CHARTERED
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CANADA

Audit Client Briefing

CANADIAN AUDITING STANDARD (CAS)

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CONSIDERATIONS FOR MANAGEMENT WHEN DETERMINING ACCOUNTING ESTIMATES AND RELATED DISCLOSURES

Purpose of This *Briefing*

The Auditing and Assurance Standards Board (AASB) recently completed a significant revision for its standard for auditing accounting estimates. These revisions may have important implications for chief financial officers, other senior management responsible for financial statement preparation, and staff directly involved in determining whether accounting estimates are needed and, if so, deriving the monetary amounts (recorded or disclosed) of those accounting estimates. Moreover, while not aimed at the audit committee, this *Briefing* may also be a useful resource for its members.

The purpose of this *Briefing* is to make you aware of matters to consider in preparing for and responding to the significant revisions in, and the auditor's requests pertaining to Canadian Auditing Standard (CAS) 540, *Auditing Accounting Estimates and Related Disclosures*.

Revised CAS 540 applies to audits of all accounting estimates in financial statements for periods beginning on or after December 15, 2019. This revised CAS responds to changes to financial reporting standards and a more complex business environment, which together have increased the importance of accounting estimates to the users of financial statements and introduced new challenges for preparers and auditors.

Accounting estimates are monetary amounts that are a fundamental part of the financial statements of many entities. Once the need for an accounting estimate is recognized, the measurement of these monetary amounts is subject to estimation uncertainty because of inherent limitations in knowledge or data. As a result, there may be a wide range of measurement outcomes. Your process and controls for deriving the monetary amounts of accounting estimates involve selecting and applying methods (including models) using assumptions and data. This requires you to exercise judgment and may involve complexity and subjectivity (including possible bias) in your measurements. These factors make your accounting estimates susceptible to material misstatement.

In many cases, there will be changes in the nature and extent of information auditors request you provide regarding your process and controls for:

- identifying the need for accounting estimates
- deriving the monetary amounts for accounting estimates and related disclosures

This *Briefing* provides an overview of:

- management's responsibilities in determining when accounting estimates are needed
- management's responsibilities regarding the main components of an estimation process
- the impact on management because of changes to the auditor's responsibilities, including broad questions auditors are likely to ask those involved in the detailed aspects of your estimation process

The Appendix is aimed primarily at those who:

- identify the need for accounting estimates in the financial statements
- are involved in the details of deriving accounting estimates and related disclosures

The Appendix contains examples of accounting estimates that differ in their levels of estimation uncertainty, as well as examples of specific questions auditors may ask regarding how these accounting estimates were derived.

Identifying the Need for Accounting Estimates

Many financial reporting frameworks state that, as a result of the uncertainties inherent in business activities, many items in financial statements cannot be measured with precision; these can only be estimated. Estimation involves judgments based on information that is both the latest available and reliable. Moreover, financial reporting frameworks are evolving, with greater use of complex accounting estimates, whether based on fair value measurements or otherwise, some of which require significant management judgment or involve complexity in the face of high levels of estimation uncertainty.

The determination of whether accounting estimates are needed necessitates proper processes and controls to identify the transactions, conditions or events that give rise to such estimates. The lack of these processes and controls may affect the susceptibility of your financial statements to material misstatement.

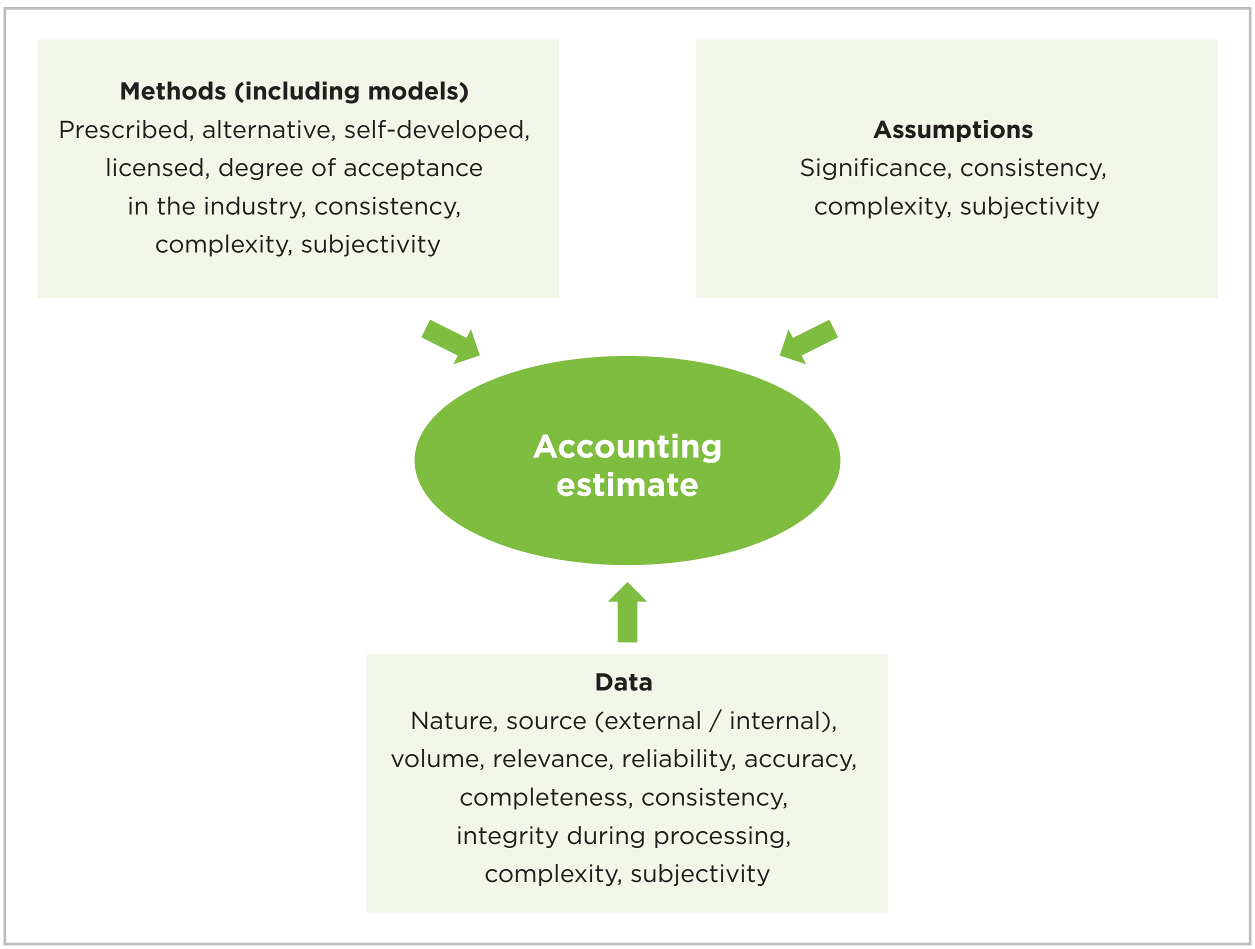
The types of accounting estimates you need to make in accordance with the requirements of the applicable financial reporting framework depend, for example, on the nature of your entity, the environment in which it operates, the transactions you enter into and the occurrence of other events, conditions and circumstances. In each new financial reporting period, changes may occur (e.g., new types of contracts entered into) that result in a need for you to make accounting estimates that were not required in the previous period. In some cases, you may determine that the types of accounting estimates to be made in the current period are the same as in previous periods. However, you may want or need to make changes in how those accounting estimates are made. For example, you would take into account the benefit gained from previous experience or the need to reflect new information that is now available.

