

## *Final Standards*

# **Changes Required by the Adoption in Canada of IFRS 17 (Insurance Contracts)**

**Actuarial Standards Board**

**December 2021**

Document 221137

*Ce document est disponible en français*  
© 2021 Canadian Institute of Actuaries

## 1100 Introduction

### 1110 Application

- .01 These Standards of Practice apply to actuarial work in Canada. Responsibility for these Standards of Practice vests in the Actuarial Standards Board (Canada) and approval of standards and changes to standards are made through a process that includes consultation with the actuarial profession and other interested parties. They are intended for the benefit of the public. The work in Canada of a member of a professional actuarial organization is expected to conform to these Standards of Practice.
- .02 The existence of standards is not a substitute for professional judgment or consideration for the needs of the user(s) when performing specific work.
- .03 The authority of these Standards of Practice derives from the powers of those bodies that recognize them for actuarial work in Canada. Among others, these include professional actuarial bodies and relevant laws such as those regulating pensions and insurance. Compliance with these Standards of Practice is also likely to be taken into account when the quality of actuarial work is being considered in a court of law or in other contested situations. However, in such circumstances, deviation from any provision of these Standards of Practice should not, in and of itself, be presumed to be malpractice.

### 1120 Definitions

- .01 Each term set over dotted underlining has the meaning given in this subsection. A term that is not set over dotted underlining has its ordinary meaning.
- .02 Accepted actuarial practice is the manner of performing work in accordance with these Standards of Practice. Unless the context requires otherwise, it refers to work in Canada. [*pratique actuarielle reconnue*]
- .03 Actuarial cost method is a method to allocate the present value of a benefit plan's obligations to time periods, usually in the form of a service cost and an accrued liability. [*méthode d'évaluation actuarielle*]
- .04 Actuarial evidence work is work where the actuary provides an expert opinion with respect to any area of actuarial practice in the context of an actual or anticipated dispute resolution proceeding, where such expert opinion is expected or required to be independent. A dispute resolution proceeding may be a court or court-related process, a tribunal, a mediation, an arbitration, or a similar proceeding. Actuarial evidence work may include the determination of capitalized values in respect of an individual, or the provision of an expert opinion with respect to a dispute involving an actuarial practice area, such as pensions or insurance, or questions of professional negligence. [*travail d'expertise devant les tribunaux*]

- .05 Actuarial present value method is a method to calculate the lump sum equivalent at a specified date of amounts payable or receivable at other dates as the aggregate of the present values of each of those amounts at the specified date, and taking into account both the time value of money and, where appropriate, contingent events. [*méthode de la valeur présente actuarielle*]
- .06 Actuary, as it is used in these standards, means a member of a professional actuarial organization whose work in Canada is expected to conform to these standards. [*actuaire*]
- .07 Anti-selection is the tendency of one party in a relationship to exercise options to the detriment of another party when it is to the first party's advantage to do so. [*antisélection*]
- .08 Appointed actuary of an entity is an actuary formally appointed, pursuant to legislation, by the entity to monitor the financial condition of that entity. [*actuaire désigné*]
- .09 Appropriate engagement is one that does not impair the actuary's ability to conform to the precepts of ethical and professional conduct such as those that may be found in the Rules of Professional Conduct of the Canadian Institute of Actuaries or relevant law or regulation. Unless the context otherwise requires, wherever the word "engagement" is used in these standards it refers to an appropriate engagement. [*mandat approprié*]
- .10 Automatic balancing mechanisms automatically adjust contributions, benefits, and/or parameters of a plan in order to restore the balance between its source of financing and its benefits. The mechanism is prescribed by a set of predetermined measures to be taken, either immediately or later as prescribed, upon being triggered by certain demographic, economic, or financial indicators. [*mécanismes automatiques de compensation*]
- .11 Benefits liabilities are the liabilities of a plan in respect of claims incurred on or before a calculation date. [*obligations liées aux prestations*]
- .12 Best estimate means without bias. [*meilleure estimation*]
- .13 Calculation date is the effective date of a calculation; e.g., the calculation date in the case of a valuation for financial statements. It usually differs from the report date. [*date de calcul*]
- .14 Case estimate at a calculation date is the unpaid amount of one of, or a group of, an insurer's reported claims (perhaps including the amount of claim adjustment expenses), as estimated by a claims professional according to the information available at that date. [*évaluation du dossier*]
- .15 Claim adjustment expenses are internal and external expenses in connection with settlement and administration of claims. [*frais de règlement des sinistres*]
- .16 Claim liabilities are the portion of insurance contract liabilities in respect of claims incurred on or before the calculation date. [*passif des sinistres*]

- .17 Contingent event is an event that may or may not happen, or that may happen in more than one way or that may happen at different times. [*éventualité*]
- .18 Contribution is a contribution by a participating employer or a plan member to fund a benefit plan. [*cotisation*]
- .19 Contribution principle is a principle of policyholder dividend determination whereby the amount deemed to be available for distribution to policyholders by the directors of a company is divided among policies in the same proportion as policies are considered to have contributed to that amount. [*principe de contribution*]
- .20 Credibility is a measure of the predictive value attached to an estimate based on a particular body of data. [*crédibilité*]
- .21 Credit spread, for a fixed-income asset, is the yield to maturity on that asset minus the yield to maturity on a risk-free fixed income asset with the same cash flow characteristics. [*écart de crédit*]
- .22 Definitive refers to a matter that is final and permanent rather than tentative, provisional, or unsettled. [*décision définitive*]
- .23 Development of data with respect to a given coverage period is the change in the value of those data from one calculation date to a later date. [*matérialisation*]
- .24 Explanatory text is text that appears outside of a box in these standards. [*texte explicatif*]
- .25 External user is a user other than the actuary's client or employer. Internal user and external user are mutually exclusive. [*utilisateur externe*]
- .26 External user report is a report whose users include an external user. [*rapport destiné à un utilisateur externe*]
- .27 Financial condition of an entity at a date refers to its prospective ability at that date to meet its future obligations, especially obligations to policyholders, members, and those to whom it owes benefits. Financial condition is sometimes called “future financial condition”. [*santé financière*]
- .28 Financial position of an entity at a date is its financial state as reflected by the amount, nature, and composition of its assets, liabilities, and equity at that date. [*situation financière*]
- .29 To fund a plan is to dedicate assets to its future benefits and expenses. Similarly for “funded” and “funding”. [*provisionner*]

- .30 Funded status is the difference between the value of assets and the actuarial present value of benefits allocated to periods up to the calculation date by the actuarial cost method, based on a valuation of a pension plan, post-employment benefit plan, or social security program. [*niveau de provisionnement*]
- .31 Going concern valuation is a valuation that assumes that the entity to which the valuation applies continues indefinitely beyond the calculation date. [*évaluation en continuité*]
- .32 Indexed benefit is a benefit whose amount depends on the movement of an index such as the consumer price index. [*prestation indexée*]
- .33 Indicated rate is the best estimate of the premium required to provide for the corresponding expected claims costs, expenses, and provision for profit. [*taux indiqué*]
- .34 Insurance contract is a contract under which one party (the issuer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder. Insurance contract includes group insurance, third-party contracts where the owner of the contract and the person who is compensated (the policyholder) differ, and all like arrangements substantively in the nature of insurance. [*contrat d'assurance*]
- .35 Insurance contract liabilities in an issuer's statement of financial position are the liabilities at the date of the statement of financial position on account of the issuer's insurance contracts, including commitments, that are in force at that date or that were in force before that date. [*passif des contrats d'assurance*]
- .36 Insurer is a federally or provincially licensed insurance company that is an issuer of insurance contracts. Insurer includes a fraternal benefit society and the Canadian branch of a foreign insurer, but does not include a public personal injury compensation plan or a post-employment benefit plan<sup>1</sup>. [*assureur*]
- .37 Internal user is the actuary's client or employer. Internal user and external user are mutually exclusive. [*utilisateur interne*]
- .38 Internal user report is a report all of whose users are internal users. [*rapport destiné à un utilisateur interne*]
- .39 Issuer is the party under an insurance contract that accepts significant insurance risk. [*émetteur*]
- .40 Margin for adverse deviations is the difference between the assumption for a calculation and the corresponding best estimate assumption. [*marge pour écarts défavorables*]

- .41 Model is a practical representation of relationships among entities or events using statistical, financial, economic, or mathematical concepts. A model uses methods, assumptions, and data that simplify a more complex system and produces results that are intended to provide useful information on that system. A model is composed of a model specification, a model implementation, and one or more model runs. Similarly for “to model”. [*modèle*]
- .42 Model implementation is one or more systems developed to perform the calculations for a model specification. For this purpose “systems” include computer programs, spreadsheets, and database programs. [*implémentation du modèle*]
- .43 Model risk is the risk that, due to flaws or limitations in the model or in its use, the actuary or a user of the results of the model will draw an inappropriate conclusion from those results. [*risque de modélisation*]
- .44 Model run is a set of inputs and the corresponding results produced by a model implementation. [*exécution d’un modèle*]
- .45 Model specification is the description of the components of a model and the interrelationship of those components with each other, including the types of data, assumptions, methods, entities, and events. [*spécifications du modèle*]
- .46 New standards means new standards, or amendment or rescission of existing standards. [*nouvelles normes*]
- .47 Periodic report is a report that is repeated at regular intervals. [*rapport périodique*]
- .48 Plan administrator is the person or entity with overall responsibility for the operation of a benefit plan. [*administrateur d’un régime*]
- .49 Policy liabilities in an insurer’s statement of financial position are the liabilities at the date of the statement of financial position on account of the insurer’s policies, including commitments, that are in force at that date or that were in force before that date. Policy liabilities consist of insurance contract liabilities and liabilities for policy contracts other than insurance contracts. [*passif des polices*]
- .50 Policyholder is a party that has a right to compensation under an insurance contract if an insured event occurs<sup>1</sup>. [*titulaire de police*]

- .51 Premium liabilities are the portions of insurance contract liabilities that are not claim liabilities. [*passif des primes*]
- .52 Prescribed means prescribed by these standards. [*prescrit*]
- .53 Property and casualty insurance is insurance that insures individuals or legal persons
- Having an interest in tangible or intangible property, for costs arising from loss of or damage to such property (e.g., fire, fidelity, marine hull, warranty, credit, legal expense, and title insurance); or
  - For damages to others or costs arising from the actions of such persons (e.g., liability and surety bonds) and for costs arising from injury to such persons (e.g., automobile accident benefits insurance). [*assurances IARD*]
- .54 Provision for adverse deviations is the difference between the actual result of a calculation and the corresponding result using best estimate assumptions. [*provision pour écarts défavorables*]
- .55 Public personal injury compensation plan means a public plan
- Whose primary purpose is to provide benefits and compensation for personal injuries;
  - Whose mandate may include health and safety objectives and other objectives ancillary to the provision of benefits and compensation for personal injuries; and
  - That has no other substantive commitments.
- The benefits and compensation provided under such public plans are defined by statute. In addition, such public plans have monopoly powers, require compulsory coverage except for those groups excepted by legislation or regulation, and have the authority to set assessment rates or premiums. [*régime public d'assurance pour préjudices corporels*]
- .56 Recommendation means text that appears in a box in these standards. Similarly for “recommend”. [*recommandation*]
- .57 Related experience includes premiums, claims, exposures, expenses, and other relevant data for events analogous to the insured events under consideration other than the subject experience and may include established rate levels or rate differentials or external data. [*expérience connexe*]
- .58 Report is an actuary's oral or written communication to users about his or her work. Similarly for “to report”. [*rapport*]

