

## Auditing Accounting Estimates

## *Insights for Auditors*

### Overview

New requirements for auditing accounting estimates will take effect for audits of financial statements for fiscal years ending on or after December 15, 2020. These requirements will apply to estimates in significant accounts and disclosures, and will replace three PCAOB standards with a single, uniform risk-based approach to auditing estimates, including fair value measurements.

The new requirements are reflected in the revised and retitled [AS 2501, Auditing Accounting Estimates, Including Fair Value Measurements](#), and related amendments to other PCAOB standards. When the revised standard takes effect, [AS 2502, Auditing Fair Value Measurements and Disclosures](#), and [AS 2503, Auditing Derivative Instruments, Hedging Activities, and Investments in Securities](#), will be rescinded.

This publication highlights aspects of the new requirements for auditors as they begin to plan and perform work on audits subject to the new requirements. It also illustrates relevant considerations for certain key areas of the revised standard, including certain information from the adopting release. Appendix 3 of the adopting release includes a detailed discussion of the new requirements, including differences from and similarities to current requirements. The information included in this publication is not a substitute for any rule or standard; only the rules and standards of the Board provide auditors with the definitive requirements.

Staff guidance on new requirements for auditing the fair value of financial instruments, included in [Appendix A to AS 2501 \(Revised\)](#), is also available. (See [Staff Guidance: Auditing the Fair Value of Financial Instruments-Insights for Auditors](#)). Guidance on the use of specialists, including in developing and auditing estimates, is also available. (See [Staff Guidance: Using the Work of a Company's Specialist](#) and [Staff Guidance: Supervising or Using the Work of an Auditor's Specialist](#).)

### What's included?

- ✓ Overview
- ✓ Approach to Auditing Estimates
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## Approach to Auditing Estimates

The revised standard and related amendments:

- Address how the auditor’s responsibilities for identifying and responding to risk under the risk assessment standards apply to accounting estimates
- Clarify the audit procedures under each of the three approaches auditors use to substantively test estimates

Key considerations for auditing accounting estimates under the revised standard include:

- Identifying and assessing risk
- Responding to risk
- Substantive testing
  - Testing the company’s process
  - Developing an independent expectation
  - Evaluating subsequent events and transactions

## Identifying and Assessing Risk

While the auditor’s fundamental responsibilities for identifying and assessing risks of material misstatement remain the same, the risk assessment standards have been amended to enhance the risk assessment process in relation to accounting estimates in three ways.

***Understanding Processes Used to Develop Estimates.*** When obtaining an understanding of a company’s information system, auditors are now explicitly required to understand whether the related accounts involve accounting estimates and if so, the processes used to develop accounting estimates, including:

- The methods used, which may include models;
- The data and assumptions used, including the source from which they are derived; and
- The extent to which the company uses third parties (other than specialists), including the nature of the service provided and the extent to which the third parties use company data and assumptions.

The methods, data, and assumptions used by the company to develop accounting estimates, including how they are selected and applied, drive the risk associated with the estimate.

**For example**, estimates based on multiple forward-looking assumptions will generally give rise to different risks than those developed largely using historical information.

***Engagement Team Brainstorming.*** The required “brainstorming” discussion among the engagement partner and other key engagement team members is focused on how and where the company’s financial statements might be susceptible to material misstatement due to fraud. The discussion is now specifically required to address how the financial statements could be manipulated through management bias in accounting estimates in significant accounts and disclosures.

***Risk Factors for Identifying Significant Accounts and Disclosures.*** In addition to the existing risk factors set forth in the risk assessment standards, the auditor will evaluate the following when identifying significant accounts and disclosures involving accounting estimates:

- The degree of uncertainty associated with the future occurrence or outcome of events and conditions underlying significant assumptions;
- The complexity of the process for developing the accounting estimate;
- The number and complexity of significant assumptions associated with the process;
- The degree of subjectivity associated with significant assumptions (for example, because of significant changes in the related events and conditions or a lack of available observable inputs); and
- If forecasts are important to the estimate, the length of the forecast period and degree of uncertainty regarding trends affecting the forecast.

