

**Audit of Estimates Involving Measurement Uncertainty
(Revising ISA 540 “Audit of Accounting Estimates”)****Index*****Subject*** ***Paragraphs*****Introduction**

Goals and objectives	1
Working title for a revised ISA 540	2 - 4
Accounting Framework	5 - 6
Coordination with other IAASB Revisions Projects	7 - 8
Objective of the IAASB discussion	9

Issues to be addressed in meeting the goals and objectives

Introducing greater rigor and skepticism into the audit of accounting estimates	10 - 21
Where within the risk model should the starting point of ISA 540 be?	11 - 13
Improving the quality and quantity of audit evidence obtained in support of accounting estimates	14 - 21
Developing a Framework for analysing, differences, misstatements and other evidence of aggressive earnings management	22 - 32
Establishing a zone of reasonableness in relation to an estimate	22 - 26
Analysing audit findings relating to accounting estimates	27 - 32
Develop ISA 540 as an overarching ISA	33 - 40
Possible future structure for ISAs dealing with measurement uncertainty	33 - 37
Timing of revision of other documents	38 - 40

Appendix

Comparison of the black letter requirements of the extant ISA 545 and ISA 540

Introduction

GOALS AND OBJECTIVES

- 1 The Task Force has been asked by the IAASB to revise and improve ISA 540 “Audit of Accounting Estimates.” The Task Force considers that considerable benefit will be derived from a revision having the following goals:
 - **To introduce greater rigour and scepticism into the audit of estimates.** Recent corporate collapses have led certain regulators and others to question the approach taken to measurement uncertainty by both preparers of financial statements and auditors. The extant ISA 540¹ adopts a largely procedural, as opposed to a risk based, approach. The revision would be an opportunity to conform the approach taken to the audit of estimates to the revised risk model recently developed by the IAASB and, in particular, to require auditors to consider management’s own risk assessment in areas of measurement uncertainty.
 - **To provide a framework for analysing, and communicating to those charged with governance, not only misstatements and differences but also more subtle evidence of aggressive earnings management.** The extant ISA 540 is directed at the identification of “differences.”² The Task Force believes that in addition to identifying differences, the auditor’s work on accounting estimates should also be directed at communicating, to those charged with governance, evidence of more subtle attempts at aggressive earnings management³ such as manipulating estimates within the auditor’s so called “zone of reasonableness” within which an estimate might lie.
 - **Develop ISA 540 as a new overarching ISA dealing with measurement uncertainty.** Guidance dealing with specific aspects of measurement uncertainty such as auditing fair value measurements and auditing derivative financial instruments could be provided in IAPs under an overarching ISA 540.

WORKING TITLE FOR A REVISED ISA 540

- 2 The extant ISA 540 is entitled “Audit of Accounting Estimates.” An accounting estimate is defined by ISA 540 as “an approximation of the amount of an item in the absence of a precise means of measurement.” “Measurement” is defined by the IASB as “the process of determining the monetary amounts at which the elements of the financial statements are to be recognised and carried in the balance sheet and income statement.”
- 3 The term “measurement uncertainty” is being used increasingly in accounting and auditing literature and by some regulators. Estimates are not the only aspect of measurement uncertainty that are relevant to auditors. Measurement assumptions are a further aspect that are relevant and which some regulators and accounting standard setters are suggesting be disclosed in financial statements or the MD&A. In response to this, the Task Force has
 - ¹ The appendix sets out the black letter requirements of ISA 540.
 - ² A “difference” arises between the auditor’s estimate of the amount of an item and the amount included in the financial statements. An unreasonable difference that management refuses to revise is considered to be a “misstatement” which is defined as “a mistake in financial information arising from error or fraud.”
 - ³ The Task Force is not proposing that the subject matter of ISA 540 should become aggressive earnings management and in particular does not propose that a responsibility be placed on the auditor to actively search for evidence of aggressive earnings management.

decided to use the term “measurement uncertainty” in the title of the ISA and is using as a working title for the revision “The Audit of Estimates Involving Measurement Uncertainty.”