- .59 Report date is the date the actuary specifies as such in the report. It usually differs from the calculation date. [*date du rapport*]
- .60 Scenario is a set of consistent assumptions. [*scénario*]
- .61 Service cost is that portion of the present value of a plan's obligations that an actuarial cost method allocates to a time period, excluding any amount for that period in respect of unfunded accrued liabilities. [*cotisation d'exercice*]
- .62 Social security program means a program with all the following attributes regardless of how it is financed and administered:
- Coverage is of a broad segment, or all, of the population, often on a compulsory or automatic basis;
  - Benefits are provided to, or on behalf of, individuals;
  - The program, including benefits and financing method, is mandated by law;
  - The program is not financed through private insurance; and
  - Program benefits are principally provided or delivered in the form of periodic payments upon old age, retirement, death, disability, and/or survivorship.  
[*programme de sécurité sociale*]
- .63 Subject experience includes premiums, claims, exposures, expenses, and other data for the insurance categories under consideration. [*expérience visée*]
- .64 Subsequent event is an event of which an actuary first becomes aware after a calculation date but before the corresponding report date. [*événement subséquent*]
- .65 Trend is the tendency of data values to change in a general direction from one coverage period to a later coverage period. [*tendance*]
- .66 User means an intended user of the actuary's work. [*utilisateur*]
- .67 Virtually definitive refers to a matter that is almost certain, but that lacks one or more formalities like ratification, due diligence, regulatory approval, third reading, royal assent, or proclamation. However, a decision that still involves discretion at an executive or administrative level is not virtually definitive. [*pratiquement définitive*]



- .68 Work means work that is commonly, but not necessarily exclusively, performed by actuaries in assessing, measuring, and evaluating risks and contingencies and usually includes
- Acquisition of knowledge of the circumstances affecting the work that the actuary is undertaking;
  - Obtaining sufficient and reliable data;
  - Selection of assumptions and methods;
  - Calculations and examination of the reasonableness of their result;
  - Use of other persons' work;
  - Formulation of opinion and advice;
  - Reporting; and
  - Documentation. [*travail*]

### **1130 Interpretation**

#### **Recommendations**

- .01 These standards consist of recommendations and explanatory text.
- .02 A recommendation is the highest order of guidance in these standards.
- .03 Each recommendation is in boxed text where it is accompanied by its effective date, shown in square brackets.

#### **Explanatory text**

- .04 The explanatory text supports and expands upon the recommendations. The explanatory text consists of definitions, explanations, examples, and useful practices.

#### **Effective date of recommendations**

- .05 The notice of adoption for new standards would indicate their effective date and whether early implementation is permitted and may provide additional direction regarding the application of new standards.
- .06 Subject to the notice of adoption, a recommendation applies to work with a calculation date that is on or after the recommendation's effective date. Superseded recommendations that were in effect at the calculation date would apply to work with a calculation date prior to the effective date of new standards unless early implementation is permitted and applied to the work.

#### **General standards and practice-specific standards**

- .07 These standards consist of general standards and practice-specific standards. With the exception noted below, the general standards apply to all areas of actuarial practice. In addition, the standards in part 4000 apply to all areas of actuarial practice if the actuary's work in an area meets the definition of actuarial evidence work.
- .08 Usually, the intent of the practice-specific standards is to narrow the range of practice considered acceptable under the general standards.

- .02 Usually, the actuary is responsible for all aspects of his or her work and performs it in accordance with accepted actuarial practice. The engagement to which the recommendation applies is usually one in which one or more aspects of work are omitted or are stipulated by the client or employer or the terms of a benefit plan. Examples include situations where
- The actuary uses, but does not take responsibility for, the software system, or the work, of the staff of the client or employer; and
  - The client or employer or the terms of a benefits plan stipulates an assumption or a method that is not in accordance with accepted actuarial practice.
- .03 Conflict between accepted actuarial practice and the law is not the same as conflict between accepted actuarial practice and the terms of an engagement. In the case of an engagement whose terms call for deviation from accepted actuarial practice, the actuary has discretion to accept or not to accept the engagement.
- .04 The practicality and usefulness of reporting a result in accordance with accepted actuarial practice are the same as for subsection 1210, Conflict with law.

### **1230 Unusual and unforeseen situations**

.01 Deviation from a particular recommendation or other guidance in these standards is accepted actuarial practice for an unusual or unforeseen situation for which the standards are inappropriate<sup>2</sup>. [Effective February 1, 2018]

- .02 The actuary would report without reservation when deviating from a particular recommendation or other guidance in these standards in accordance with this subsection 1230, but it may sometimes be appropriate to describe and justify the deviation in the report.

### **1240 Materiality**

.01 Deviation from a particular recommendation or explanatory text in these standards is accepted actuarial practice if the effect of so doing is not material. [Effective February 1, 2018]

---

<sup>2</sup> Actuaries are encouraged to bring such situations to the attention of the Actuarial Standards Board, who may wish to consider how standards might be improved so that they do contemplate such situations.

.02 “Material” has its ordinary meaning, but is judged from the point of view of a user, having regard for the purpose of the work. Thus, an omission, understatement, or overstatement is material if the actuary expects it to affect either the user’s decision-making or the user’s reasonable expectations. When the user does not specify a standard of materiality, judgment falls to the actuary. That judgment may be difficult for one or more of these reasons:

- The standard of materiality depends on how the user uses the actuary’s work, which the actuary may be unable to foresee. If practical, the actuary would discuss the standard of materiality with the user. Alternatively, the actuary would report the purpose of the work as precisely as possible, so that the user is warned of the risk of using the work for a different purpose with a more rigorous standard of materiality.
- The standard of materiality may vary among users. The actuary would choose the most rigorous standard of materiality among the users.
- The standard of materiality may vary among uses. For example, the same accounting calculations may be used for a pension plan’s financial statements and the financial statements of its participating employer. The actuary would choose the more rigorous standard of materiality between those two uses.
- The standard of materiality depends on the user’s reasonable expectations, consistent with the purpose of the work. For example, advice on winding-up a pension plan may affect each participant’s share of its assets, so there is a conflict between equity and practicality. The same is true for advice on a policy dividend scale.

- .03 The standard of materiality also depends on the work and the entity that is the subject of that work. For example,
- A given dollar standard of materiality is more rigorous for a large than for a small entity;
  - The standard of materiality for valuation of an insurer's policy liabilities is usually more rigorous for those in its financial statements than for those in a forecast in financial condition testing;
  - The standard of materiality for data is more rigorous for calculating an individual benefit (such as in a pension plan wind-up) than for a valuation of a group benefit plan (such as a going concern valuation of a pension plan); and
  - The standard of materiality for work involving a threshold, such as a regulatory capital adequacy requirement calculation of an insurer or a statutory minimum or maximum funding level for a pension plan would become more rigorous as the entity approaches that threshold.
- .04 The actuary would not report an immaterial deviation from a particular recommendation or other guidance in these standards except if doing so assists a user to decide whether the standard of materiality is appropriate for that user.
- .05 The recommendation applies to both calculation and reporting standards.

#### **Calculation standards**

- .06 The result of applying a recommendation may not differ materially from the result of a simpler practice requiring less time and expense. For example, the practice-specific recommendations for valuation of insurance contract liabilities for term life insurance have little effect on an issuer whose volume of term life insurance is trivial. To ignore them in that situation is accepted actuarial practice if it helps the actuary to concentrate time and resources on material items.
- .07 In considering materiality, it is not appropriate to net items that are reported separately. For example, if simple practices requiring less time and expense than those in the recommendations materially overstate the premium liabilities and materially understate its claim liabilities, but do not materially affect their sum, the understatement and overstatement are each material if the two items are reported separately. In considering materiality, it is, however, appropriate to net components within a separately reported item. To continue the example, it would be appropriate to net the overstatement of premium liabilities with the understatement of claim liabilities if only the sum of the two (i.e., the insurance contract liabilities) is reported.

- .08 The effect of using a simpler practice requiring less time and expense than those in the recommendations may be conservative or not conservative. Usually, the criterion of materiality is the same in both cases.

**Reporting standards**

- .09 The result of applying a recommendation may provide information that is not useful. For example, disclosure of a material change in the basis for valuing the liabilities with respect to a material class of a benefit plan's members is not useful if that class was trivial at the previous valuation. Also, description of immaterial provisions of a benefit plan is not useful. To ignore the recommendation is accepted actuarial practice in that situation.

## 1430 Subsequent events

- .01 The actuary should correct any data defect or calculation error that is revealed by a subsequent event. [Effective February 1, 2018]
- .02 For work with respect to an entity, the actuary should take a subsequent event into account (other than in a pro forma calculation) if the subsequent event
- Provides information about the entity as it was at the calculation date;
  - Retroactively makes the entity different at the calculation date; or
  - Makes the entity different after the calculation date and a purpose of the work is to report on the entity as it will be as a result of the event. [Effective February 1, 2018]
- .03 The actuary should not take the subsequent event into account if it makes the entity different after the calculation date and a purpose of the work is to report on the entity as it was at the calculation date. Nevertheless, the actuary should report that subsequent event. [Effective February 1, 2018]

### Classification

- .04 A subsequent event is relevant to the recommendation if it reveals an error, provides information about the entity, or is a decision that makes the entity different.
- .05 The actuary would correct an error revealed by a subsequent event. The actuary would classify each subsequent event other than those that reveal errors and, depending on the classification, the actuary would either
- Take that event into account; or
  - Report that event, but not take it into account.

## Entity

.06 Examples of entities are

- The pension plan, in the case of an actuary doing a valuation of a pension plan;
- The block of annuity business, in the case of an actuary calculating the insurance contract liabilities for an issuer's annuity business;
- A combination of the pension plan and the member's specific data, in the case of the determination of a member's individual entitlement under a pension plan; and
- The insurance company, in the case of an actuary valuing the insurance contract liabilities of an insurance company.

## Event provides information about entity as it was or retroactively makes entity different

.07 Examples of subsequent events that provide information about an entity as it was at the calculation date are

- Publication of an experience study that provides information for selection of assumptions;
- Reporting of a claim that was incurred on or before the calculation date; and
- Adoption of a pension plan amendment prior to the calculation date of which the actuary becomes aware after the calculation date.