Accordingly, you will need to think about:

- transactions that require accounting estimates or changes to them
- conditions or events that require accounting estimates or changes to them

Main Components of the Process to Derive the Monetary Amounts of Accounting Estimates

FIGURE 1 – INPUTS TO ACCOUNTING ESTIMATES



There are three main components of the process for determining accounting estimates and related disclosures:

1. methods (including models)
2. assumptions
3. data.

As noted in Figure 1, these components or inputs to the process have a number of characteristics, and they all impact the determination of the accounting estimate. For example, assumptions may vary with sources of the data and the basis of your judgments to support them. Also, a method is applied using a model (computational tool or process) and involves applying assumptions and data and taking into account a set of relationships among them.

The revised audit requirements apply to all accounting estimates. It is important to note that the more complex the estimate, the more the auditor will expect you to have a robust process in place. Some accounting estimates may be simple because they have lower levels of estimation uncertainty and do not require a complex method / model. Therefore, the audit work effort required under CAS 540 will not necessarily always be extensive. For an example which illustrates the concepts of how a simple-to-complex estimate could change what is expected from you (see the illustrative example in the Appendix).

Impact on Management of Changes to the Auditor's Responsibilities

Set out below are some key changes to CAS 540 and how these may affect the nature and extent of information the auditor may request.

Key Change	Impact on Auditor	Impact on Management
More emphasis on the need for the auditor to exercise professional skepticism	The auditor will perform audit procedures in a manner that is not biased toward obtaining audit evidence that may be corroborative or toward excluding audit evidence that may be contradictory. The auditor will carefully consider all information obtained and whether it corroborates or contradicts your judgments and decisions regarding accounting estimates.	The auditor may increasingly challenge aspects of how you derive your accounting estimates.

Key Change	Impact on Auditor	Impact on Management
More granular assessments regarding the risk accounting estimates are materially misstated	The auditor will first consider the conditions and events that are likely to cause your accounting estimates to be materially misstated. The auditor will then consider whether the system of internal control you have designed and implemented is likely to prevent material misstatements, or if a material misstatement occurs, is likely to detect and correct it.	The auditor may place more emphasis on obtaining an understanding of the nature and extent of your estimation process and key aspects of the related policies and procedures.
Focus on appropriately responding to the levels of estimation uncertainty, complexity and subjectivity in accounting estimates	The extent of the auditor's required work effort depends on the risk your accounting estimate is materially misstated. This risk is impacted by the degree of estimation uncertainty, complexity, and subjectivity involved in making that accounting estimate.	If the auditor determines the risk of your accounting estimate being materially misstated is higher, the work effort will increase, which in turn will likely impact how much, and the type of, information you need to provide the auditor.
Audit work effort based on the selected approach(es) (testing management's process, developing own estimate, subsequent events), including a more detailed understanding of the significant matters considered in making key judgments and decisions affecting accounting estimates	CAS 540 includes revised audit requirements that are more specifically directed at the components of an accounting estimate. These include methods (including models), assumptions and data, including the auditor's understanding and documentation of key elements of the entity and its environment, the linkage of audit procedures to the assessed risks, and significant judgments related to the auditor's determination of whether the accounting estimates and related disclosures are reasonable.	You may receive more focused requests from the auditor on each of these matters. You may wish to consider retaining experts to assist with the related work. You may also consider documenting key judgments and decisions in anticipation of auditor requests. Such documentation is likely to provide a basis for more efficient and effective discussions between you and the auditor.

Key Change	Impact on Auditor	Impact on Management
More emphasis on auditing accounting estimate disclosures in the financial statements	In particular, the sufficiency of disclosures regarding estimation uncertainty may receive more scrutiny.	If the auditor determines the risk of material misstatement is higher for certain disclosures, the work effort will increase, which in turn will impact how much, and the type of, information you will need to provide the auditor.
More detailed written representations	The auditor is required to request written representations from you regarding the reasonableness of the methods, significant assumptions and the data used in determining the monetary amounts of accounting estimates, including the related disclosures, in accordance with the applicable financial reporting framework. The auditor is also required to consider the need to obtain your representations about specific accounting estimates, including in relation to the methods, assumptions, or data used.	You may receive requests for new or changed representations compared to previous years. Therefore, you may wish to ask the auditor to let you know as soon as practicable the details of the written representations they will request from you.