- 4 Although the change in the title may be considered to be largely semantic the Task Force perceives the following additional benefits to including the expression “measurement uncertainty” in the title:
 - It aligns the terminology in the ISA to the IASB’s “Framework for the Preparation and Presentation of Financial Statements.” In that Framework the second criterion for the recognition of an item is, “... that it possesses a cost or value that can be measured with reliability.” Information has the quality of reliability when it is free from material error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent.”
 - It is consistent with the current proposals to improve IAS 1 “Presentation of Financial Statements” to require the disclosure of key measurement assumptions and other sources of measurement uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.⁴
 - It is consistent with the terminology used in the IAASB’s proposed revision to ISA 400 “Risk Assessments and Internal Control.”⁵
 - It is consistent with the subject matter and title of the recently issued ISA 545 “Auditing Fair Value Measurements and Disclosures.”

ACCOUNTING FRAMEWORK

- 5 In developing the revised ISA 540 the Task Force intends to adopt the IAASB’s usual practice of drafting in a style that is accounting framework neutral. ISA 545, for example, is drafted in this style.
- 6 The redrafting will, however, be undertaken with an awareness of emerging issues such as the current proposal in IAS 1 described in paragraph 4 above.

COORDINATION WITH OTHER IAASB REVISIONS PROJECTS

- 7 Concurrently with this project, the IAASB has embarked on projects to revise the ISAs on materiality and auditor’s reports. At a recent meeting the Task Force met with representatives of the Materiality Task Force to seek to ensure consistency of approach. An initial agreement on the approach to be taken regarding the “Framework for Identifying and Communicating to Those Charged With Governance” has been reached and is discussed further in the issues section of this paper (see paragraphs 27 to 32).
- 8 In view of the commencement of the project to revise ISA 700 “The Auditor’s Report on Financial Statements,” the Task Force decided that it should not address issues that relate to the content or wording of auditor’s reports. However, one matter to be explored is the interrelationship between significant measurement uncertainty and the inclusion of emphasis

⁴ See paragraph 110 of the IASB’s May 2002 Exposure Draft of Improvements to IAS 1.

⁵ See paragraph 111 of the proposed revision to ISA 400 which lists one of the matters that auditors consider as “the degree of subjectivity in the measurement of financial information related to the risk.”

of matter paragraphs in the auditor's report. Philip Ashton is the Chairman of both working parties and will be in a position to ensure effective coordination of this matter.

OBJECTIVE OF THE IAASB DISCUSSION

- 9 The Task Force has identified various issues relating to the goals and objectives which are set out in the following section of the paper. The text boxes within the discussion of the issues are intended to set out the recommendations of the Task Force with respect to each issue, and may help to focus the IAASB's discussion.

Issues to be Addressed in Meeting the Goals and Objectives

INTRODUCING GREATER RIGOR AND SKEPTICISM INTO THE AUDIT OF ACCOUNTING ESTIMATES

- 10 The Task Force believes that there would be benefit in introducing greater rigour and scepticism into the audit of accounting estimates. It is envisaged that the revised ISA 540 would address ordinary everyday estimates (such as provisions for doubtful trade accounts receivable) as well as the more out of the ordinary, and frequently, higher risk estimates (such as impairment provisions against the carrying amount of property plant and equipment).

Where within the risk model should the starting point of ISA 540 be?

11. In this context the Task Force has considered where, within the recently revised risk model, a revised ISA 540 should have its starting point. The principal issue is whether the ISA should either:
 - (a) encompass all of the new risk model as set out in the proposed ISA on "Understanding the Entity and its Environment and Assessing the Risks of Material Misstatement" and the proposed ISA on "The Auditor's Procedures in Response to Assessed Risks"; in particular obtaining an understanding of the entity's process for identifying and responding to business risks and the measurement and review of the entity's financial performance; or
 - (b) restrict itself to the audit of estimates relating to "significant risks that require special audit consideration."
- 12 The Task Force is of the view that seeking to improve the quality and quantity of audit evidence obtained in support of accounting estimates should embrace not only estimates arising from significant risks but also more routine risks and the gaining of the understanding of the business sufficient to distinguish the significant from the less significant. Consequently the Task Force considers it to be most logical for a revised ISA 540 to embrace the content of both the proposed Audit Risk ISAs.
- 13 The Task Force recognises that in adopting such an approach that there may be some overlap between a revised ISA 540 and the proposed Audit Risk ISAs. However, adopting a more holistic approach is more consistent with the thinking underlying the adoption of the new risk model. The Task Force would seek to minimise repetition between the ISAs and structure ISA 540 to build on the foundation provided by the proposed Audit Risk ISAs.