.08 Examples of events that retroactively make the entity different at the calculation date are definitive or virtually definitive decisions, made after the calculation date but effective on or before the calculation date, to

- Wind-up a pension plan, partially or fully;
- Sell a portion of a participating employer's business and consequently to spin off the corresponding members from the participating employer's pension plan;
- Amend the benefits of a pension plan;
- Transfer a portion of an insurer's policies to another insurer; or
- Invoke a judicial decision that nullifies or significantly modifies the law affecting insurance claims.

.09 If an event provides information about the entity as it was at the calculation date or provides information that retroactively makes the entity different at the calculation date, the effect of the subsequent event on the work is the same as if the actuary first became aware of the information on or before the calculation date and the actuary would not report the event as a subsequent event. That is, the actuary would report the event only to the extent that the event would have been reported had the actuary first become aware of the information before the calculation date.

**Event makes entity different after**

- .10 If the subsequent event makes the entity different after the calculation date, the purpose of the work determines whether or not the actuary takes the event into account.
- .11 If the subsequent event makes the entity different after the calculation date and the purpose of the work is to report on the entity as it will be as a result of the event, the actuary would take that event into account and would describe it in reporting.
- .12 If the subsequent event makes the entity different after the calculation date and the purpose of the work is to report on the entity as it was at that date, the actuary would not take that event into account but would report the event since it would affect the entity's future operations and the actuary's subsequent calculations.



**Classification not clear**

- .13 The classification of a subsequent event may be unclear, at least a priori, although the circumstances affecting the work and the actuary's engagement may make it clear. The following are examples of such events:
- A precipitous fall in the stock market. For financial reporting, one can argue that the stock market crash provides additional information about the entity as it was at the calculation date, because the crash is an indicator of the outlook for common share investments at that date; alternatively, one can argue that the crash makes the entity different only after the calculation date since it creates a new situation. The new situation would be reflected in the financial statements for the subsequent financial reporting period.
  - A salary freeze for employees who are members of a pension plan. If the salary freeze is a correction of excessive salaries, it provides additional information about the entity as it was at the calculation date, because the freeze is an indicator of the outlook for salaries at the calculation date. If the salary freeze deals with a recent problem, it indicates a change in conditions that makes the entity different after the calculation date. In either case, the actuary would consider the effect of the freeze on the employees' pension benefits. It may be that the freeze will have a lasting effect. Alternatively, it may be that the freeze will be compensated for by higher salaries later on, so that the salary inflation assumption based on historical trends continues to be valid.
  - Default on a bond. If the default was the culmination of a gradual deterioration in its issuer's financial circumstances, most of which had occurred before the calculation date but that was not apparent until revealed by the default, the default provides additional information about the entity as it was at the calculation date. If the default was precipitated by a catastrophe, it provides information about a change in conditions that makes the entity different after the calculation date.
  - Insolvency of an insurer's reinsurer. This is similar to default on a bond. If the insolvency was the culmination of a gradual deterioration in the reinsurer's financial circumstances, most of which had occurred before the calculation date but that was not apparent until revealed by the insolvency, the insolvency provides information about the entity as it was at the calculation date. If the insolvency was precipitated by a catastrophe, it provides information about a change in conditions that makes the entity different after the calculation date.

## Reporting

- .14 Sometimes, either because the actuary considers it appropriate or the terms of the work require it, the actuary may report as an alternative the opposite calculation; i.e., one that does not take the subsequent event into account when the main calculation does, or that takes the subsequent event into account when the main calculation does not. For example, in a province for which the calculation date for a pension valuation following marriage breakdown is the date of separation, a subsequent event may be the early retirement of the plan member at some time between the calculation date and the report date. The actuary would consider reporting values assuming that this subsequent event had been an established intention at the calculation date, instead of or in addition to retirement scenarios otherwise recommended in the practice-specific standards. In such cases, the actuary would make the same calculations regardless of the purpose of the work but the reporting thereof would depend on the purpose of the work.

## 1440 Data

- |  |
|--|
| <p>.01 The <u>actuary</u> should apply such procedures as are necessary for the <u>actuary</u> to arrive at a conclusion as to the sufficiency and reliability of the data. [Effective February 1, 2018]</p> |
|--|
- .02 Data relevant to the work may include experience data, membership or policyholder data, census data, claims data, asset and investment data, economic data, operational data, benefit definitions, and policy or contract terms and conditions and other data relevant to the work.
- .03 Sources of data may include data obtained from inventory or sampling methods. Data may be obtained directly by the actuary or may be provided to the actuary by the client, by an accountant or auditor, by a government or statistical body, from a financial statement, or by others. Data may be specific to the client. Where data specific to the client are not available or not relevant, the actuary would consider using industry data, population data, or other published data with suitable adjustments where relevant and appropriate.

### Sufficiency and reliability

- .04 Data are sufficient if they include the needed information for the work. For example, participants' dates of birth are needed to value the liabilities of a pension plan.
- .05 Data are reliable if they are sufficiently complete, consistent, and accurate for the purposes of the work.

## 1600 Assumptions and Methods

### 1610 Methods

.01 The actuary should select a method that takes account of the circumstances affecting the work. [Effective February 1, 2018]

- .02 The basis for calculating actuarial estimates is comprised of a method and one or more assumptions. Methods represent the underlying manner in which actuarial calculations are undertaken. Methods differ from one area of actuarial practice to another and have differed over time.
- .03 In selecting an appropriate method, the actuary would consider whether any method is mandated by law, by practice-specific standards or by the terms of the engagement.

### 1620 Assumptions

.01 The actuary should identify and select each assumption that is needed for the work, except for those that are prescribed, that are mandated by law or that are stipulated by the terms of the engagement. [Effective February 1, 2018]

.02 The actuary should select an appropriate model or data assumption for a matter as the best estimate assumption relating to that matter, modified, if appropriate, to make provision for adverse deviations. In selecting an assumption, the actuary should take account of the circumstances affecting the work, past experience data, the relationship of past to expected future experience, anti-selection, and the relationship among matters. [Effective February 1, 2018]

.03 The appropriate assumption for a matter, other than a model or data assumption, should be continuation of the status quo, unless there is none or unless there is a reasonable expectation that it will change, and the actuary so reports. [Effective February 1, 2018]

- .04 Throughout the standards, the word “calculation” appears, but not as a defined term. It can imply a mathematical operation as simple as adding two numbers or as complex as a scenario of financial condition testing. “Calculation” does not necessarily imply that a model is used. The word “calculation”, when used in the context of a model, emphasizes the result of a model run and to a lesser extent model specification and model implementation.
- .05 It may be useful, under the terms of the engagement, to report the result of two assumptions without opining on their relative appropriateness and to recommend that each user select that which meets his or her needs.

### **Model assumptions**

- .06 The model assumptions are quantitative assumptions in a model about
- Contingent events;
  - Investment return and other economic matters, such as price and wage indices; and
  - Numerical parameters of the environment, such as the income tax rate.
- .07 There is a model assumption for each of the matters that the actuary's model takes into account. Those matters would be sufficiently comprehensive for the model reasonably to represent reality.
- .08 A model, whether simple or complex, requires model assumptions. The model depends on the purpose of the work and the sensitivity of the model run to the various matters about which assumptions could be made. The actuary would strike a balance between the complexity needed for reasonable representation of reality and the simplicity needed for a practical calculation. If the model specification does not take into account a matter, the result is an implicit assumption about that matter, usually an assumption of zero probability or of zero rate. The actuary may compensate for an inappropriate implicit assumption regarding a matter that the model specification does not take into account by altering the explicit assumption regarding a matter that the model does take into account.
- .09 For models with interrelated model assumptions, the actuary would consider the interaction between assumptions.

### **Data assumptions**

- .10 Data assumptions are the assumptions, if any, needed to relieve insufficiency or unreliability in the data.
- .11 The available data may be not sufficient or not reliable. For example, files of pension plan members may lack the date of birth of the members' spouses. Based on sampling, or on comparison with comparable data, it may be appropriate to assume a relationship between spouse and member ages; for example, that a male spouse's date of birth is three years before the member's, and that a female spouse's date of birth is three years after the member's.

### **Assumptions other than model and data assumptions**

- .12 The assumptions other than model and data assumptions are the assumptions about the legal, economic, demographic, and social environment upon which the model and data assumptions depend.

- .13 Such other assumptions are usually qualitative, dealing with the environment; for example,
- Legislation, like the Income Tax Act (Canada);
  - Student education;
  - The medical care system;
  - Government social security systems; and
  - International treaties.
- .14 Those assumptions are needed to the extent that the model assumptions and, in some cases, the data assumptions depend upon them. Such assumptions are numerous and it is not practical to identify all of them.
- .15 Continuation of the status quo is usually the appropriate assumption for other than model and data assumptions; for example, an assumption that the fund of a registered pension plan continues not to be taxed or that the capital markets remain more or less as they are. Users may infer that assumption except where the actuary reports otherwise. The actuary would report an assumption
- That is different from continuation of the status quo; and
  - Regarding a matter for which there is no status quo, for example, a student's assumed occupation after completion of education.

#### **Acceptable range**

- .16 There is a reasonable range of assumptions that may be selected by an actuary for particular work and that might produce materially different results. Sometimes, it is desirable that actuaries produce results within a relatively narrow range, in which case the practice-specific standards may prescribe certain methods and/or assumptions to achieve that purpose.

#### **Circumstances affecting the work**

- .17 Knowledge of the circumstances affecting the work may require consultation with the persons responsible for the functions that affect experience. For example, if the calculation is to value the assets or liabilities of a benefits plan, the actuary would consult the persons responsible for investments, administration, and plan provisions. If the calculation is to value the policy liabilities of an insurer, the actuary would consult the officers responsible for investments, underwriting, claims, marketing, product design, policy dividends, and policy servicing.
- .18 An assumption about a matter would take account of the circumstances affecting the work if those circumstances affect that matter. The circumstances affecting the work are relevant for experience in most matters other than economic matters.

### **Past experience data**

- .19 The available and pertinent past experience data are helpful in the selection of assumptions.
- .20 Other things being the same, pertinent past experience data are data
- Relating to the case itself rather than to similar cases;
  - Relating to the recent past rather than to the distant past;
  - That are homogeneous rather than heterogeneous; and
  - That are statistically credible.

These criteria may conflict with each other.

### **Expected future experience vs. past experience**

- .21 To extrapolate pertinent past experience and its trend to the near future is often, but not necessarily, appropriate.
- .22 The appropriateness of the extrapolation depends on the matter assumed. For example, pertinent past mortality experience is a better indicator of the outlook than is pertinent past investment return experience.
- .23 An extrapolation would take account of a change that affects the outlook. For example,
- Adoption of a subsidized early retirement option in a pension plan may affect retirement rates;
  - A change in an issuer's case estimate practices may affect its claims development;
  - An issuer's discontinuance of a line of business may affect its expense rates allocable to the remaining lines; and
  - A change in judicial practice may affect the settlement of claims.

### **Anti-selection**

- .24 Each assumption would normally take account of potential anti-selection.
- .25 One party in a relationship may have the right (or the administration of the relationship may give the privilege) to exercise certain options. That party may be, for example, a policyholder, a benefits plan's member, a borrower, a lender, or a shareholder.