A more detailed overview of the key changes can be found at IAASB "At a Glance."

Broad Questions Auditors Are Likely to Ask about Your Estimation Process

Figure 2 sets out broad questions the auditor is likely to ask to obtain or confirm understanding of, and whether there have been changes to, key aspects of your process for deriving accounting estimates.

FIGURE 2 – BROAD QUESTIONS

How do you ...?

- control your accounting estimation process?
- make those responsible for deriving or changing your accounting estimates aware of relevant significant transactions, conditions or events?
- review the outcome(s) of previous accounting estimates and respond to the results of that review?
- identify and comply with the relevant requirements in the applicable financial reporting framework regarding your accounting estimates and related disclosures including how they are affected by complexity and your judgment?
- account for regulatory factors relevant to the entity's accounting estimates, including, when applicable, regulatory frameworks related to prudential supervision?
- identify the need for, and apply, specialized skills or knowledge related to accounting estimates, including with respect to the use of a management's expert?
- identify and address risks related to accounting estimates through your risk assessment process?
- identify relevant methods (including models), assumptions and data and the need for changes in them and from those identified, select those to apply?
- address the degree of estimation uncertainty in selecting your final point estimates?
- describe in your financial statements matters related to your process for deriving your accounting estimates, and matters related to the degrees of estimation uncertainty underlying your accounting estimates?
- ensure there is oversight and governance in place over management's financial reporting process relevant to accounting estimates?

The broad questions auditors are likely to ask, as set out in the shaded box above, relate to what are likely to be the main steps of your accounting estimation process.

The first question in Figure 2, “How do you control your accounting estimation process?,” applies to all aspects of your accounting estimation process. This includes not only how you designed and implemented your process, but also the policies and procedures you put in place to satisfy yourself that each step in your process is properly applied, and that the resulting accounting estimates are reasonable in the context of the applicable financial reporting framework.

The Appendix sets out more detailed considerations regarding aspects of your internal control and the main steps in your process that may be of interest to those in your organization who have direct involvement in making accounting estimates.

Call to Action

Your company’s auditor will expect you to have designed, performed and appropriately documented the accounting estimation process. As a result of the changes to the audit, you may see a need and an opportunity to improve the quality of your process for deriving accounting estimates and related disclosures. Your consideration of the matters raised in this *Briefing* may help you achieve that objective.

Appendix

Specific Considerations Regarding Your Process For Deriving Accounting Estimates And Related Disclosures

This Appendix sets out specific considerations:

A. Controlling Your Process for Deriving Accounting Estimates and Related Disclosures

B. Considering Whether to Document Significant Aspects of Your Process

C. Considering the Broad Questions Regarding Significant Aspects of Your Estimation Process Noted in This *Briefing*

D. Understanding Simple vs. Complex Estimates — Illustrative Example

E. Glossary

Limitations of Material in This Appendix

The matters covered by the questions in this Appendix are not meant to be exhaustive. In particular, the Appendix does not address all the detailed requirements or guidance in IFRS and Canadian GAAP regarding the three examples discussed.

Also, in planning and performing audit procedures in response to assessed risks of material misstatement, your company's auditor may follow one of three testing strategies (or combinations thereof):

1. Obtain audit evidence regarding the accounting estimate from events occurring up to the date of the auditor's report.
2. Test how you made the accounting estimate and developed related disclosures about estimation uncertainty; which may include, in some cases, testing your controls relevant to the estimation process.
3. Develop the auditor's own point estimate or range to evaluate your point estimate and related disclosures about estimation uncertainty.

The nature and extent of the questions the auditor is likely to ask you might be affected in part by the auditor's choice of strategy. Addressing this is beyond the scope of this *Briefing*.

A. Controlling Your Process for Deriving Accounting Estimates and Related Disclosures

Auditing standards suggest that internal control has five components:

1. control environment
2. entity's risk assessment process
3. information system (including the related business processes relevant to financial reporting, and communication)
4. control activities
5. monitoring of controls[1]

Matters to consider related to certain aspects of your control environment, control activities and monitoring of controls are set out immediately below. Matters to consider regarding the other two components are addressed in the later section of this Appendix that sets out more detailed considerations regarding the broad questions auditors are likely to raise about your estimation process.

Control Environment

AUDITOR REQUIREMENT
The auditor is required to obtain an understanding of the nature and extent of oversight and governance you have placed over the process to determine accounting estimates.

What matters have you considered that would provide an appropriate foundation for implementing effective controls over your accounting estimate process?

- What are the nature, timing and extent of the activities of your board of directors (or its audit committee) in providing oversight of your accounting estimation process?
- Have you maintained a culture of honesty and ethical behaviour such that there will not be deliberate bias or misstatements in determining accounting estimates?
- Have personnel with the appropriate skills and knowledge (including experts, where appropriate) been assigned responsibility for developing accounting estimates?
  - Does the determination of an estimate involve persons who are closest to the business operations and may therefore provide input that may result in a more realistic and precise estimate?
  - Do the preparers have the appropriate experience, taking into account the degree of estimation uncertainty, complexity and subjectivity of an estimate?
  - Have you considered the use of an internal or external expert to calculate the estimate? What qualifications do you consider important when selecting your expert? Specifically, for more complex accounting estimates, have you considered using the work of an external expert to assist in estimate preparation?

1 See the Glossary for brief descriptions of these five components.

Control Activities

AUDITOR REQUIREMENT

The auditor is required to perform procedures to obtain an understanding of your control activities over your process for making accounting estimates.

What control activities (policies and procedures) do you apply over your estimation process?