Action Required by IAASB

Does the IAASB support the Task Force's approach of adopting as a starting point for ISA 540 all of the new risk model including, for example, the entity's process for identifying and responding to business risk?

Improving the quality and quantity of audit evidence obtained in support of accounting estimates

14 In the IASB's "Framework for the Preparation and Presentation of Financial Statements" "reliability of measurement of cost or value" is one of the criteria that is required to be met before an item can be recognised in financial statements. The Framework states "In many cases, cost or value must be estimated; the use of reasonable estimates is an essential part of the preparation of financial statements and does not undermine their reliability. When however a reasonable estimate cannot be made the item is not recognised in the balance sheet or the income statement."

15 Measurement uncertainty is not so black and white an issue as its portrayal in the IASB's Framework may indicate. Financial statement items that meet the recognition criteria may, nevertheless, be subject to measurement uncertainty to differing extents and for different reasons. The following table illustrates, in very general and purely illustrative terms, the possible implications of the differing degrees of measurement uncertainty to which financial statement items may be subject.

No.	Extent of measurement uncertainty	Example(s)	Degree of uncertainty	Degree of risk of material misstatement	Extent of audit evidence required
1	Item that can be measured with absolute reliability (and, therefore, without the need for estimation) based on a stated accounting policy.	Gross receivable from an operating lease with a fixed monthly payment and a fixed term.	None	Low	Low however, availability may be high
2	Items that can be measured with reliability based on generally accepted estimation measures.	Mid market values of marketable securities	Low	Low	Low however, availability may be high
3	Items that can be measured with reliability based on current financial data and historical experience of the enterprise with no evidence that historical experience is not indicative of the future	Accounts receivable provisions, warranty provisions of an automobile manufacturer, bottle return rate of a brewery, gross margin to be used when valuing inventory using the retail method.	Medium	Medium to Significant	Medium to high availability is also likely to be medium to high
4	Items where an estimate can be made with reliability but there is a high degree of uncertainty because the entity has no previous experience of making such estimates.	Future sales of a new pharmaceutical drug in order to determine whether carrying amount of development costs is impaired.	High	Significant	High however, availability may be low.

No.	Extent of measurement uncertainty	Example(s)	Degree of uncertainty	Degree of risk of material misstatement	Extent of audit evidence required
5	Items which cannot be measured with sufficient reliability to warrant recognition in primary financial statements but which warrant disclosure in notes to the financial statements.	Expected proceeds from a lawsuit which cannot be measured reliably.	Wholly	Significant	High (in order to justify the non-recognition) <i>however availability may be low.</i>

- 16 Although not invariably the case, there is frequently an inverse relationship between the extent of measurement uncertainty, the magnitude of the so called “zone of reasonableness” (a concept which is explored further below) and the availability of audit evidence. In other words those measurements that are the most uncertain give rise to a wide zone of reasonableness and audit evidence is likely to be the most difficult to obtain.
- 17 The extant ISA 540 (see Appendix) adopts a rather neutral approach to the audit of estimates and at paragraph 10 requires the auditor to adopt one or a combination of the following approaches in the audit of an accounting estimate.
- review and test the process used by management to develop the estimate;
 - use an independent estimate for comparison with that prepared by management; or
 - review subsequent events which confirm the estimate made.
- 18 In revising ISA 540 the Task Force wishes to explore ways in which the Standards and guidance might direct the auditor’s work effort towards finding sufficient appropriate evidence to support the more uncertain measurements. Academic research⁶ and some of the findings of the USA Panel on Audit Effectiveness have indicated that auditors may not always seek additional evidence, especially in circumstances where accounting standards themselves give management considerable latitude in exercising their judgment. A similar approach to that proposed has already been adopted by the IAASB when developing ISA 545.
- 19 Conversely, the revised ISA 540, through following the thought processes implicit in the new risk model, will seek to encourage auditors not to direct disproportionate audit effort towards a measurement having a low risk of measurement error purely on the basis that there is a lot of evidence to support the measurement.
- 20 To achieve its aim the Task Force has identified a number of possible approaches that it, (and with respect to the last bullet, the Auditor’s Reports Task Force) will explore in the revision. These include:
- Auditors assessing the rigour of management’s risk assessment processes relating to measurement uncertainty.
 - Auditors assessing whether the assumptions underling accounting estimates faithfully represent the entities strategies, plans and risk analysis.