These risk factors describe characteristics and conditions that can affect the auditor's determination of likely sources of potential misstatement of accounting estimates.

*For example*, some estimates are inherently complex, involving valuation attributes made up of multiple sources of data and assumptions, or internally-developed models requiring specialized skill. Other estimates are based largely on the outcome of uncertain future events, involve unobservable inputs or require forward-looking assumptions, making them particularly subjective or prone to higher levels of measurement uncertainty.

## Responding to Assessed Risks of Material Misstatement

Responding to risks of material misstatement for accounting estimates involves evaluating whether the estimates are in conformity with the applicable financial reporting framework and reasonable in the circumstances, as well as evaluating potential management bias in accounting estimates and its effect on the financial statements.

Some estimates have components that are subject to significantly differing risks of material misstatement. The auditor is required to perform procedures that are responsive to the identified risks.

*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 the need for differing responses for the components of the reserve.

## Selecting an approach for testing

Consistent with the previous standard, auditors are required to test accounting estimates using one or a combination of the following approaches:

- Testing the company's process used to develop the accounting estimate;
- Developing an independent expectation for comparison to the company's estimate; and
- Evaluating audit evidence from events or transactions occurring after the measurement date related to the accounting estimate for comparison to the company's estimate.

The auditor may use any of the three approaches (individually or in combination). The selection of approach(es) is informed by the auditor's understanding of the company's process used to develop the estimate and, if relevant controls are tested, the results of those tests.

For example:

- Testing the company's process may be appropriate if the auditor intends to rely on controls over the process, or the company uses complex, proprietary models to develop an estimate.
- Developing an independent expectation of the estimate may be appropriate if the company's controls over an estimate are ineffective.
- Evaluating subsequent events or transactions will be feasible only when there are relevant subsequent events or transactions to evaluate.
- If an estimate has multiple components or multiple significant assumptions, the auditor might use different approaches for individual components (e.g., different approaches for different components of certain valuation allowances such as inventory reserves) or for individual significant assumptions.

Requirements under each approach are discussed below.

## Testing the Company's Process

Testing the company's process used to develop accounting estimates involves performing procedures to test and evaluate the methods, data, and significant assumptions used by the company in developing the estimate.

### Evaluating the company's methods

The methods a company uses to develop an accounting estimate, and the corresponding inputs, typically depend on the nature of the estimate. For some estimates, including certain fair value measurements, the method may involve the use of a model or other valuation method, such as one based on expected future cash flows. For other types of estimates, such as obsolescence reserves, the method might be a calculation based on historical trends and other relevant data.

The auditor is required to evaluate whether the methods used by the company to develop an estimate are:

- In conformity with the requirements of the applicable financial reporting framework, including whether the data is appropriately used and significant assumptions are appropriately applied under the applicable financial reporting framework; and
- Appropriate for the nature of the related account or disclosure, taking into account the auditor's understanding of the company and its environment.

***Evaluating Conformity with the Applicable Financial Reporting Framework.***

Financial reporting frameworks may prescribe a specific method to develop an estimate. In other instances, the financial reporting framework may allow for alternative methods, or may provide guidance on how to apply a method, including guidance on the selection or use of assumptions or data.

***Evaluating Appropriateness for the Account or Disclosure.*** The auditor's evaluation of whether the method is appropriate for the nature of the related account or disclosure is based on the auditor's understanding of the company and its environment, including relevant industry, regulatory, and other external factors.

The nature and extent of audit procedures to evaluate the method used by the company depend on the risks of material misstatement associated with the estimate, which may vary with the type of estimate or the process used to develop the estimate.

*For example*, the risks associated with a method that uses a commercially available valuation model may relate to whether the model is appropriate for the related estimate under the applicable financial reporting framework, whereas the risks associated with a method that uses an internally-developed company model may include additional risks associated with how the model was developed (including the potential for management bias) that necessitate additional audit procedures. In both types of models, other potential risks of material misstatement may relate to the mathematical accuracy of calculations used in the method and, if the output of the model is adjusted (or requires adjustment), the appropriateness of the adjustments.