- .26 Examples are the right or privilege of a
- Pension plan member to select his or her retirement date when the pensions at various retirement ages are not actuarially equivalent;
  - Policyholder to renew term life insurance at its expiry for a stipulated premium;
  - Mortgagor to prepay principal, or an issuer to call a bond or redeem a preferred share; and
  - Shareholder to retract a share.
- .27 When considering a single relationship, it is reasonable to expect that party to exercise those options to the detriment of the other party in the relationship if it is to the first party's advantage to do so. However, where a number of such relationships are concerned, such as a portfolio of policyholders or members of a benefit plan, it may not be reasonable to assume that every one of these would exercise such an option in that manner.
- .28 The extent of anti-selection depends on
- The size of the advantage from each exercise of the option (for example, anti-selection is dampened if the advantage to each policyholder is small even when the aggregate potential detriment to an issuer is large);
  - The concomitance of exercise of the option (for example, election of a favourable early retirement pension may force the plan member into unwanted unemployment, or a policyholder (who is also the life insured) in ill health may be unable to afford to continue an insurance policy with a low premium);
  - The policyholder's or plan member's difficulty in making the required judgment (for example, everyone knows his or her age, but a person may be unable to gauge the effect of ill health on longevity); and
  - The sophistication of the policyholder, plan member, borrower, lender, or shareholder.

**Independently reasonable and appropriate in the aggregate**

- .29 The assumptions that the actuary selects or for which the actuary takes responsibility, other than alternative assumptions selected for the purpose of sensitivity testing, would be independently reasonable and appropriate in the aggregate.

- .30 The actuary would select independently reasonable assumptions. The following is an example:
- For a typical defined benefit pension plan valuation, the actuary would adopt an explicit investment assumption, as well as an explicit expense assumption rather than using implicit assumptions incorporated within a net discount rate. However, for a small defined benefit pension plan, the actuary may choose to use approximations for the investment expenses.
- .31 The actuary would avoid the use of independently reasonable assumptions that are inconsistent or biased in the same direction, either of which might result in the assumptions not being reasonable in the aggregate. If an assumption is prescribed, is mandated by law or is stipulated by the terms of the engagement, it would not be appropriate to compensate for this prescription or stipulation by modifying other assumptions. The remaining assumptions would be reasonable in the aggregate and to the extent possible be independently reasonable.
- .32 The use of independently reasonable assumptions implies that each assumption is explicitly defined. However, there would be no requirement to use explicit assumptions in the model specification, as long as the result of using that model does not produce a material error. For example, for pension valuations, use of a discount rate net of expenses may produce a value very close to the value obtained by using explicit assumptions. In this case, the actuary would disclose both the gross investment rate assumption and the expense assumption.

**Stipulated or mandated assumptions**

- .33 Use of an assumption stipulated by the terms of the engagement is use of the work of another person.
- .34 If the assumption is mandated by law and an amendment to the law is virtually definitive, it may be useful to report a result that reflects the amendment.



### Discount rate

- .35 The use of a discount rate is inherent in the actuarial present value method. The discount rate may be constant or it may vary over time. In selecting the best estimate assumption for the discount rate, the actuary, consistent with the circumstances affecting the work, may either
- Take into account the expected investment returns of the assets that support the liabilities; or
  - Reflect interest rates on relevant fixed income reference securities.
- .36 In selecting the best estimate assumption for the discount rate, the actuary, consistent with the circumstances affecting the work, may assume that the yields on fixed income investments at future dates, either
- Remain at levels applicable at the calculation date; or
  - Revert in the long term to expected levels.

### 1630 Provision for adverse deviations

- .01 The actuary should include a provision for adverse deviations in calculations only to the extent required by the terms of the actuary's engagement or as mandated by law or as prescribed by practice-specific standards. [Effective February 1, 2018]

### 1640 Comparison of current and prior assumptions

- .01 Unless the actuary reports the inconsistency, the assumptions for a calculation for a periodic report should be consistent with those of the prior calculation. [Effective February 1, 2018]

- .02 The definition of consistency for the purpose of this recommendation varies among practice areas. For example,
- For advice on funding a pension plan, the assumption at a calculation date is consistent with the corresponding assumption at the prior calculation date if the two are numerically the same; and
  - For valuation of insurance contract liabilities for financial reporting, an assumption at a calculation date is consistent with the corresponding assumption at the prior calculation date if the two assumptions
    - Each reflect the conditions and outlook at their respective calculation dates consistent with the circumstances affecting the work in the case of a best estimate assumption;

- Each reflect the risks at their respective calculation dates consistent with the circumstances affecting the work in the case of a margin for adverse deviations; and
  - Are located at the same point within the range of accepted actuarial practice.
- .03 If the assumptions are not so consistent, the actuary would report the inconsistency. If practical, useful and appropriate under the terms of the engagement, the report would quantify the effect of the inconsistency.

## 2100 Insurance Contract Valuation: All Insurance

### 2110 Scope

- .01 Part 1000 applies to work within the scope of Part 2000.
- .02 Repealed
- .03 Sections 2200 and 2300 apply to the valuation of insurance contracts and other obligations in accordance with IFRS 17, even where the reporting entity is not an insurer.
  - Section 2200 reflects Canadian-specific considerations. It includes specific exclusions from Part 1000, a glossary of terms applicable to IFRS 17, and valuation and reporting requirements.
  - Section 2300 reflects International Standard of Actuarial Practice 4 (ISAP 4), developed by the International Actuarial Association. It provides guidance to actuaries when performing actuarial services in connection with IFRS 17.
- .04 Where the valuation of insurance contracts and other obligations is not in accordance with IFRS 17, Sections 2200 and 2300 do not apply to the valuation and the valuation would be in accordance with any applicable accounting standards if the valuation is to be used for financial reporting, or the terms of the actuary's engagement or as mandated by law or as prescribed by practice-specific standards.
- .05 Section 2400 applies to actuaries performing the role of appointed actuary as defined in subsection 2420.
- .06 Section 2500 applies to the appointed actuary of an insurer when preparing a report on an insurer's financial condition as defined in subsection 2510.
- .07 Section 2600 applies to property and casualty ratemaking as defined in subsection 2610.
- .08 Section 2700 applies to policyholder dividend determination as defined in subsection 2710.
- .09 Section 2800 applies to public personal injury compensation plans for both the valuation of insurance contracts and other obligations for financial reporting in accordance with IFRS 17 and the valuation of benefit liabilities for funding purposes.

## 2200 Insurance Contract Valuation: Canadian Considerations

### 2210 General

- .01 [IFRS 17 Insurance Contracts](#) (“[IFRS 17](#)”) establishes principles for the recognition, measurement, presentation and disclosure of [insurance contracts](#). The actuary should be familiar with [IFRS 17](#) and apply the requirements in the valuation of [insurance contracts](#) and other obligations where such valuation is to be in accordance with [IFRS 17](#). [Effective January 1, 2023]
- .02 The Standards of Practice provide guidance to actuaries when performing [actuarial services](#) in connection with [IFRS 17](#). They are intended to supplement and not replace or restate the requirements of [IFRS 17](#).
- .03 Notwithstanding the general applicability of Part 1000, paragraphs 1620.35 and 1620.36 on Discount Rate do not apply to the valuation of [insurance contracts](#) and other obligations where such valuation is to be in accordance with [IFRS 17](#).
- .04 The [IFRS 17 risk adjustment for non-financial risk](#) is not considered to be a provision for adverse deviations as defined in paragraph 1120.53.
- .05 When the [principal](#) or another party sets or prescribes an assumption or methodology used by the actuary in performing [actuarial services](#) in connection with [IFRS 17](#), it is to be treated as the actuary’s use of another person’s work as described in subsection 1510. The actuary would not ‘take responsibility’ for such work:
- If the assumption or methodology set or prescribed by the [principal](#) or another party conflicts with what would be appropriate for the purpose of the [actuarial services](#); or
  - The actuary is unable to judge the appropriateness of the assumption or methodology set or prescribed by the [principal](#) or another party without performing a substantial amount of additional work beyond the scope of the assignment, or the actuary is not qualified to judge the appropriateness.

### 2220 Definitions

- .01 Sections 2100, 2200, 2300, and 2800 use various terms whose specific meanings are defined in ISAP 4. These terms are highlighted in the text with a dashed underscore and in blue (e.g., [Accounting Policies](#)). For the purpose of these sections, these terms have the meaning given in this subsection and have their ordinary meaning otherwise.

- .02 Sections 2100, 2200, 2300, and 2800 also use key terms found in [IFRS 17](#), in which case they have the meaning as used in [IFRS 17](#). These terms are highlighted in the text with a double underscore and in green (e.g., [insurance contract](#)).
- .03 **Accounting Policies** – As defined by the International Accounting Standards Board® (the Board) in paragraph 5 of IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*, “the specific principles, bases, conventions, rules and practices applied by an [reporting] entity in preparing and presenting financial statements.”
- .04 **Actuarial Services** – Services based upon actuarial considerations provided to [intended users](#) that may include the rendering of advice, [recommendations](#), findings, or [opinions](#).
- .05 **Communication** – Any statement (including oral statements) issued or made by an [actuary](#) with respect to [actuarial services](#).
- .06 **Data** – Facts often collected from records, experience, or observations. Data are usually quantitative but may be qualitative. Examples of data include membership or [policyholder](#) details, claims details, asset and investment details, operating expenses, benefit definitions, and policy terms and conditions. Assumptions are not data, but data are commonly used in the development of actuarial assumptions.
- .07 **General Measurement Approach** – The basis for measuring [insurance contracts](#) set out in [IFRS 17](#), except where [IFRS 17](#) permits a simplification (in the case of the [premium allocation approach](#)) or is modified (in the case of the [variable fee approach](#)).
- .08 **IFRS 17** – International Financial Reporting Standard 17 – Insurance Contracts, including any interpretations from the International Financial Reporting Interpretations Committee thereon, as issued through 16 August 2019.
- .09 **International Financial Reporting Standards (IFRSs)** – As defined by the IASB in paragraph 7 of IAS 1 Presentation of Financial Statements, as amended in June 2011, by Presentation of Items of Other Comprehensive Income (Amendments to IAS 1): “Standards and Interpretations issued by the International Accounting Standards Board (IASB). They comprise:
  - a. International Financial Reporting Standards;
  - b. International Accounting Standards;
  - c. [International Financial Reporting Interpretations Committee] IFRIC® Interpretations; and
  - d. [The former Standing Interpretations Committee] SIC Interpretations.”
- .10 **Intended User** – Any legal or natural person (usually including the [principal](#)) whom the [actuary](#) intends to use the output of the [actuarial services](#) at the time the [actuary](#) performs those services.
- .11 **Law** – Applicable acts, statutes, regulations, or any other binding authority (such as accounting standards and any regulatory guidance that is effectively binding).