- Do appropriate levels of management review and approve accounting estimates, including the method(s) / model(s), assumptions and data used in their development? Do you understand each step the persons who calculated the estimate have undertaken to determine the estimate? How do you obtain this understanding?
- Taking into account, for example, the nature and size of your company, how do you achieve appropriate segregation of duties between those responsible for making accounting estimates and those committing the company to related transactions and who therefore may not be neutral in making the accounting estimates?
- When use of the work of an expert is required to assist in developing an estimate, how is that work supervised and assessed?
- What controls have you implemented to address estimation uncertainty, complexity, and subjectivity related to each estimate? How do you become satisfied the appropriate level of diligence has been applied regarding these matters?
- How do you determine the appropriateness of data from external sources that are not within your control?
- What controls have you implemented to determine whether your reviews of the outcomes of previous accounting estimates are effective? Regarding these reviews:
  - What threshold have you established to evaluate the outcome of prior-period accounting estimates? A threshold is typically established to identify significant variances between what is expected and what is actualized. What is the basis for the threshold used and why?
  - Does the precision of the threshold used take into consideration the level of estimation uncertainty associated with the estimate? For example, a lower threshold may be appropriate when the level of estimation uncertainty is considered high.
- When information technology is extensively used in your estimation process, what information technology controls have you implemented?[2]

2 See the Glossary for examples of information technology controls.

Monitoring of Controls

AUDITOR REQUIREMENT

The auditor is required to obtain an understanding of the major activities you use to monitor internal control, including control activities related to your process for determining accounting estimates, and how you initiate remedial actions to address deficiencies in your controls.

What are the key aspects of the way you have monitored controls over your process for determining accounting estimates?

- How do you ensure your controls over the process to develop an accounting estimate are operating effectively, including addressing any control deficiencies identified?
- Is there accountability when inaccurate accounting estimates are produced as a result of not considering all significant information known at the time accounting estimates were made?
- Is there evidence to support the effectiveness of your monitoring activities? For example, have your monitoring activities resulted in identifying control deficiencies that resulted in a material misstatement of an accounting estimate?
- When monitoring activities have identified control deficiencies, were these addressed on a timely basis? How did you satisfy yourself that no additional misstatements occurred?

B. Considering Whether to Document Significant Aspects of Your Process

AUDITOR REQUIREMENT

The auditor is required to document, for example:

- key elements of the auditor's understanding of the environment in which your company operates related to accounting estimates
- the auditor's assessments of inherent risk and control risk (i.e., risk assessment procedures) related to accounting estimates
- how these assessments are linked to the auditor's procedures

- Are there significant aspects of your process for making accounting estimates that should be documented? For example, might documentation help you to:
  - better enable effective future internal reviews of the outcome of accounting estimates and of your process
  - assist in training employees or to evidence compliance with regulations
  - provide information to your auditors more effectively and efficiently
  - provide an appropriate basis for making written representations requested by auditors?

- Matters to consider include whether you should have a policy requiring documentation of:
  - key aspects of internal control over your estimation process
  - the significant judgments you made in each of the steps in your process including, for example, those relating to selecting methods / models, assumptions and data
  - the required skill sets and knowledge of the personnel who play a significant role in deriving accounting estimates.

C. Considering the Broad Questions Regarding Significant Aspects of Your Estimation Process Noted in This *Briefing*

The tables in this section set out considerations and detailed questions related to some of the broad questions noted in Figure 2 of this *Briefing*.

The considerations and certain of the questions apply to many types of accounting estimates within many financial reporting frameworks. The tables below set out questions that apply in particular to each of three specific examples of accounting estimates. For illustrative purposes, these examples are noted in the table immediately below along with the applicable IFRS and ASPE standards. For these three examples, the questions are related to matters in the relevant accounting standards you are expected to consider when deriving these types of accounting estimate and related disclosures. The examples are therefore aimed at demonstrating more specifically the relationships between accounting standards and how they may be taken into consideration in performing the significant steps in your accounting estimation process. In addition, at the end of each table, there is also a brief summary of auditor responsibilities relating to the matters being considered. The information set out in these tables is not meant to be exhaustive.

Example Estimate	IFRS	ASPE
Loss Allowance for Trade Accounts Receivable	IFRS 9 – *Financial Instruments*	Section 3856 – *Financial Instruments*
Revenue Recognition – Progress Toward Completion of a Long-Term Contract[3]	IFRS 15 – *Revenue from Contracts with Customer*	Section 3400 – *Revenue*
Impairment of Goodwill	IAS 36 – *Impairment of Assets*	Section 3064 – *Goodwill and Intangible Assets*

3 The example of recognition of revenue from a long-term contract assumes you are using an input method. The method illustrated is based on costs incurred relative to total expected (e.g., budgeted; forecast) costs. The relevant costs are those required to satisfy your performance obligations under a contract. ASPE Section 3400 refers to use of a “percentage of completion method.” Costs incurred relative to total expected costs may be used under the percentage of completion method when such costs reflect the pattern of contract performance. IFRS 15 does not use the term “percentage of completion method.” This term is not used in the example below. Further, financial reporting frameworks allow the use of “output methods” to recognize revenue from a long-term contract. Output methods are not discussed in the example.

1. How do you make those responsible for deriving or changing your accounting estimates aware of relevant significant transactions, conditions or events?

Type of Estimate	**Consideration:** What is the nature, extent, and timeliness of communications among those making key operating and financial decisions and those responsible for deriving accounting estimates and related disclosures?
Many types of accounting estimates (not just the three examples)	• Are managers of key business functions (e.g., marketing, production, finance, administration, legal) aware of the types of transactions, conditions and events that give rise to the need to make accounting estimates? Further, are these managers aware of the possible significant implications regarding the data, method / models and assumptions that will be used for those accounting estimates? • How and when do those managers keep those responsible for making accounting estimates informed about significant changes in transactions, events and conditions, including those that are unusual or infrequent?
Loss allowance for trade accounts receivable	• How and when do those responsible for the company's sales strategies and granting of credit communicate changes in factors affecting the collectability of trade accounts receivable? Examples include changes in terms of sales agreements, customer churn, expansion of sales to customers in new regions, changes in economic and other conditions likely to affect the ability of customers to pay amounts owing.
Revenue recognition – progress toward completion of a long-term contract using an input method based on costs incurred	• How and when do managers responsible for entering into, amending and administering long-term contracts keep those responsible for making accounting estimates informed of significant developments? Examples include changes in contract terms, changes significantly affecting supply chains and progress toward completion of a contract.
Impairment of goodwill	• How and when do those responsible for developing, implementing and monitoring the entity's business strategy keep those responsible for making accounting estimates informed about important changes likely to significantly affect goodwill impairment tests? Examples include decisions to expand product lines or shut down parts of the business.