## Testing data used by the company

Companies may use both internal company data and data from external sources when developing accounting estimates. The data used will depend on the nature of the estimate and the information available. The nature and extent of procedures to be performed with respect to data depend on whether the data is internal company data or data from external sources, as shown on the next page.

Source of Data	Audit Procedures and (Examples)
<p>Internal company data</p> <p><i>Examples:</i></p> <p><i>Historical data on warranty claims or losses on defaulted loans.</i></p> <p><i>(Note: Company data supplied by the company to a third party or company specialist is considered internal company data, not data from an external source.)</i></p>	<p>Evaluate whether the information is sufficient and appropriate for purposes of the audit by performing procedures to:</p> <ul style="list-style-type: none"> <li>• test the accuracy and completeness of the information or test the controls over the accuracy and completeness of that information, and</li> <li>• evaluate whether the information is sufficiently precise and detailed for purposes of the audit.</li> </ul>
<p>Sources external to the company</p> <p><i>Examples:</i></p> <p><i>General or regional economic, market data, or industry data</i></p>	<p>Evaluate the relevance and reliability of the data in accordance with <a href="#">AS 1105, Audit Evidence</a>.</p>
<p>Both internal and external data</p>	<p>Regardless of whether the data is internal or external, evaluate whether the data is appropriately used by the company in developing the accounting estimate by evaluating whether:</p> <ul style="list-style-type: none"> <li>• the data is relevant to the measurement objective for the accounting estimate; <ul style="list-style-type: none"> <li><i>(for example, considering whether more recent or more precise internal or external data is available to the company)</i></li> </ul> </li> <li>• the data is internally consistent with its use by the company in other significant accounts and disclosures; and</li> <li>• the source of the company's data has changed from the prior year and, if so, whether the change is appropriate. <ul style="list-style-type: none"> <li><i>(Changes in the data source and internal consistency of data might reveal potential contradictory evidence or may also help the auditor identify potential management bias.</i></li> <li><i>For example, while a new source of data might result in an estimate that better reflects a company's specific circumstances, a change in data source could also be used by a company to achieve a desired financial result.)</i></li> <li><i>(Evaluating whether data is appropriately used by the company relates to whether the company's selection and use of the data is in conformity with the requirements of the applicable financial reporting framework.)</i></li> </ul> </li> </ul>

## Identifying significant assumptions used by the company

Auditors are required to identify which of the assumptions used by the company are significant assumptions to the accounting estimate by taking into account:

- The nature of the accounting estimate, including related risk factors,
- The requirements of the applicable financial reporting framework, and
- The auditor's understanding of the company's process for developing the estimate.

Significant assumptions are assumptions that are important to the recognition or measurement of the accounting estimate in the financial statements.

Examples of assumptions that would ordinarily be considered significant assumptions include those that:

- Are sensitive to variation, such that minor changes in the assumption can cause significant changes in the estimate;
- Are susceptible to manipulation and bias;
- Involve unobservable data or company adjustments of observable data; or
- Depend on the company's intent and ability to carry out specific courses of action.

The above examples are not intended to be an exhaustive list of the attributes of significant assumptions. They are also not a substitute for taking into account the auditor's understanding of the nature of the estimate, including risk factors, the requirements of the applicable financial reporting framework, and his or her understanding of the company's process for developing the estimate.

## Evaluating the reasonableness of significant assumptions used by the company

Auditors are required to evaluate the reasonableness of the significant assumptions, both individually and in combination. This includes evaluating whether:

- The company has a reasonable basis for the significant assumptions used and, when applicable, for its selection of assumptions from a range of potential assumptions; and
- The significant assumptions are consistent with the following, when applicable:
  - Relevant industry, regulatory, and other external factors, including economic conditions;
  - The company'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 significant assumptions used by the company in other estimates tested.

The auditor's understanding of the company and its environment, the assessed risks of material misstatement, and the auditor's understanding of the process used to develop the estimates informs the auditor's evaluation of the consistency of significant assumptions with other relevant information obtained during the audit.