- .12 **Measurement Date** – The date as of which the value of an asset or liability is presented, whether or not the actual calculations have been made as of a different date and rolled forward or back to the [measurement date](#). This has the same meaning as [calculation date](#).
- .13 **Opinions** – An opinion expressed by an [actuary](#) and intended by that [actuary](#) to be relied upon by the [intended users](#).
- .14 **Principal** – The party who engages the provider of [actuarial services](#). The [principal](#) will usually be the client or the employer of the [actuary](#).
- .15 **Variable Fee Approach** – The measurement approach that is a modification of the [general measurement approach](#) for the valuation of [insurance contracts with direct participation features](#) as set out in [IFRS 17](#).

## 2230 Reporting

- .01 The [actuary's report](#), which is a [summary report](#) as described in subsection 1740, should
- conform to relevant Canadian federal and provincial legislation that require the [actuary](#) to value the [policy liabilities](#), not only the [insurance contract liabilities](#);
  - describe the valuation and presentation of [policy liabilities](#) for the [insurer's](#) financial statements prepared in accordance with International Financial Reporting Standards (IFRS);
  - include the [actuary's](#) opinion on the appropriateness of those [policy liabilities](#) and on the fairness of their presentation; and
  - describe the [actuary's](#) role in the preparation of the [insurer's](#) financial statements if that role is not described in those statements or their accompanying management discussion and analysis. [Effective January 1, 2023]

.02 If the actuary can report without reservation, then the actuary's report should conform to the standard reporting language, consisting of

- A scope paragraph, which describes the actuary's work; and
- An opinion paragraph, which gives the actuary's favourable opinion on the valuation and its presentation;

otherwise the actuary should modify the standard reporting language to report with reservation. [Effective January 1, 2023]

### **Presentation of policy liabilities in financial statements**

.03 The valuation of policy liabilities for use in IFRS financial statements requires valuation of items other than the total amount of policy liabilities. All items derived from the valuation of policy liabilities that are reported in the statement of financial position, statement of financial performance, statement of changes in equity, statement of cash flows, and the accompanying notes (disclosures) are part of the presentation of policy liabilities in the IFRS financial statements.

.04 Examples of such items derived from the valuation of policy liabilities are:

- The change in the liability for remaining coverage in the reporting period that is presented as insurance revenue in the statement of financial performance;
- The calculation and projection of coverage units used to allocate the release of the contractual service margin over current and future reporting periods;
- Identification of the components of the total carrying amount (present value of future cash flows, risk adjustment for non-financial risk, and contractual service margin) for each of:
  - portfolios of insurance contracts issued that are assets;
  - portfolios of insurance contracts issued that are liabilities;
  - portfolios of reinsurance contracts held that are assets; and
  - portfolios of reinsurance contracts held that are liabilities.
- Reconciliation of change in the contractual service margin or loss component.

### Description of the actuary's role

- .05 An insurer that reports financial statements under IFRS is responsible for the information reported. This means it is responsible for, amongst other things, identification, combination, aggregation, separation, recognition and derecognition of contracts, the choice of measurement approach and assumptions, the measurement calculations and the disclosures in the IFRS financial statements.
- .06 However, where required by legislation, the actuary is responsible for performing a valuation of policy liabilities and reporting to policyholders and shareholders on that valuation and its presentation in the financial statements. Accordingly, the actuary's summary report would include a description of the role of the actuary in the preparation of the insurer's financial statements if the financial statements or their accompanying management discussion and analysis do not provide that description.
- .07 Here is an illustrative description.

"The Appointed Actuary is

appointed by the [Board of Directors] of [the Company];

responsible for ensuring that the valuation of policy liabilities is in accordance with accepted actuarial practice in Canada, applicable legislation, and associated regulations and directives; and

required to provide an opinion on the appropriateness of the policy liabilities reported in the financial statements and the fairness of their presentation."

The wording of the illustrative description conforms to relevant Canadian federal and provincial legislation that require the actuary to value the policy liabilities, not only the insurance contract liabilities.

- .08 It may also be useful for the financial statements or their accompanying management discussion and analysis to include a description of the formal responsibilities of the actuary beyond the role in the preparation of the financial statements, including for example the annual financial condition testing and report to the directors of the insurer.

### Standard reporting language

- .09 Here is the standard reporting language in the usual situation where the financial statements or their accompanying management discussion and analysis include a description of the role of the actuary in the preparation of the financial statements. Otherwise, that description would be inserted between the two paragraphs in this report.



### Appointed Actuary's Report

To the policyholders [and shareholders] of [the ABC Insurance Company]:

I have valued the policy liabilities of [the Company] for its [consolidated] financial statements prepared in accordance with International Financial Reporting Standards for the year ended [31 December xxxx].

In my opinion, the amount of policy liabilities is appropriate for this purpose. The valuation conforms to accepted actuarial practice in Canada and the [consolidated] financial statements fairly present the results of the valuation.

[Montréal, Québec]  
[Report date]

[Mary F. Roe]  
Fellow, Canadian Institute of Actuaries

- .10 The language in square brackets is variable and other language may be adjusted to conform to interim financial statements and to the terminology and presentation in the financial statements.
- .11 An auditor's report usually accompanies the financial statements. Uniformity of common features in the two reports will avoid confusion to readers of the financial statements. Those common features include
- Addressees: Usually, the actuary addresses the report to the policyholders of a mutual insurer and to both the participating policyholders and shareholders of a stock insurer.
  - Years referenced: Usually, the actuary's report refers only to the current year, even though financial statements usually present results for both the current and prior years.
  - Report date: If the two reports have the same date, then they would take account of the same subsequent events.

### Communication with the auditor

.12 Communication with the auditor is desirable at various stages of the actuary's work. Examples of situations where communication with the auditor is desirable are:

- Use of the work of the other professional by both actuary and auditor;
- The drafting of common features in the auditor's report and actuary's report;
- The drafting of a report with reservation;
- The presentation of the insurance contract liabilities and other policy liabilities, including the presentation of other items in the financial statements that are valued by the actuary; and
- The treatment of subsequent events.

### Disclosure of unusual situations

- .13 The items that the actuary values for the financial statements may be misleading if the financial statements do not present them fairly. The actuary's report signals to the reader of the financial statements that there is, or is not, fair presentation.
- .14 In an unusual situation, fair presentation may require explanation of an item that the actuary values for the financial statements. Usually, the notes to the financial statements would provide that explanation, including, where appropriate, disclosure of the situation's effect on the financial statements. In the absence of such explanation in the notes, the actuary would provide it by a reservation in reporting that would include the explanation.

- .15 The question, “Will explanation enhance the user’s understanding of the insurer’s financial statements?” may help the actuary to identify such a situation. Examples of unusual situations where explanation may help the user’s understanding are:
- Capital appropriated or repatriated on the actuary’s advice;
  - Off-balance-sheet obligations (e.g., contingent policy liabilities in connection with market conduct);
  - Restatement of items for preceding financial reporting periods;
  - Inconsistency among financial reporting periods;
  - The impracticality of restating any items that are reported in current period financial statements and that were reported inconsistently in preceding period financial statements;
  - An unusual relationship between the items in current period financial statements and the expected corresponding items in future period financial statements;
  - A change in a methodology used in the valuation that does not have an effect in the current financial reporting period but that is expected to have an effect in future financial reporting periods;
  - A difference between the insurer’s present practices (e.g., policy for setting dividend scales) and those which the actuary assumed in valuing the policy liabilities; and
  - A subsequent event.

**Consistency across financial reporting periods**

- .16 Financial statements usually present results for one or more preceding financial reporting periods in comparison to those for the current period. Meaningful comparability requires the financial statement items for the various periods to be consistent, which can be achieved by the restatement of preceding period items that were previously reported on a basis which was inconsistent with that for the current period. A less desirable alternative to restatement is disclosure of the inconsistency.
- .17 A change in a methodology used in the valuation might create an inconsistency. A change in the assumptions for valuation reflecting a change in the expected outlook does not constitute an inconsistency although, if its effect is material, then fair presentation would require its disclosure.
- .18 A change in assumptions that results from the application of new standards might create an inconsistency.

### Reservations in reporting

- .19 The examples that follow are illustrative of situations where a reservation in reporting is required. Where “reference” appears in square brackets in suggested wording, a paragraph in the actuary’s report would provide the additional explanation necessary for fair presentation.

### New appointment

- .20 A newly appointed actuary who uses but is unable to take responsibility for the predecessor actuary’s work would modify the standard reporting language as follows:

I have valued the policy liabilities of [the Company] for its [consolidated] financial statements prepared in accordance with International Financial Reporting Standards for the year ended [31 December xxxx].

In performing this valuation I used the valuation of the policy liabilities at [31 December xxxx-1] which was performed by another actuary who expressed a favourable opinion without reservation as to their appropriateness and fair presentation.

In my opinion, subject to the use of another actuary’s work as noted above, the amount of policy liabilities is appropriate for the stated purpose. The valuation conforms to accepted actuarial practice in Canada and the [consolidated] financial statements fairly present the results of the valuation.

- .21 If the actuary doubts the appropriateness of the predecessor actuary’s work as a result of a review of it, then the actuary would consider a more serious reservation.

### Impracticality of restatement

- .22 The actuary would, if necessary and practical, restate the preceding year valuation to be consistent with the current year valuation. If it is not practical to restate the preceding year valuation, the actuary would modify the [opinion](#) paragraph in the standard reporting language.

- .23 An example of an inconsistency that might require restatement is a change in the methodology chosen to measure the [coverage units](#) used to allocate and recognize the [contractual service margin](#) in profit or loss, in which case the opinion paragraph of the [report](#) might appear as follows:

In my opinion, the valuation conforms to accepted actuarial practice in Canada and the amount of policy liabilities is appropriate for the stated purpose. As explained in [reference], [the methodology for XX] for the current year is inconsistent with that used in previous years. Except for that lack of consistency, in my opinion the [consolidated] financial statements fairly present the results of the valuation.

The reference would identify where to find additional information that explains the change in methodology and the impracticality of applying the new methodology retroactively and discloses the effect of the change on the financial statements.

#### **Takeover of insurer with insufficient records**

- .24 If the [insurer](#) took over another [insurer](#) with records that did not provide sufficient and reliable [data](#) for the valuation, then the [actuary](#) would modify the standard reporting language as follows:

I have valued the policy liabilities of [the Company] for its [consolidated] financial statements prepared in accordance with International Financial Reporting Standards for the year ended [31 December xxxx]. The valuation conforms to accepted actuarial practice in Canada, except as described in the following paragraph.

During the year, [the Company] took possession of the assets, liabilities, and policies of [WWW Insurer], whose policy records are, in my opinion, unreliable. [The Company] is implementing but has not completed the necessary improvements. My valuation with respect to the policies taken over from [WWW Insurer] therefore involves an unusual degree of uncertainty. The associated policy liabilities comprise [N]% of [the Company's] total policy liabilities at [31 December xxxx].

In my opinion, except for the reservation in the previous paragraph, the amount of policy liabilities is appropriate for the stated purpose and the [consolidated] financial statements fairly present the results of the valuation.