⁶ Evidence from auditors about managers’ and auditors’ earnings management decisions. MW Nelson. JA Elliot, RL Tarpley, Draft December 2001, (accepted for Accounting Review)

- Auditors obtaining an understanding of the components of internal control relating to estimates.
- Including as possible responses to significant risk
 - tests of controls;
 - a reinforcement of the evidential strength of the development of independent estimates by auditors;
 - looking at the final outcome in relation to an estimate. Both in the context of validating a specific estimate and also assessing management's track record with respect to measurement uncertainty;
 - assessing the consistency of underlying assumptions as between different estimates; and
 - disclosure of measurement uncertainty in the auditor's report on the financial statements.

21 ISA 545 with respect to fair value measurements, has already adopted many of the approaches described above. An implication of exploring these approaches will be to increase the length and complexity of ISA 540.

Action Required by IAASB

Does the IAASB support the Task Force's goal that ISA 540 should adopt a risk based approach and more actively direct the auditor's work effort with regard to quality and quantity of audit evidence obtained?

DEVELOPING A FRAMEWORK FOR ANALYZING DIFFERENCES, MISSTATEMENTS AND OTHER EVIDENCE OF AGGRESSIVE EARNINGS MANAGEMENT**Establishing a zone of reasonableness in relation to an estimate**

- 22 The extant ISA 540 (at paragraph 26) discusses the evaluation of differences arising from the audit findings with respect to estimates. It notes that a difference between the auditor's estimate, best supported by the available audit evidence, and the estimated amount included in the financial statements may not require to be adjusted if it falls within a range of acceptable results. The concept of a range of acceptable results is sometimes described as a "zone of reasonableness."
- 23 The risk of misstatement of accounting estimates included in financial statements varies with such factors as:
- the complexity and subjectivity involved in preparing the estimate;
 - the availability and reliability of data;
 - the nature and extent of assumptions required; and
 - the degrees of uncertainty of future events occurring.

Management will, however, need to make a point estimate, notwithstanding that these factors may indicate that the amount of the item could lie within a range around the point

chosen.

- 24 Audit evidence relating to accounting estimates is, similarly, likely to be equally persuasive over a range of possible point estimates. For example, the auditors may be indifferent with respect to a provision for doubtful accounts receivable within a range between \$4 million and \$5 million. The existence of a zone of reasonableness is likely to be particularly the case with respect to rows three and four in the table above. Auditors, therefore, need to assess whether they have sufficient appropriate evidence to determine whether management's estimate lies within their zone of reasonableness.
- 25 The Task Force is advocating greater rigour and scepticism in the audit of accounting estimates so that the magnitude of the zone of reasonableness is as narrow as the gathering of sufficient and appropriate audit evidence will allow. The need to limit the zone of reasonableness supports the recommendation of the Task Force to include as a focus of ISA 540 the development of independent estimates by auditors, as a possible response to significant risk.
- 26 The concept of a zone of reasonableness underpins the framework that the Task Force would like to develop for the identification of differences, misstatements and other more subtle attempts at aggressive earnings management, which is described further below.

Action Required by IAASB

Does the IAASB agree that the concept of the zone of reasonableness relating to an estimate is one that should be developed and refined by the Task Force?

Analyzing audit findings relating to accounting estimates

- 27 The Task Force has met with representatives of the Materiality Task Force to seek to ensure a consistent approach. Both task forces recognise that a "zone of reasonableness" applies to estimates involving measurement uncertainty.
- 28 One of the issues that is of mutual interest is the analysis and evaluation of misstatements and other matters to communicate to those charged with governance. A Framework has been developed that builds on the concept of the "zone of reasonableness."
- 29 Three categories of audit findings have been identified:
 - (a) Factual errors.
 - (b) Estimates by management that are outside the auditor's zone of reasonableness.
 - (c) Estimates by management that are within the zone of reasonableness determined by the auditor but for which particular characteristics may need to be considered carefully when assessing whether the financial statements give a fair presentation. A particular consideration may be whether management is seeking to manage the entity's earnings or other key performance indicators in an unacceptable manner (e.g., whether management has made a significant change from one period to another of an estimate in the zone of reasonableness, or whether the particular selection of estimates from within zones of reasonableness appear to be designed to achieve a pre-determined

result and cause the financial statements to be other than neutral (i.e., there is evidence of bias).)