*For example*, assumptions used in multiple estimates (e.g., the growth rate for a specific product line) should ordinarily be consistent with each other.

The auditor's evaluation of whether the company has a reasonable basis for a significant assumption (including an assumption based on forward-looking information) relates to whether the assumption is based on an analysis of relevant information, or determined arbitrarily, with little or no such analysis. The auditor's evaluation also involves considering whether the company considered relevant evidence, regardless of whether it corroborates or contradicts the company's assumption.

In practice, auditors sometimes develop their own expectation of a significant assumption as a means of evaluating the reasonableness of the company's assumption. In these circumstances, the auditor should have a reasonable basis for that expectation, taking into account relevant information.

***Critical Accounting Estimates.*** For critical accounting estimates, the auditor should obtain an understanding of how management analyzed the sensitivity of its significant assumptions to change, based on other reasonably likely outcomes that would have a material effect on the company's financial condition or operating performance, and take that understanding into account when evaluating the reasonableness of the significant assumptions and potential management bias.

The auditor is not expected to evaluate the company's compliance with the SEC's MD&A requirements for critical accounting estimates, but rather to obtain an understanding of management's analysis of critical accounting estimates and to use this understanding in evaluating the reasonableness of the significant assumptions and potential for management bias.

## Developing an Independent Expectation

Developing an independent expectation of an accounting estimate involves the auditor using some or all of the auditor's own methods, data, and assumptions to develop the expectation for comparison with the company's estimate. The auditor is also required to take into account the requirements of the applicable financial reporting framework and the auditor's understanding of the company's process, including the significant assumptions used by the company, so that the auditor's expectation considers the factors relevant to the estimate.



## Methods, data, and assumptions used

The requirements for developing an independent expectation are tailored to the particular sources of the methods, data, and assumptions used by the auditor.

Auditor's Independent Expectation Developed Using :	Auditor's Responsibility Under AS 2501 (Revised)
Assumptions and methods of the auditor	Have a reasonable basis for the assumptions and methods
Data and assumptions obtained from a third party	Evaluate the relevance and reliability of the data and assumptions obtained in accordance with AS 1105
Company data, significant assumptions, or methods	Test and evaluate data, significant assumptions, or methods in the same manner as when testing the company's process

When the auditor uses his or her own assumptions or methods, the auditor is required to have a reasonable basis for the assumptions and methods used. A reasonable basis would reflect consideration of, among other things, the nature of the estimate; relevant requirements of the applicable financial reporting framework; the auditor's understanding of the company, its environment, and the company's process for developing the estimate; and other relevant audit evidence, regardless of whether the evidence corroborates or contradicts the company's assumptions.

Auditors may also choose to use a portion or a combination of data, significant assumptions, and methods produced by the company in developing their expectations (e.g., using the company's method, but substituting his or her assumptions for those used by the company). The auditor is required to test such data or evaluate such significant assumptions or methods, using the corresponding procedures in the revised standard that apply when the auditor tests the company's process.

## Developing an independent expectation as a range

Aside from developing an independent expectation as a point estimate, auditors may also choose to develop an independent expectation as a range. In such cases, the auditor is required to determine that the range encompasses only reasonable outcomes, in conformity with the applicable financial reporting framework, and is supported by sufficient appropriate evidence.

The sufficiency and appropriateness of the evidence needed will depend on the relevant circumstances, including the nature of the accounting estimate, the requirements of the applicable financial reporting framework, and the number and nature of significant assumptions and data used in the independent expectation.

## Evaluating Subsequent Events and Transactions

The auditor is required to:

- Evaluate whether audit evidence from events or transactions occurring after the measurement date is sufficient, reliable, and relevant to the company's accounting estimate and whether the evidence supports or contradicts the company's estimate. This would include evaluating pertinent information that is known or knowable at the measurement date.
- Take into account changes in the company's circumstances and other relevant conditions between the event or transaction date and the measurement date. As the length of time from the measurement date increases, the likelihood that events and conditions have changed during the intervening period also increases.

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