### Liabilities different than those calculated by the actuary

.25 If the financial statements of an insurer report policy liabilities that are materially different from those calculated and reported by the actuary then the actuary would need to disclose the difference in the amounts and identify where to find an explanation for the difference. If possible, such explanation would include the important reasons for the difference.

.26 The actuary could report as follows:

I have valued the policy liabilities of [the Company] for its [consolidated] financial statements prepared in accordance with International Financial Reporting Standards for the year ended [31 December xxxx]. My valuation conforms to accepted actuarial practice in Canada.

In my valuation, the amount of the policy liabilities is \$[X]. The corresponding amount in the [consolidated] financial statements is \$[Y]. The sources of this difference are described in [reference].

In my opinion, the amount of policy liabilities in the [consolidated] financial statements is not appropriate and as explained in [reference] the [consolidated] financial statements do not fairly present the results of my valuation.

### Change in assumption or methodology affecting disclosure items

.27 If an item valued by the actuary is materially affected by a change in assumption or methodology that is not disclosed in the financial statements, the actuary would modify the opinion paragraph in the standard reporting language to disclose this situation.

.28 An example of such a change might be a change in the methodology for measuring the risk adjustment for non-financial risk that materially affects financial statement disclosures related to insurance contracts initially recognized in the year.

.29 In this case the opinion paragraph of the report could be changed as follows:

In my opinion, the valuation conforms to accepted actuarial practice in Canada and the amount of policy liabilities is appropriate for the stated purpose. As explained in [reference], [the methodology for XX] was changed from that used for the previous year. Except for the absence of the disclosure of this change and its impact, in my opinion the [consolidated] financial statements fairly present the results of the valuation.

The additional information referenced in the report of the actuary would explain the change in methodology and disclose the effect of the change on financial statements.

### Examples not requiring reservation in reporting

- .30 When the actuary uses an assumption or methodology set by another party in performing the valuation of policy liabilities and the actuary is able to take responsibility for the work, the actuary would not modify the opinion paragraph in the standard reporting language.

Following are illustrative examples of such situations:

In setting discount rates, the Chief Investment Officer (CIO) of the insurer selects different reference portfolios for two groups of insurance contracts with the same liquidity characteristics creating inconsistency which the actuary considers to be unnecessary. Both reference portfolios are reasonably representative of the liquidity characteristics as required by IFRS 17. The actuary has confidence in the CIO's qualifications, competence, integrity, and objectivity.

The insurer's risk appetite framework clearly indicates that longevity risk is desirable (i.e., the insurer prices it cheaply). The actuary believes that the insurer should require more compensation than it does for taking on longevity risk, but the risk adjustment for non-financial risk reflects the insurer's requirements as required by IFRS 17.

The Chief Financial Officer (CFO) of the insurer classifies some expenses "directly attributable" as defined under IFRS 17 that the actuary would consider not "directly attributable", which results in a material impact on some components of the valuation. The CFO understands the actuary's view and the impact on the financial statements of the difference in view. The actuary has confidence in the CFO's qualifications, competence, integrity, and objectivity, and acknowledges that the CFO's view is reasonable.

## 2300 Insurance Contract Valuation: International Actuarial Standards of Practice

### 2310 General

#### Purpose

.01 When performing [actuarial services](#) in connection with [IFRS 17](#), actuaries should apply the requirements of [IFRS 17](#) and this Section 2300. [Effective January 1, 2023]

- .02 The purpose of this section is to increase [intended users'](#) confidence that
- [Actuarial services](#) are carried out professionally and with due care;
  - The results are relevant to their needs, are presented clearly and understandably, and are complete; and
  - The assumptions and methodology (including, but not limited to, [models](#) and modelling techniques) used are disclosed appropriately.

#### Relationship to IFRSs

- .03 Section 2300 refers to the content of [IFRS 17](#) and other IFRSs, including any interpretations from the International Financial Reporting Interpretations Committee (IFRIC) or its predecessor, the Standing Interpretations Committee, as issued through 16 August 2019. The guidance in this Section 2300 complements the guidance in [IFRS 17](#), which is not repeated in this Section 2300.



## 2320 Appropriate Practices

### Relevant knowledge requirements

- .01 The actuary would have or obtain sufficient knowledge and understanding of information necessary to perform the assignment, such as:
- [IFRS 17](#), applicable sections of other relevant IFRSs (e.g., IFRS 13 when measuring Fair Value), the entity's [accounting policies](#) and the relevant processes that are applied in the preparation of IFRS financial statements;
  - The business environment in which the entity operates, including the financial market(s) from which it obtains [data](#);
  - The entity's appetite for risks that have an impact on the measurement under [IFRS 17](#);
  - The entity's products and operations;
  - The methodologies and assumptions used by the entity in other relevant contexts and the rationale for any differences;
  - How [laws](#) affect the application of [IFRS 17](#); and
  - The relevant auditing standards.

### Materiality

- .02 The actuary would understand the distinction between materiality with respect to the [actuarial services](#), the preparation of IFRS financial statements and the auditing of those financial statements.
- When appropriate for the work, the actuary would seek guidance from the [principal](#) or the entity regarding materiality.
  - In applying subsection 1240, with respect to the preparation of IFRS financial statements, the actuary's threshold of materiality with respect to the [actuarial services](#) would not be greater than the entity's threshold of materiality.
  - In all following paragraphs of Section 2300, any use of 'material' or 'materiality' is with respect to the [actuarial services](#) carried out in accordance with this section.

### Proportionality

- .03 The degree of refinement in specific assumptions or methods recommended by the actuary would be proportionate to their possible impact on the results of the [actuarial services](#).

**Identification, combination, aggregation, separation, recognition, derecognition, and modification**

.04 The actuary would treat the processes of:

- Identification of [insurance contracts](#);
- Combination of [insurance contracts](#);
- Determination of the level of aggregation (refer to 2320.17);
- Separation of components from an [insurance contract](#) for treatment under a different standard;
- Separation of components of an [insurance contract](#) for different treatment under [IFRS 17](#) (if and to the extent permitted);
- Recognition of [groups of insurance contracts](#) and derecognition of [insurance contracts](#); and
- Treatment of [insurance contract](#) modifications

as work subject to paragraph 2210.05.

The actuary would disclose in the actuary's report changes in the above processes, including the rationale for and impact of the changes.

**Measurement approach**

.05 The actuary would treat the processes of selecting the appropriate measurement approach to be applied to each [group of insurance contracts](#), whether it is the [general measurement approach](#), the premium allocation approach ([PAA](#)), or the [variable fee approach](#), as work subject to paragraph 2210.05.

The actuary would disclose in the actuary's report changes in the above processes, including the rationale for and impact of the changes.

## The General Measurement Approach

.06 **General approach for selection of assumptions** – In applying Part 1000, when advising the [principal](#) or the entity on actuarial assumptions, the [actuary](#) would consider matters such as:

- Combining similar risks based on the nature of the insurance obligation, without being constrained by the actual grouping of [insurance contracts](#) that is used for measurement purposes;
- Whether assumptions developed in other contexts, for example pricing assumptions, may be inappropriate for [IFRS 17](#) purposes;
- Links as necessary to ensure consistency between assumptions, (e.g., assumptions related to option exercise patterns would be linked to the economic [scenarios](#));
- The potential asymmetrical distribution of the current estimates (e.g., assumptions to deal with extreme events like tail events or options and guarantees that are triggered by market conditions);
- The credibility of [data](#) when combining information from various sources or time periods; and
- Long term [trends](#) and seasonal variations, and other changes in the environment (e.g., applicable [law](#), economic, demographic, technological and social).

.07 **Process for updating assumptions** – If the [actuary](#) considers it appropriate to change the process, including the methodology, used to update a recommended assumption, the [actuary](#) would discuss the change with the [principal](#), including whether it would constitute a change in [accounting policy](#) or just a change in an accounting estimate as defined in the International Accounting Standard 8 (IAS 8) *Accounting Policies, Changes in Accounting Estimates and Errors*.

The [actuary](#) would disclose in the [actuary's report](#) changes in such processes, including the rationale for and impact of the changes.

### Specific considerations for insurance risks

- .08 **Insurance risks** – When advising the [principal](#) or the entity on assumptions to measure [insurance risks](#), the [actuary](#) would consider relevant factors including the following:
- Characteristics of the [insurance contract](#) including the risks being insured;
  - Characteristics of the [policyholder](#) and the way the contract was sold;
  - Past experience of incurred claims including patterns of delays in reporting and payment and the relevance to expected future experience; and
  - Practices of the entity such as underwriting procedures and claims management.
- .09 **Policyholder Options** – When advising the [principal](#) or the entity on assumptions for the exercise of options by [policyholders](#), the [actuary](#) would consider factors such as the following:
- Past experience of how [policyholders](#) have exercised options;
  - Likely behaviour of [policyholders](#), taking into account factors such as anti-selection, the effects of non-financial considerations, and the relative advantages to the [policyholder](#) of exercising any options;
  - Characteristics of how the [insurance contracts](#) are sold and serviced;
  - Significant scheduled changes in premiums, charges, benefits or terms and conditions; and
  - Any short-term spikes in cancellation rates created by the exercise of certain options.
- .10 **Entity Discretion** – When advising the [principal](#) or the entity on assumptions which consider the exercise of discretion by the entity, the [actuary](#) would take into account expectations, or limitations that may arise from sources, such as
- The entity’s marketing and promotional materials;
  - The entity’s past practices;
  - The entity’s current policy;
  - Market practices; and
  - [Laws](#) and rulings of relevant authorities.

- .11 **Reinsurance Contracts Held** – When advising the [principal](#) or the entity on the measurement of [reinsurance contracts](#) held, the [actuary](#) would
- When estimating amounts recoverable under multiple reinsurance arrangements, consider the order in which the [reinsurance contracts](#) apply;
  - When estimating non-recoverable amounts, consider the [financial condition](#) of the reinsurer, the existence of collateral and the extent to which default by one reinsurer may affect the amounts recoverable from other reinsurers; and in the estimates of future cash flows to be received from [reinsurance contracts](#), allow for the uncertainty caused by the potential of non-performance by reinsurers;
  - When estimating [fulfilment cash flows](#), consider the extent to which each reinsurance counterparty exercises its control over recapture, cancellation or commutation to its advantage; and
  - Consider the impact of reinstatement of [reinsurance contracts](#) following claims.
- .12 **Reinsurance Contracts Issued** – When advising the [principal](#) or the entity on the measurement of [reinsurance contracts](#) issued, the [actuary](#) would consider circumstances such as:
- The expected behaviour with respect to the available options of the [policyholders](#), the issuer of the underlying [insurance contracts](#) and all intermediate reinsurers;
  - The underwriting and management practices, including the underwriting of facultative placements, and the claim management processes impacting the [reinsurance contracts](#) issued;
  - Reinstatements of [reinsurance contracts](#) following claims; and
  - Default by the issuer of the underlying [insurance contracts](#) and all intermediate reinsurers.
- .13 **Currency exchange** – When advising the [principal](#) or the entity on the estimation of [fulfilment cash flows](#) in multiple currencies, the [actuary](#) would reflect current market expectations of future currency exchange rates.