AUDITOR REQUIREMENT

The auditor is required to obtain an understanding of your entity's transactions and other events and conditions that may give rise to the need for, or changes in, accounting estimates to be recognized or disclosed in your financial statements.

2. How do you perform and evaluate the results of your reviews of the outcomes of previous accounting estimates?

Type of Estimate	**Considerations:** What are the nature, timing, and extent of your review of the outcomes of previous accounting estimates? How do you reflect the results of your retrospective review when determining the data, assumptions and methods / models to be used for determining accounting estimates for the current period?
Many types of accounting estimates (not just the three examples)	• Do the results of previous applications of your estimation process, updated for relevant changes regarding current conditions and forecast future conditions, indicate: — significant changes in attributes of accounting estimates (e.g., degree of estimation uncertainty, complexity and subjectivity)? — a need to change aspects of your estimation process (e.g., methods, assumptions, or nature and extent of data to be used)? • Regarding controls over your retrospective review process, what thresholds do you consider reasonable for identifying significant variances between actual outcomes and previous accounting estimates, and why?
Loss allowance for trade accounts receivable	• How do write-offs of bad debts related to trade accounts receivable at the end of the preceding period compare with the estimated loss allowance for those accounts? If there are significant differences, what caused them? What aspects of the method and assumptions used in estimating the loss should be changed?
Revenue recognition – progress toward completion of a long-term contract using an input method based on costs incurred	• Do variances between actual contract costs and budgeted costs exceed the threshold you use to identify significant variances? For significant variances: — Are they a result of a single overrun, or are the differences more pervasive in nature, indicating inefficiencies throughout the performance of the contract? — What significant assumptions did you make that did not materialize? Do you understand why these assumptions did not materialize? — Do you understand why contract-cost budgets were not updated to reflect significant changes in circumstances? — Are multiple project managers responsible for developing the budgets? If so, are accounting estimates provided by certain project managers more prone to significantly different outcomes on final completion? If so, how has this been addressed? — Is there any indication of management bias in any of the particular products or locations you need to investigate?

2. How do you perform and evaluate the results of your reviews of the outcomes of previous accounting estimates?

Impairment of goodwill	• Have you compared the projected cash flows from the prior year to the actual cash flows in the current period? Where there are differences, can they be appropriately explained? For example, does the difference arise as a result of an event that was expected or anticipated at the time the original estimate was developed, such as the loss of a significant customer?

AUDITOR REQUIREMENT
The auditor is required to review the outcome of your previous accounting estimates or, where applicable, your subsequent re-estimation to assist in identifying and assessing the risks of material misstatement in the current period.

3. How do you identify and comply with the relevant requirements of the applicable financial reporting framework regarding your accounting estimates and related disclosures?

Type of Estimate	**Consideration:** Are you aware of, and have you taken steps to comply with, the most recent requirements of the applicable financial reporting framework?
Many types of accounting estimates (not just the three examples)	• Have there been any changes in accounting standards effective for the current period, or that you intend to implement before the effective date, that significantly affect the determination of your accounting estimates? If so, what actions have you taken to appropriately address these changes? • Have you complied with requirements, if any, regarding when/how often your process for determining an accounting estimate needs to be re-evaluated? • With regard to estimation uncertainty, what steps have you taken to ensure you meet requirements for related disclosures?

AUDITOR REQUIREMENT
The auditor is required to obtain an understanding of the applicable financial reporting framework and determine whether you have appropriately applied the requirements of the applicable financial reporting framework relevant to the estimate.

4. How do you obtain an up to date understanding of the degree of estimation uncertainty in your accounting estimates and identify and address risks they may be materially misstated?

Inherent Risks

Type of Estimate	**Consideration:** What have you done to identify and assess matters regarding the degree of estimation uncertainty, complexity, and subjectivity of your accounting estimates, and your need to exercise judgment in developing your accounting estimates?
Many types of accounting estimates (not just the three examples)	• For each of your accounting estimates, how have you obtained an up-to-date understanding of: — estimation uncertainty (i.e., the level and causes of inherent lack of precision in determining the estimate)? — level of complexity (e.g., do multiple methods / models, assumptions or data sets need to be applied)? — degree of subjectivity (e.g., is the estimate based on anticipated future events or conditions that cannot be directly observed and are there limitations to the knowledge and data that are reasonably available)? • How do you identify and address any relevant new information in the current period? This may include changes in conditions or forecast conditions that are likely to have significant effects on your accounting estimates compared to those determined in prior periods. • Have you performed a sensitivity analysis to identify the degree of estimation uncertainty and the assumptions used when even small movements, including changes from prior periods, can have a significant impact on the estimate?
Loss allowance for trade accounts receivable	• Have you identified significant trade accounts receivable from individual or groups of customers that are likely to be affected by adverse changes related to, for example: — their technological, market, economic or legal environment? — national or local economic or industry conditions or adverse changes in industry conditions? • Does the churn in trade accounts receivable between the current and prior period indicate changes in the risk accounts may not be collectible? For example, are there any new significant accounts (individual or homogeneous groups) that have particular attributes affecting levels of credit risk?
Revenue recognition – progress toward completion of a long-term contract using an input method based on costs incurred	• Are there any changes to existing suppliers that will have an impact on costs? Were these appropriately considered when developing the budget for the costs of the contract? For example, if you have become aware subsequent to year end that a significant supplier went bankrupt and costs are expected to change with a new supplier, have you updated the input to the accounting estimates (i.e., projected costs to complete)?