- 30 With respect to items in the first two categories, auditors have a detection responsibility and such differences give rise to misstatements (as defined by ISAs). Auditors consider whether such misstatements are material either individually or in aggregate.
- 31 Auditors do not have a detection responsibility, per se, with respect to items in the third category. However, to the extent that such items are detected by the auditors, they need to know how to deal with them. Because such items fall within the auditor's zone of reasonableness they do not meet the definition of a misstatement. Nevertheless, the auditor may question whether individually or in aggregate such items cause the financial statements not to be in accordance with the principles of the accounting framework.
- 32 The two task forces believe that the proposed revision of ISA 540 ought to provide standards and guidance on determining which items, and their value, should be recorded under each of the three categories. The revised ISA on materiality will provide standards and guidance on the evaluation of the items, whether they are material, and whether and how they should be reported to those charged with governance.

Action Required by IAASB

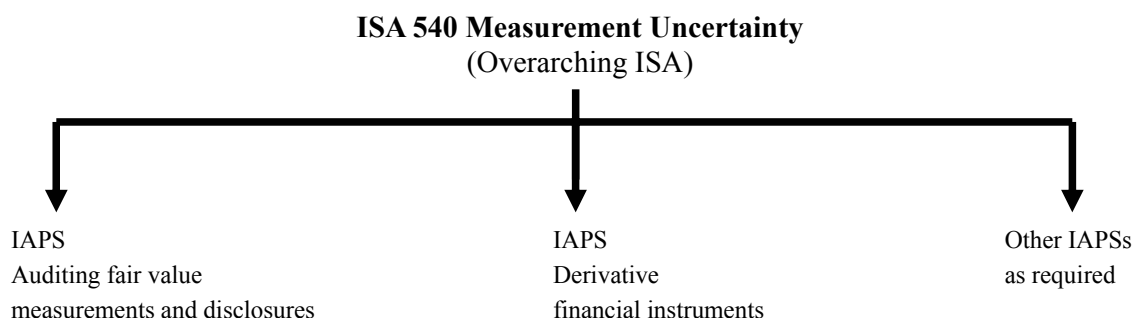
Does the IAASB agree with the structure of the suggested framework and the way in which the standards and guidance would be split between the estimates and materiality ISAs?

Does the IAASB agree with the Task Force that auditors should not have a detection responsibility in respect of items that fall within category (c) in paragraph 29 and that, therefore, such items are not misstatements as defined by ISAs? If so, does the IAASB further agree that standards or guidance should be provided to auditors regarding how to deal with such items that are detected by the auditor?

DEVELOP ISA 540 AS AN OVERARCHING ISA

Possible future structure for ISAs dealing with measurement uncertainty

- 33 The Task Force recommends that ISA 540 become an overarching ISA addressing the general principles of measurement uncertainty. More detailed guidance dealing, for example, with fair value measurement or derivative financial instruments could be dealt with by IAPSs that support the overarching ISA. Such a structure might resemble the diagram below:



- 34 As an overarching ISA, ISA 540 would address the general principles of accounting measurements and estimation applicable to all measurement bases. The IASB's "Framework for the Preparation and Presentation of Financial Statements," for example describes the following four bases of measurement:
- Historical cost
 - Current cost
 - Realizable value
 - Present value.
- 35 Detailed guidance, for example dealing with fair value measurements would be dealt with by IAPSs that support the overarching ISA. ISA 545, therefore, would need to be redrafted as an IAPS.
- 36 As can be seen from the Appendix, there is some overlap between the requirements of ISA 540 and ISA 545. ISA 545 could then be reformatted as an IAPS. Although the status of what is now ISA 545 will change, the Task Force does not envisage that anything substantive from the existing ISA 545 would be lost.
- 37 Based on this recommendation this paper does not revisit matters that the IAASB has recently dealt with when issuing ISA 545, even though in terms of ISA 540 these may be new developments.

Action Required by IAASB

Does the IAASB agree with the recommendation of the Task Force with respect to the future structure of ISAs relating to measurement uncertainty?