- .14 **Discount rates** – When advising the [principal](#) or the entity on the derivation of
- Discount rates for periods beyond those for which observable [data](#) from an active market is available, the [actuary](#) would consider how current rates are expected to evolve over time using the best information available in the circumstances, including such market prices as are observable;
  - Discount rates for cash flows of [insurance contracts](#) that vary with returns of the entity's invested assets, the [actuary](#) would consider the entity's investment policy, as applied in practice, taking into account the entity's [communications](#) to various stakeholders and, where applicable, anticipated [policyholder](#) behaviour;
  - Illiquidity and credit or default adjustments for determining the discount rates, the [actuary](#) would consider
    - Approaches that are robust and that would be able to be applied reliably over time and under a variety of market conditions, to reflect the illiquidity of the cash flows underlying the relevant liabilities; and
    - The possible methods for calculating such adjustments to observed market rates. Methods include market-based techniques, structural model techniques and expected/unexpected credit loss techniques.
- .15 **Contracts with cash flows that vary with returns on underlying items** – When advising the [principal](#) or the entity on contracts whose cash flows vary with returns on [underlying items](#), the [actuary](#) would
- Select discount rates used to calculate the present value of the cash flows to measure the [fulfilment cash flows](#) that are consistent with the investment returns anticipated in the estimates of the future cash flows. Returns on assets would be estimated using prospective expectations consistent with current market expectations of future economic conditions; and
  - For cash flows which are subject to a floor or a cap, consider the associated impact, if any, on the estimates of future cash flows, the [risk adjustment for non-financial risk](#) and the discount rates in the projection.

- .16 **Maintenance expenses** – When advising the [principal](#) or the entity on the estimation of cash flows for maintenance expenses, such as policy administration and claim handling costs, and attributable overheads, the actuary would consider factors such as:
- The entity’s cost-accounting and expense allocation policies;
  - Expenses expected to arise from fulfilling insurance obligations existing on the [measurement date](#). This estimate would consider factors such as the entity’s past experience and current business plans, and the impact of future inflation; and
  - Terms of any outsourcing arrangements.
- .17 **Insurance acquisition cash flows** – The actuary would be satisfied that the allocation of [insurance acquisition cash flows](#) to each [portfolio of insurance contracts](#) is made on a consistent basis.

- .18 **Risk adjustment for non-financial risk** – When advising the [principal](#) or the entity on the [risk adjustment for non-financial risk](#), the [actuary](#) would
- Understand the [non-financial risk](#) inherent in the [insurance contracts](#);
  - In assessing what the entity requires as compensation for bearing the [non-financial risk](#):
    - Reflect the diversification benefit that the entity recognizes at the relevant level of consolidation; and
    - Consider sources of relevant information such as the entity’s capital management, risk management and pricing policies;
  - Select a methodology that, at the chosen level of aggregation
    - Uses assumptions that are consistent with those used in the determination of the corresponding estimates of future cash flows;
    - Reflects the risk differences between the [portfolios of insurance contracts](#); and
    - Allows for the diversification that the entity recognizes.
  - Make appropriate allowance for mechanisms that result in risk being passed to the [policyholder](#) (e.g., contracts with participation or adjustment features);
  - Consider whether the difference between the total of the calculated gross [risk adjustments for non-financial risk](#) and the total of the ceded [risk adjustment for non-financial risk](#) fairly reflects the compensation that the entity requires for bearing the uncertainty of its net exposure; and
  - When advising on the confidence level disclosure required by [IFRS 17](#), where the [risk adjustment for non-financial risk](#) has not been determined using a specified confidence level approach, consider
    - The ability to diversify [non-financial risk](#) over the entity’s consolidated business; and
    - The inherent uncertainty in the translation to a confidence level and the need to describe such uncertainty in the [actuary’s report](#).



.19 **Aggregation and Contractual Service Margin (CSM)** – The actuary would treat the processes of

- Identification of portfolios of insurance contracts;
- Allocation of individual insurance contracts into portfolios of insurance contracts, and division of each portfolio of insurance contracts into groups of insurance contracts;
- Treatment of the loss component on onerous contracts;
- Determination of the coverage units; and
- Roll forward of the contractual service margin

as work subject to paragraph 2210.05.

The actuary would disclose in the actuary's report changes in the above process, including the rationale for, and impact of the changes.

### The Premium Allocation Approach (PAA)

.20 When advising the [principal](#) or the entity in relation to the use of the [PAA](#) for a [group of insurance contracts](#), the [actuary](#) would

- At initial recognition, if the [coverage period](#) is longer than one year, consider:
  - Differences between the expected patterns of insurance revenue under the [general measurement approach](#) and under the [PAA](#);
  - Differences between the expected timing of cash flows under the [general measurement approach](#) and the insurance revenue under the [PAA](#), resulting in different adjustments for the time value of money; and
  - Whether future assumption changes under the [general measurement approach](#) would render the simplification invalid when assessing whether material differences between the respective carrying amounts of the [liabilities for remaining coverage](#) under the [PAA](#) and the [general measurement approach](#) are reasonably expected to arise;
- Assess whether [insurance contracts](#) in the group have a significant financing component, advise the [principal](#) or the entity accordingly, and measure the liability accordingly;
- Be aware of whether the entity has chosen, in accordance with [IFRS 17](#), to recognize [insurance acquisition cash flows](#) as expenses when it incurs those costs and determine the liability in accordance with the entity's choice;
- Be aware of whether the entity has chosen to reflect the time value of money and the effect of [financial risk](#), when not required to do so, and determine the liability in accordance with the entity's choice; and
- Consider whether facts and circumstances indicate that the [group of insurance contracts](#) is or has become onerous and advise the [principal](#) or the entity accordingly.

### The Variable Fee Approach

.21 In using the [variable fee approach](#), the [actuary](#) would apply the guidance for the [general measurement approach](#) except for 2320.09 (Reinsurance Contracts Held) and 2320.10 (Reinsurance Contracts Issued), as the [variable fee approach](#) does not apply to reinsurance.

### Financial statement presentation and disclosure

- .22 Where the information provided by the actuary will be used in financial statement presentation and disclosure,
- The actuary would provide the related information needed to comply with the relevant presentation and disclosure requirements of [IFRS 17](#) and the entity's [accounting policies](#); and
  - If the actuary becomes aware that such information is used in the presentations and/or disclosures incorrectly or inappropriately, the actuary would discuss and report these issues to the [principal](#).
- .23 In providing advice on the disclosures of reconciliations where the order of calculation alters the information disclosed, the actuary would apply a consistent order of calculation across all reconciliations and from period to period, or disclose any change, including the rationale for and impact of the change, in the actuary's report.

### Transition

- .24 When advising the [principal](#) or entity on whether the full retrospective application of [IFRS 17](#) at transition is impracticable, the actuary would take into consideration factors such as:
- The availability and integrity of the past [data](#) that are required to determine the [fulfilment cash flows](#);
  - The availability and integrity of information on past products;
  - The availability, without the benefit of hindsight, of sufficient [data](#) to determine the initial assumptions and subsequent changes that the entity would have adopted over the lifetime of the [insurance contracts](#);
  - The method that would have been used to adjust past known interest rates to achieve the rates that reflect the characteristics of the [insurance contracts](#); and
  - The difficulty, without the benefit of hindsight in evaluating the past [risk adjustment for non-financial risk](#) and entity's use of discretion.

## 2330 Communication

### Disclosures

- .01 In addition to complying with Section 1700, in any report other than the summary report described in subsection 2230, the actuary would disclose in the actuary's report
- Information regarding a change in assumptions or method, whether arising from a consistent or changed process;
  - Changes in processes, together with the rationale for and impact of the changes, related to
    - The identification, combination, aggregation, separation, recognition, derecognition and modification (2320.02);
    - The selection of the measurement approach (2320.03);
    - The process for updating assumptions (2320.05);
    - Aggregation and contractual service margin (2320.17); and
    - The order of calculation on reconciliation provided for financial statement presentation and disclosure (2320.21); and
  - When the risk adjustment for non-financial risks has not been determined using a confidence level approach, the uncertainty inherent in the translation to a confidence level (2320.16).

## 2800 Public Personal Injury Compensation Plans

### 2810 Scope

- .01 The standards in this section apply to public personal injury compensation plans for both the valuation of insurance contracts and other obligations for financial reporting in accordance with IFRS 17 and the valuation of benefits liabilities for funding purposes.
- .02 Subsection 2820 applies to the valuation of insurance contracts and other obligations for financial reporting in accordance with IFRS 17.
- .03 Subsection 2830 applies to the work and advice an actuary provides with respect to the valuation of benefits liabilities for funding purposes.
- .04 The standards in subsection 2840 provide requirements for a gain and loss analysis resulting from the valuation of insurance contracts and other obligations for financial reporting in accordance with IFRS 17 or the valuation of benefits liabilities for funding purposes.
- .05 The standards in subsection 2850 provide requirements for the sensitivity analysis to be conducted for the valuation of insurance contracts and other obligations for financial reporting in accordance with IFRS 17 or the valuation of benefits liabilities for funding purposes.
- .06 The standards in subsection 2860 replace those in subsection 2230 and provide requirements for reporting on valuation of insurance contracts and other obligations for financial reporting in accordance with IFRS 17 or the valuation of benefits liabilities for funding purposes, including the actuary's opinion, reporting on the gain and loss analysis required under subsection 2840 and reporting of the work related to sensitivity testing required under subsection 2850 resulting from valuations.
- .07 The standards in this section may provide useful guidance for other work of an actuary for a public personal injury compensation plan, such as work on the development of assessment rates or premiums, the costing of insurance contract or policy changes, or work on experience-rating programs.

## 2820 Valuation of Insurance Contracts and Other Obligations for Financial Reporting

- .01 The actuary should follow the requirements under Sections 2100, 2200, and 2300 based on the accounting policies adopted by the public personal injury compensation plan for financial reporting under IFRS 17. [Effective January 1, 2023]
- .02 Notwithstanding paragraph 2820.01 above, the actuary should follow the reporting requirements under subsection 2860 in lieu of those prescribed in subsection 2230. [Effective January 1, 2023]

## 2830 Valuation of Benefits Liabilities for Funding Purposes

- .01 This subsection 2830 applies to the work and advice an actuary provides under the terms of an appropriate engagement for purposes of the funding of a public personal injury compensation plan.
- .02 Sections 2100, 2200 other than subsection 2230, and section 2300 apply to the work under this subsection with the exceptions and variations as noted below.

### 2831 Circumstances Affecting the Work

- .01 The actuary's work on the valuation of the benefits liabilities or other items for the purpose of providing input into its funding arrangements should take into account the circumstances affecting the work. [Effective January 1, 2023]
- .02 For the purposes of subsection 2830, the circumstances affecting the work would include:
- Terms of the relevant statute and regulations;
  - Relevant policies and practices of the public personal injury compensation plan; and
  - Terms of an appropriate engagement under which the work is being performed.
- .03 The terms of an appropriate engagement would define the role of the actuary and the purpose of the work. The work of the actuary may be limited to the valuation of the benefits liabilities, or the work may also include advice on the funding of the public personal injury compensation plan, its financial position, and any other actuarial item required under the terms of an appropriate engagement.