4. How do you obtain an up to date understanding of the degree of estimation uncertainty in your accounting estimates and identify and address risks they may be materially misstated?

Impairment of goodwill	• Does the applicable financial reporting framework require an annual impairment test of goodwill? Apart from complying with the requirement, have events or changes in circumstances occurred that warrant an impairment test for goodwill? For example, is there any indication the carrying amount of the relevant asset group (e.g., cash generating unit or reporting unit) to which the goodwill is assigned may exceed the fair value (or in some cases, the value in use) of the asset group? • Is there any conflicting information, such as a history of losses, slow growth or a shortage of financial resources, if an increase of earnings before interest, taxes, depreciation and amortization (EBITDA) is now being projected? • Have you considered the effects of planned changes in your business strategy on your goodwill impairment-estimation process? For example, do you have plans to launch a new product line or to shut down a division in the next year? Have you considered any significant initiatives to reduce expenses (e.g., plans to decrease the workforce and move to automated processing of transactions or manufacturing)?

Control Risks

Type of Estimate	**Consideration:** What are the control risks relevant to your accounting estimates and related disclosures and how have they been addressed?
Many types of accounting estimates (not just the three examples)	• For some considerations and questions regarding control risk pertaining to many types of accounting estimate and related disclosures, refer to the preceding section on internal control.
Loss allowance for trade accounts receivable	• Have you implemented effective controls over the granting of credit? • How have the policies and procedures implemented over the granting of credit (e.g., limits on amounts of credit granted to various types of customers) been taken into account in determining your allowance estimate?
Revenue recognition – progress toward completion of a long-term contract using an input method based on costs incurred	• What controls are in place to determine whether actual costs are appropriately captured and allocated to the correct projects? • Are there approved purchase orders to support budgeted costs for the current year? • Do the actual expenses include accruals? If so, how have you determined the accruals are complete and accurate?

4. How do you obtain an up to date understanding of the degree of estimation uncertainty in your accounting estimates and identify and address risks they may be materially misstated?

Impairment of goodwill

- What controls have been implemented to, for example:
  - identify when there is a need to update the goodwill impairment test?
  - identify the asset group (unit) to which the impairment test is to be applied, in accordance with the requirements of the applicable financial reporting framework?
  - help ensure the method, assumptions and data to be applied in estimating fair value (and in some cases value in use) of the unit, and the apportionment to goodwill and other assets, are in accordance with the requirements of the applicable financial reporting framework?

AUDITOR REQUIREMENT

The auditor is required to perform risk assessment procedures and related activities. These include, for example, obtaining an understanding of the:

- risks likely to result in your accounting estimates being materially misstated
- internal control you have implemented to prevent these misstatements from occurring or, if they do occur, to detect and correct these misstatements

The auditor's procedures include, for example, considering the degree to which your accounting estimates are subject to estimation uncertainty, and how your selection and application of methods, assumptions and data are affected by complexity and subjectivity.

5. How do you identify relevant methods / models, assumptions and data and, from those identified select those to apply?

Consideration: What alternative relevant methods, assumptions and sources and types of data are permitted by the applicable financial reporting framework?

Many types of accounting estimates (not just the three examples)

- Have you considered the requirements and guidance, if any, in the applicable financial reporting framework regarding the identification of alternative relevant methods, assumptions or data?
- Do you have a formal policy and process for identifying relevant alternatives?
- How do you distinguish between assumptions and significant assumptions[4] and how they are used in making your accounting estimates?
- How do you decide whether the approach you take in the current period should be consistent with, or different from, that taken in prior years?

4 See the definition of "significant assumptions" in the Glossary.

5. How do you identify relevant methods / models, assumptions and data and, from those identified select those to apply?

Loss allowance for trade accounts receivable	• When the financial reporting framework allows the use of practical expedients, do you evaluate whether you meet the criteria for such use? • If you reject use of a practical expedient even when you meet the criteria, what are your reasons for this decision?
Revenue recognition – progress toward completion of a long-term contract using an input method based on costs incurred	• Is your method of revenue recognition for long-term contracts common in your industry? • Why have you determined that it is appropriate to use an input method based on a comparison of actual contract costs to expected costs? • Have you considered using other inputs rather than costs (i.e., number of labour hours)? Have you considered using an output method? Why did you conclude that these alternatives were inappropriate?
Impairment of goodwill	• Have you applied the impairment test taking into account the detailed requirements of the applicable financial reporting framework? For example, requirements may cover: — how to identify the asset group (unit) to which the test is to be applied (e.g., based on cash inflows, or net cash flows, that are independent from other assets or groups of assets)? — whether the impairment test involves comparing the carrying value of the unit with its *fair value* or with its *recoverable amount* (the higher of its *fair value less costs to sell* and *value in use)*? — A specified method of allocating the impairment loss between goodwill and the other assets in the group? • What alternative methods, and related assumptions and data have you considered for calculating fair value (and when applicable, value in use) of the group of assets (e.g., cash generating unit, reporting unit)? For example, have you considered cash flow models, market approach models and asset approach models?

AUDITOR REQUIREMENT
The auditor is required to obtain an understanding of how you identify relevant methods, assumptions or sources of data. A key consideration is whether you identified relevant alternatives when developing, for example, an approach to appropriately address estimation uncertainty.