Timing of revision of other documents

- 38 If the IAASB agrees that ISA 545 should be reconfigured as an IAPS under the revised ISA 540 a decision needs to be taken as to when and how this should be done. There will be considerable overlap between the requirements of ISA 540 and ISA 545. ISA 540 will have been developed using the revised risk model, whereas ISA 545 predates the development of the new model.
- 39 If ISA 540 were to be revised and issued and ISA 545 had not been revised this would lead to confusion amongst the users of ISAs. As ISA 545 needs to be aligned with the new risk model it would make sense for the revision to be carried out concurrently with the development of ISA 540. IAPS 1012 "Auditing Derivative Financial Instruments" similarly needs to be brought into alignment with the approach adopted by the new risk model; although the Task Force sees less need for this revision than for the need to conform ISA 545 with the new risk model and the revised ISA 540.
- 40 Although synergies are likely to arise if the revisions are undertaken simultaneously the Task Force is not seeking responsibility for the revision of ISA 545 and IAPS 1012. The means by which the revisions are undertaken are a matter for the IAASB.

Action Required by IAASB

The Task Force recommends to the IAASB that it ought to consider when and how the necessary revisions of ISA 545 and IAPS 1012 should be undertaken.

Appendix

Comparison of the black letter requirements of ISA 545 “Auditing Fair Value Measurements and Disclosures” with those of the extant ISA 540 “Auditing Accounting Estimates”

<i>ISA 545</i>	<i>ISA 540</i>
The auditor should obtain sufficient appropriate audit evidence that fair value measurements and disclosures are in accordance with the entity’s financial reporting framework. (3)	The auditor should obtain sufficient appropriate audit evidence regarding accounting estimates. (2)
	The auditor should obtain sufficient appropriate evidence as to whether an accounting estimate is reasonable in the circumstances and, when required, is appropriately disclosed. (8)
The auditor should obtain an understanding of the entity’s process for determining fair value measurements and disclosures and of the relevant control procedures sufficient to develop an effective audit approach. (10)	The auditor should adopt one or a combination of the following approaches in the audit of an accounting estimate: (a) review and test the process used by management to develop the estimate; (10)
	The auditor should adopt one or a combination of the following approaches in the audit of an accounting estimate: (b) use an independent estimate for comparison with that prepared by management; (10)
After obtaining an understanding of the entity’s process for determining fair value measurements and disclosures, the auditors should assess inherent and control risk related to the fair value measurements and disclosures in the financial statements to determine the nature, timing and extent of the audit procedures. (14)	
The auditor should evaluate whether the fair value measurements and disclosures in the financial statements are in accordance with the entity’s financial reporting framework. (17)	
The auditor should obtain evidence about management’s intent to carry out specific courses of action, and consider its ability to do so, where relevant to the fair value measurements and disclosures under the entity’s financial reporting framework. (22)	
Where alternative methods for measuring fair value are available under the entity’s financial reporting framework, or where the method of measurement is not prescribed, the auditor should evaluate whether the method of measurement is appropriate in the circumstances under the entity’s financial reporting framework. (24)	
The auditor should evaluate whether the entity’s method for its fair value measurements is applied consistently. (27)	
The auditor should determine the need to use the work of an expert. (29)	
Based on the assessment of inherent and control risk, the auditor should test the entity’s fair value measurements and disclosures. (33)	
Where applicable, the auditor should evaluate whether the significant assumptions used by management in measuring fair	

<i>ISA 545</i>	<i>ISA 540</i>
values, taken individually and as a whole, provide a reasonable basis for the fair value measurements and disclosures in the entity's financial statements. (39)	
The auditor should test the data used to develop the fair value measurements and disclosures and evaluate whether the fair value measurements have been properly determined from such data and management's assumptions. (50)	
The auditor should consider the effect of subsequent events on the fair value measurements and disclosures in the financial statements. (53)	The auditor should adopt one or a combination of the following approaches in the audit of an accounting estimate: (c) review subsequent events which confirm the estimate made. (10)
The auditor should evaluate whether the disclosures about fair values made by the entity are in accordance with its financial reporting framework. (56)	
In making a final assessment of whether the fair value measurements and disclosures in the financial statements are in accordance with the entity's financial reporting framework, the auditor should evaluate the sufficiency and appropriateness of the audit evidence obtained as well as the consistency of that evidence with other evidence obtained and evaluated during the audit. (61)	The auditor should make a final assessment of the reasonableness of the estimates based on the auditor's knowledge of the business and whether the estimate is consistent with other audit evidence obtained during the audit. (24)
The auditor should obtain written representations from management regarding the reasonableness of significant assumptions, including whether they appropriately reflect management's intent and ability to carry out specific courses of action on behalf of the entity where relevant to the fair value measurements or disclosures. (63)	

Note ISA 540 comprises 27 paragraphs in total whereas ISA 545 comprises 66 paragraphs.

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