly, such constraints are sources of estimation uncertainty. Other sources of measurement uncertainty that may occur in the measurement process are, at least in principle, capable of elimination if the method is applied appropriately and therefore are sources of potential misstatement rather than estimation uncertainty.

6. When estimation uncertainty relates to uncertain future inflows or outflows of economic benefits that will ultimately result from the underlying asset or liability, the outcome of these flows will only

be observable after the date of the financial statements. Depending on the nature of the applicable measurement basis and on the nature, condition and circumstances of the financial statement item, this outcome may be directly observable before the financial statements are finalized or may only be directly observable at a later date. For some accounting estimates, there may be no directly observable outcome at all.

7. 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.

## Complexity

8. Complexity (i.e., the complexity inherent in the process of making an accounting estimate, before consideration of controls) gives rise to inherent risk. Inherent complexity may arise when:

- There are many valuation attributes with many or non-linear relationships between them.
- Determining appropriate values for one or more valuation attributes requires multiple data sets.
- More assumptions are required in making the accounting estimate, or when there are correlations between the required assumptions.
- The data used is inherently difficult to identify, capture, access or understand.

9. Complexity may be related to the complexity of the method and of the computational process or model used to apply it. For example, complexity in the model may reflect the need to apply probability-based valuation concepts or techniques, option pricing formulae or simulation techniques to predict uncertain future outcomes or hypothetical behaviors. Similarly, the computational process may require data from multiple sources, or multiple data sets to support the making of an assumption or the application of sophisticated mathematical or statistical concepts.

10. The greater the complexity, the more likely it is that management will need to apply specialized skills or knowledge in making an accounting estimate or engage a management's expert, for example in relation to:

- 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;
- The underlying valuation attributes that may be relevant given the nature of the measurement basis and the nature, condition and circumstances of the financial statement items for which accounting estimates are being made; or
- Identifying appropriate sources of data from internal sources (including from sources outside the general or subsidiary ledgers) or from external information sources, determining how to address potential difficulties in obtaining data from such sources or in maintaining its integrity in applying the method, or understanding the relevance and reliability of that data.

11. Complexity relating to data may arise, for example, in the following circumstances:

(a) When data is difficult to obtain or when it relates to transactions that are not generally accessible. Even when such data is accessible, for example through an external information source, it may be difficult to consider the relevance and reliability of the data, 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) When data reflecting an external information source's views about future conditions or events, which may be relevant in developing support for an assumption, is difficult to understand without transparency about the rationale and information taken into account in developing those views.

(c) When certain types of data are 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.

# Subjectivity

12. Subjectivity (i.e., the subjectivity inherent in the process of making an accounting estimate, before consideration of controls) reflects inherent limitations in the knowledge or data reasonably available about valuation attributes. When such limitations exist, the applicable financial reporting framework may reduce the degree of subjectivity by providing a required basis for making certain judgments. Such requirements may, for example, set 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 disclosures about those judgments.

13. Management judgment is generally needed in determining some or all of the following matters, which often involve subjectivity:

- 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 when there are various potential sources of data, the appropriate sources of data to use;
- To the extent valuation attributes are not observable, the appropriate assumptions or range of assumptions to make, having regard to the best available data, including, for example, market views;
- The range of reasonably possible outcomes from which to select management's point estimate, and the relative likelihood that certain points within that range would be consistent with the objectives of the measurement basis required by the applicable financial reporting framework; and
- The selection of management's point estimate, and the related disclosures to be made, in the financial statements.

14. Making assumptions about future events or conditions involves the use of judgment, the difficulty of which varies with the degree 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 degree to which those events or conditions are determinable based on knowledge, including knowledge of past conditions, events and related outcomes. The lack of precision also contributes to estimation uncertainty, as described above.

15. With respect to future outcomes, assumptions will only need to be made for 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.

16. However, in other cases, the amounts of cash flows embodied in the rights relating to an asset may be 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.

17. It may be necessary for management to consider information about past conditions and events, together with current trends and expectations about future developments. Past conditions and events provide historical information that may highlight repeating historical patterns that can be 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.

18. 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 or fraud may also be increased.

## Relationship of Estimation Uncertainty to Subjectivity and Complexity

19. Estimation uncertainty gives rise to inherent variation in the possible methods, data sources and assumptions that could be used to make an accounting estimate. This gives rise to subjectivity, and hence, the need for the use of judgment in making the accounting estimate. Such judgments are required in selecting the appropriate methods and data sources, in making the assumptions, and in selecting management's point estimate and related disclosures for inclusion in the financial statements. These judgments are made in the context of the recognition, measurement, presentation and disclosure requirements of the applicable financial reporting framework. However, because there are constraints on the availability and accessibility of knowledge or information to support these judgments, they are subjective in nature.