5. How do you identify relevant methods / models, assumptions and data and, from those identified select those to apply?

Type of Estimate	**Consideration:** What are the key matters you consider in selecting, applying and assessing the reasonableness of your approach to determining your accounting estimates?
Many types of accounting estimates (not just the three examples)	**Method(s) / model(s)** • Having considered alternatives, how do you determine the method / model to be used (e.g., based on its relevance and accuracy when compared to alternatives)? • How do you validate or back-test the model used? Do you consider, for example: — the model's theoretical soundness and mathematical integrity? — whether the model was 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 any adjustments to the output of the model were appropriate in the circumstances? — 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 • What matters do you consider when selecting your assumptions from alternatives (e.g., degree of relevance, completeness)? • When applicable, how do you determine the assumptions are consistent with: — each other, those used in other accounting estimates and, when applicable, those used in the prior year? — relevant aspects of your business, including the environment in which it operates and your business plans? — relevant matters outside of your control (e.g., interest rates, potential judicial or regulatory actions)?
	Data • From among alternatives available, how do you determine the nature and sources of the data used, including information obtained from an external information source? • How do you determine that: — the data obtained is relevant, accurate and complete and, when appropriate, consistent with the previous year? — the integrity of the data was maintained during transmission and processing by your information technology systems; (e.g., if you are relying on system-generated reports, do you have an understanding of what can and cannot be altered within the reports, when, and by whom)?

5. How do you identify relevant methods / models, assumptions and data and, from those identified select those to apply?

	Assessment of Reasonableness of Results of Initial Calculations • Do the initial calculations of point estimates or ranges appear reasonable based on your understanding of the aspects of your business to which the accounting estimates relate? When applicable, do the results obtained appear reasonable in relation to prior years' accounting estimates? Are you satisfied the method, assumptions and data used to calculate an estimate continue to be appropriate and supportable? • If initial results do not appear reasonable, what is your process for determining why and the related corrective actions, including changing one or more of the methods/models, assumptions or data used? • Are preliminary drafts of related disclosures regarding assumptions and methods in accordance with the applicable financial reporting framework?
Loss allowance for trade accounts receivable	• Does the method you have selected for calculating your allowance reflect the timing of expected cash flows from impaired trade accounts receivable based on, for example: — your best judgment? — an unbiased and probability-weighted method that includes evaluating a range of possible outcomes? — reasonable and supportable assumptions that take into account the range of possible outcomes? — reasonable and supportable information available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions? • If you decide to use a provision matrix as a practical expedient (when allowed by the applicable financial reporting framework) do your account groupings appropriately reflect significantly different loss patterns from different customer segments? Is the basis for your account groupings appropriate (e.g., geographical region, product type, customer rating, collateral, or type of customer [i.e., wholesale or retail])? • If you decided to apply formulae as a practical expedient (when allowed by the applicable financial reporting framework), did you take into account matters such as analysis of arrears, aging of balances, past loss experience, current economic conditions and other relevant circumstances such as uncompensated payment delays? Have the formulae been reviewed regularly to ensure the loss ratios applied reflect the most current information available?

5. How do you identify relevant methods / models, assumptions and data and, from those identified select those to apply?

Revenue recognition – progress toward completion of a long-term contract using an input method based on costs incurred	• Have the project managers responsible for contracts: — been involved in selecting and applying significant aspects of your estimate process for contract revenues (i.e., assumptions, data, method / model)? — confirmed they have updated the projected costs to amounts to complete the contract, which take into account any changes in circumstances? — confirmed the contract revenue estimates meet their expectations, based on their understanding of the status of their projects?
Impairment of goodwill	• How do you determine which model(s) to use from the various alternatives? For example, why is your chosen model the most relevant? Is it commonly used in your industry? What is the basis for your conclusion that other approaches would be inappropriate? • Are all your assumptions in applying your chosen model appropriate (e.g., discounted cash flows, a market-based approach or asset-based approach) and supportable? Assumptions may include, for example, discount rates, growth rates, market capitalization. Is there any conflicting information to support maintainable EBITDA, such as a history of losses, slow growth or a shortage of financial resources if an increase of EBITDA were to be projected? • Is the data used in applying your model reliable and appropriate for your purpose? How have you assessed the reliability of data from external sources that significantly affect your determination of the fair value (and when applicable, value in use) of the asset group?

AUDITOR REQUIREMENT

The auditor performs procedures in response to the results of risk assessment procedures to determine whether your accounting estimates and related disclosures are reasonable in the context of the applicable financial reporting framework. This includes, for example, performing procedures to address whether:

- The methods and significant assumptions you selected from alternatives, and the data you used, are appropriate, and properly applied in determining your accounting estimates, in the context of the applicable financial reporting framework
- There are any indicators you may have been biased in any aspect of your process to determine your accounting estimates

6. How do you address the degree of estimation uncertainty in selecting your final point estimate?

Example	Consideration
Many types of accounting estimates (not just the three examples)	• What factors do you consider when exercising judgment in determining the point estimate that will be recorded in your accounts and reflected in your financial statements, taking into consideration the requirements of the applicable financial reporting framework? For example, when your estimation process results in identifying a range of reasonably possible point estimates, how do you determine the most appropriate point estimate in that range? How did you guard against inadvertent or deliberate bias in making that selection (e.g., avoiding selecting an overly optimistic or pessimistic point estimate)?

AUDITOR REQUIREMENT
The auditor is required to obtain sufficient appropriate audit evidence that your selection of point estimate is in accordance with the applicable financial reporting framework.

7. How do you describe in your financial statements matters related to your process for deriving your accounting estimates and matters related to the degrees of estimation uncertainty underlying your accounting estimates?

Example	**Considerations:** Do your financial statement disclosures appropriately describe your amounts as accounting estimates and explain the nature and limitations of your estimation process, including the variability of the reasonably possible measurement outcomes? Do your financial statement disclosures appropriately describe matters that contribute to the degrees of estimation uncertainty underlying your accounting estimates?
Many types of accounting estimates (not just the three examples)	• Have you made financial statement disclosures regarding your ***estimation process*** as required by the applicable financial reporting framework, or have you chosen to make such financial statement disclosures even when not required? Examples of matters that may be disclosed regarding each estimate include: — that the amount is an estimate — the method used, including any applicable model, and the basis for its selection — information relating to the underlying data and assumptions used in applying the model, including, for example, whether assumptions were developed internally, whether data is affected by factors outside the control of your entity, the range of possible outcomes and the assumptions used in determining that range — fair value information — information about sensitivity analyses derived from financial models that demonstrates that you considered alternative assumptions

7. How do you describe in your financial statements matters related to your process for deriving your accounting estimates and matters related to the degrees of estimation uncertainty underlying your accounting estimates?

- Have you made financial statement disclosures regarding ***estimation uncertainty*** as required by the applicable financial reporting framework, or have you chosen to make such financial statement disclosures even when not required? Examples of matters that may be disclosed regarding each accounting estimate include:
  - the nature and limitations of your process for making the estimate, including the variability (i.e., range) in reasonably possible measurement outcomes
  - information related to difficulty in making judgments related to the estimate, including subjectivity or complexity resulting, for example, from a need to use significant forward-looking assumptions or other sources of estimation uncertainty
  - significant accounting policies related to the accounting estimates, including, depending on the circumstances, matters such as the specific principles, bases, conventions, rules and practices applied in preparing and presenting the estimate
- Have you considered whether, in certain circumstances, additional financial statement disclosures beyond those explicitly required by the financial reporting framework are needed for your financial statements to be fairly represented (or not misleading)?

AUDITOR REQUIREMENT
The auditor is required to obtain sufficient appropriate audit evidence that your disclosures related to accounting estimates are in accordance with the applicable financial reporting framework. This includes assessing risks your disclosures, including those related to material uncertainty, may be materiality misstated, and performing audit procedures to respond to these assessed risks.

D. Understanding Simple vs. Complex Estimates – Illustrative Example

An allowance for doubtful trade accounts receivable may be used to illustrate how your auditor's expectations may vary based on the complexity of your accounting estimates (and the underlying levels of estimation uncertainty, complexity, and other factors). For example, the determination of the allowance may be uncomplicated (i.e., simple). That may be the case when there is low customer churn, customers are located in a geographic region where the economy is booming, and customer payment histories and credit ratings have not changed significantly. Given this data, it may be appropriate to decide to apply the same pragmatic method for determining the allowance as used in the previous years and assume that factors used in applying this method are still valid. For example, the percentages applied to the various aging categories could be the same as in the previous year.

On the other hand, your allowance could reflect a much higher degree of estimation uncertainty, complexity and subjectivity. For example, you may have expanded your operations and now sell to new customers in many geographic regions around the world. An unexpected economic downturn or developments leading to significant political instability may have occurred. As a result, the relevant data to be considered, and assumptions about how much cash will ultimately be collected, will be significantly different from those in previous years. The pragmatic approach previously applied may no longer be appropriate. A more complex method and model may need to be developed. For example, the method / model may entail classifying customers into groups that reflect many factors not previously taken into account. Further, without the benefit of having previous experience in using this method / model, its design and application may be more subjective and produce a possible unintended bias toward underestimating or overestimating the allowance required.

E. Glossary

Components of Internal Control

(as described in CAS 315, *Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and its Environment*)

Control Environment

The control environment encompasses the following elements:

- Communication and enforcement of integrity and ethical values
- Commitment to competence
- Participation by those charged with governance
- Management's philosophy and operating style
- Organizational structure
- Assignment of authority and responsibility
- Human resource policies and practices

Entity's Risk Assessment Process

For financial reporting purposes, the entity's risk assessment process includes:

- How management identifies business risks relevant to the preparation of financial statements in accordance with the entity's applicable financial reporting framework
- Estimation of their significance
- Assessments of the likelihood of their occurrence
- Decisions about actions to respond to and manage them and the results thereof

Information System, including the Related Business Processes, Relevant to Financial Reporting, and Communication

An information system consists of infrastructure (physical and hardware components), software, people, procedures, and data. Many information systems make extensive use of information technology (IT).

Control Activities

Control activities are policies and procedures that pertain to:

- performance reviews
- information processing (application controls, general IT controls)
- physical controls
- segregation of duties

Monitoring of Controls

Management's monitoring of controls includes considering whether they are operating as intended and that they are modified, as appropriate, for changes in conditions.

Information Technology Controls

Application controls

Application controls are policies and procedures suitable for the processing of individual information technology applications. Examples of application controls include:

- Checking the arithmetical accuracy of records
- Maintaining and reviewing accounts and trial balances
- Automated controls such as edit checks of input data and numerical sequence checks
- Manual follow-up of exception reports

General IT controls

These are policies and procedures that relate to many applications and support the effective functioning of application controls by helping to ensure the continued proper operation of information systems. Examples of general IT controls are:

- Program change controls
- Controls that restrict access to programs or data
- Controls over the implementation of new releases of packaged software applications
- Controls over system software that restricts access to or monitors the use of system utilities that could change financial data or records without leaving an audit trail

Control risk

The risk that a misstatement that could occur in an assertion about a class of transaction, account balance or disclosure and that could be material, either individually or when aggregated with other misstatements, will not be prevented, or detected and corrected, on a timely basis by the entity's internal control.

Inherent risk

Inherent risk is the susceptibility of an assertion about a class of transaction, account balance or disclosure to a misstatement that could be material, either individually or when aggregated with other misstatements, before consideration of any related controls

Model

A model is a computational tool or process used in applying a method. It involves applying assumptions and data and taking into account a set of relationships among them.

Significant assumption

An assumption is significant if it is used in making an accounting estimate for which a reasonable variation in that assumption would materially affect the measurement of the accounting estimate.

What additional resources are available to help me?

1. CPA Canada's *Audit & Assurance Alert*: Revised CAS 540, *Auditing Accounting Estimates and Related Disclosures* (March 2019)
2. *Basis for Conclusions* (March 2019)

Feedback

Comments on this *Briefing*, or suggestions for future publications should be sent to:

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