20. Subjectivity in such judgments creates the opportunity for unintentional or intentional management bias in making them. Many accounting frameworks require that information prepared for inclusion in the financial statements should be neutral (i.e., that it should not be biased). Given that bias can, at least in principle, be eliminated from the estimation process, sources of potential bias in the judgments made to address subjectivity are sources of potential misstatement rather than sources of estimation uncertainty.

21. The inherent variation in the possible methods, data sources and assumptions that could be used to make an accounting estimate (see paragraph 19) also gives rise to variation in the possible measurement outcomes. The size of the range of reasonably possible measurement outcomes results from the degree of estimation uncertainty and is often referred to as the sensitivity of the accounting estimate. In addition to determining measurement outcomes, an estimation process also involves analyzing the effect of

inherent variations in the possible methods, data sources and assumptions on the range of reasonably possible measurement outcomes (referred to as sensitivity analysis).

22. Developing a financial statement presentation for an accounting estimate, which, when required by the applicable financial reporting framework, achieves faithful representation (i.e., complete, neutral and free from error) includes making appropriate judgments in selecting a management point estimate that is appropriately chosen from within the range of reasonably possible measurement outcomes and related disclosures that appropriately describe the estimation uncertainty. These judgments may themselves involve subjectivity, depending on the nature of the requirements in the applicable financial reporting framework that address these matters. For example, the applicable financial reporting framework may require a specific basis (such as a probability weighted average or a best estimate) for the selection of the management point estimate. Similarly, it may require specific disclosures or disclosures that meet specified disclosure objectives or additional disclosures that are required to achieve fair presentation in the circumstances.

23. Although an accounting estimate that is subject to a higher degree of estimation uncertainty may be less precisely measurable than one subject to a lower degree of estimation uncertainty, the accounting estimate may still have sufficient relevance for users of the financial statements to be recognized in the financial statements if, when required by the applicable financial reporting framework, a faithful representation of the item can be achieved. In some cases, estimation uncertainty 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. Even in these circumstances, there may still be relevant disclosure requirements, for example to disclose the point estimate or range of reasonably possible measurement outcomes and information describing the estimation uncertainty and constraints in recognizing the item. The requirements of the applicable financial reporting framework that apply in these circumstances may be specified to a greater or lesser degree. Accordingly, in these circumstances, there may be additional judgments that involve subjectivity to be made.

# Appendix 2 - Communications with Those Charged with Governance

## International Standards on Auditing: ISA 540.Appendix 2

## Appendix 2 Communications with Those Charged with Governance

(Ref: Para. A146)

Matters that the auditor may consider communicating with those charged with governance with respect to the auditor's views about significant qualitative aspects of the entity's accounting practices related to accounting estimates and related disclosures include:

(a) How management identifies transactions, other events and conditions that may give rise to the need for, or changes in, accounting estimates and related disclosures.

(b) Risks of material misstatement.

(c) The relative materiality of the accounting estimates to the financial statements as a whole;

(d) Management's understanding (or lack thereof) regarding the nature and extent of, and the risks associated with, accounting estimates;

(e) Whether management has applied appropriate specialized skills or knowledge or engaged appropriate experts.

(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 related to accounting estimates and presentation of accounting estimates in the financial statements.

(h) Indicators of possible management bias.

(i) Whether there has been or ought to have been a change from the prior period in the methods for making the accounting estimates

(j) When there has been a change from the prior period in the methods for making the accounting estimate, why, as well as the outcome of accounting estimates in prior periods.

(k) Whether management's methods for making the accounting estimates, including when management has used a model, are appropriate in the context of the measurement objectives, the nature, conditions and circumstances, and other requirements of the applicable financial reporting framework.

(l) The nature and consequences of significant assumptions used in accounting estimates and the degree of subjectivity involved in the development of the assumptions;

(m) 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.

(n) When relevant to the appropriateness of the significant assumptions or the appropriate application 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.

(o) 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.

(p) Whether the data and significant assumptions used by management in making the accounting estimates are appropriate in the context of the applicable financial reporting framework.

(q) The relevance and reliability of information obtained from an external information source.

(r) 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.

(s) Significant differences in judgments between the auditor and management or a management's expert regarding valuations.

(t) 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.

(u) The reasonableness of disclosures about estimation uncertainty in the financial statements.

(v) Whether management's decisions relating to the recognition, measurement, presentation and disclosure of the accounting estimates and related disclosures in the financial statements are in accordance with the applicable financial reporting framework.

# Copyright