- .04 The terms of an appropriate engagement may specify applicable policies of the public personal injury compensation plan relevant to the work of the actuary. These policies may include a funding policy, operational policies and practices, and an investment policy.
- .05 Significant terms of an appropriate engagement may stipulate one or more of:
- Use of a specified asset value or method of asset valuation;
  - The treatment of self-insured employers;
  - The conditions considered in the liability for potential future occupational disease claims; and
  - Depending on the circumstances affecting the work, treatment of definitive amendments and other pending changes.
- .06 Objectives of funding specified by the terms of an appropriate engagement may include, but are not limited to, a specific funding target, the security of benefits, a principle of equity among various groups of employers or various groups of individuals or among generations, or a funding approach for occupational disease claims.
- .07 The purpose of the work may influence one or more of:
- The assumptions chosen for the valuation, including the discount rate;
  - The methods used in the valuation; and
  - The provision for adverse deviations included in the valuation, if any.
- .08 The actuary would consider the plan's funding and investment policies.
- .09 For the purposes of subsection 2830:
- New injury costs refers to the actuarial present value of benefits payable by the plan in respect of all new injuries incurred in a period, whether reported or not, including a provision for the incurred exposure to long latency occupational diseases during the same period, where appropriate.
  - Required revenue is an estimate of the amount necessary to fund the plan including new injury costs, plan administrative expenses, and any revenue adjustment required by the plan's funding policy to respond to its financial position.

- .10 A funding valuation may be completed to determine any or all of the following:
- The plan's financial position under the funding valuation basis;
  - An estimate of new injury costs for periods following the calculation date;
  - An estimate of required revenue for periods following the calculation date; and
  - The sufficiency of proposed premium or assessment rates.

## 2832 Economic Assumptions

- .01 The economic assumptions chosen for the valuation should be consistent with the plan's funding and investment policies. [Effective January 1, 2023]
- .02 The economic assumptions that are needed would depend on the nature of the benefits that are being valued, and may vary by year. Generally, the needed economic assumptions would include a discount rate and various inflation rate assumptions such as general inflation, wage inflation, and health care inflation.
- .03 The economic assumptions chosen for the valuation would be internally consistent. In particular, the chosen assumptions would generally be appropriate for a similar time horizon. For example, a long-term investment rate of return assumption would generally not be combined with an inflation assumption based on short-term expectations. Similarly, the valuation would generally not mix assumptions based on current market prices (e.g., market-implied inflation expectation) with those not based on current prices.
- .04 When determining a best estimate assumption for the expected rate of investment return, the actuary would take into account the expected investment return on the assets of the public personal injury compensation plan at the calculation date and the expected investment policy after that date.
- .05 In establishing the assumption for the expected rate of investment return, the actuary would assume that there would be no additional returns achieved, net of investment expenses, from an active investment management strategy compared to a passive investment management strategy except to the extent that the actuary has reason to believe, based on relevant supporting data, that such additional returns will be consistently and reliably earned over the long term.
- .06 The expected investment expenses would depend on the investment policy of the plan, the types of investments held and projected to be held in the future, and the nature of investment operations.



- .07 The actuary may adopt an assumption for the expected rate of investment return that varies depending on the part of the public personal injury compensation plan being valued and the assets backing the liabilities in that part.
- .08 The economic assumptions need not be a flat rate but may vary from period to period.

### 2833 Margins for Adverse Deviations

- .01 The actuary should only include margins for adverse deviations when the circumstances affecting the work require such margins. A non-zero margin should be sufficient, without being excessive, and should have the effect of increasing the benefits liabilities or reducing the reported value of the offsetting assets, the computation of which falls within the scope of the work of the actuary. In addition, the provision resulting from the application of all margins for adverse deviations should be appropriate in the aggregate. [Effective January 1, 2023]
- .02 If the actuary is required by legislation, regulation, or the funding policy of the plan to use a margin for adverse deviations that is outside the range that the actuary considers appropriate, the actuary should use such an imposed assumption, subject to the disclosure requirements under subsection 2860. [Effective January 1, 2023]
- .03 The actuary's decision with respect to margin for adverse deviations may reflect considerations such as
- Funding policy of the public personal injury compensation plan;
  - Relative importance placed on the balancing of competing interests compared to the achievement of full funding;
  - Underlying adaptability of the plan to changes in financial position;
  - Legislative requirements regarding margins;
  - Intergenerational equity among employers and other groups;
  - Level of uncertainty inherent in the assumptions;
  - Level of reliability or credibility of the data or historical information upon which the assumptions are based;
  - Asset/liability mismatch risk;
  - Propensity for ad hoc changes to be made to plan conditions; and
  - Legislative or other restrictions on the ability to mitigate past losses.

- .04 Examples of situations where the circumstances affecting the work might require a best estimate calculation include
- Legislation governing the plan may require a best estimate calculation; or
  - The plan's funding policy may recognize the monopoly nature of the plan and place a high priority on equity among generations, employers, and other groups.

## 2840 Gain and Loss Analysis

- .01 For each of the valuation for financial reporting purposes under subsection 2820 and valuation for funding purposes under subsection 2830, the actuary should conduct a gain and loss analysis, including a comparison of actual and expected experience for the period between the prior calculation date and the current calculation date. [Effective January 1, 2023]
- .02 The actuary should also conduct a reconciliation of the surplus or deficit position of the plan, provided that such reconciliation is in accordance with the terms of an appropriate engagement. [Effective January 1, 2023]
- .03 The actuary's analysis would include all material gains and losses. At a minimum, the actuary's gain and loss analysis would consider the impact of any significant changes to the assumptions or methods used, any significant changes to the benefits or policies of the plan, legislative changes, investment returns on the plan's assets different from the assumed basis (if reconciling the surplus or deficit position of the plan), and any other areas where the difference between actual and expected experience is significant.
- .04 The actuary would report a change in assumption if the current assumption differs nominally from the corresponding prior assumption, unless the change in the nominal amount results from the application of the same calculation method. For example, if certain rates used in the valuation are based on historical claims experience and calculated using the same averaging formula, the difference in assumed rates between the calculation date and the prior calculation date would not normally be considered as a change in assumptions. Nevertheless, the actuary may choose to disclose the effect of the updated rate assumption on the valuation results.

## 2850 Sensitivity Analysis

- .01 For each of the valuation for financial reporting purposes under subsection 2820 and valuation for funding purposes under subsection 2830, the actuary should perform sensitivity testing of adverse scenarios, to illustrate and aid the understanding of the effect of adverse changes to assumptions. [Effective January 1, 2023]
- .02 The adverse scenarios that the actuary tests should include at least:
- A decrease of 100 basis points in the gross discount rate used for the valuation; and
  - An increase of 100 basis points in the assumed general rate of inflation while maintaining the gross discount rate at the value used in the underlying valuation. [Effective January 1, 2023]
- .03 The actuary should consider other scenarios that, in the actuary's judgment, represent plausible material risks to which the plan may be exposed, and provide sensitivity testing of those scenarios where appropriate given the circumstances affecting the work. [Effective January 1, 2023]
- .04 When selecting the assumptions and scenarios for sensitivity testing, the actuary would consider the circumstances affecting the work, and would select those assumptions that have a material impact on the benefits liabilities. The actuary may consider testing integrated sensitivity scenarios; for example, the effect of a deep and prolonged recession.
- .05 The actuary may also perform sensitivity testing of favourable scenarios.

## 2860 Reporting

- .01 For each of the valuation for financial reporting purposes under subsection 2820 and valuation for funding purposes under subsection 2830, the actuary should prepare a report in accordance with the circumstances affecting the work. [Effective January 1, 2023]
- .02 If the actuary can report without reservation, then the actuary's report should conform to the standard reporting language. Otherwise, the actuary should modify the standard reporting language to report with reservation. [Effective January 1, 2023]

.03 An external user report on the work pursuant to subsection 2820 should:

- When the insurance contract liabilities and other obligations disclosed in the financial statements are different than the benefits liabilities calculated under subsection 2830 for funding purposes, the actuary should so state, explain the reason for the difference and provide the effect on the funding level reported in the financial statements;
- Where included in the measurement of insurance contract liabilities, the actuary should disclose the present value of future premium adjustments comprised in the assessment of the fulfillment cash flows for financial reporting purposes, including the underlying methodology and assumptions; and
- Describe the actuary's role in the preparation of the public personal injury compensation plan's financial statements if that role is not described in those statements or their accompanying management discussion and analysis. [Effective January 1, 2023]

.04 An external user report on work pursuant to subsection 2830 should:

- When the benefits liabilities calculated for funding purposes are different than the insurance contract liabilities and other obligations calculated under subsection 2820 for financial reporting purposes, the actuary should so state, explain the reason for the difference and provide the effect on the funding level reported for funding purposes;
- Report the aggregate provision for adverse deviations included in the benefits liabilities or state that there is no provision for adverse deviations where that is the case; and
- Disclose any imposed margins that the actuary has used in accordance with paragraph 2833.02 that, in the opinion of the actuary, are outside of the appropriate range and also disclose the reason and the financial impact. [Effective January 1, 2023]

- .05 The actuary's report on work pursuant to section 2800 should also
- Describe any significant terms of the appropriate engagement that are material to the actuary's work, including the purpose of the work;
  - State the calculation date and the prior calculation date;
  - Identify, and where applicable, conform to, the legislation or other authority under which the work is completed;
  - Describe the sources of data, benefit provisions, and policies used in the work, and any limitations thereon;
  - Summarize the data used for the valuation, the data tests conducted to assess the accuracy and completeness of the data used in the work, issues regarding insufficient or unreliable data, and any assumptions and methods used in respect of insufficient or unreliable data;
  - Describe the plan's benefits, significant policies, and relevant administration practices, including the identification of any amendments made since the prior calculation date, and the effect of such amendment on the benefits liabilities;
  - Disclose the measurement approach used;
  - Describe the assumptions and methods used to calculate the benefits liabilities;
  - Summarize the insurance contracts and other obligations or benefits liabilities, as may be applicable;
  - Describe the treatment of insurance contracts and other obligations or benefit liabilities for self-insured employers, as may be applicable;
  - Describe the treatment of the liabilities for occupational disease claims;
  - Describe and quantify the gains and losses between the prior calculation date and the current calculation date, and provide an analysis and explanation of the significant gain and loss items;
  - If required by the terms of an appropriate engagement, provide an opinion on the sufficiency of proposed premium or assessment rates; and
  - If the the terms of an appropriate engagement do not include a request to report the results of the sensitivity testing that was completed, be accompanied by a separate report for the management of the public personal injury compensation plan that does include such sensitivity testing results. [Effective January 1, 2023]

.06 Where the terms of an appropriate engagement require the actuary to provide information on the plan's financial position for funding purposes or cost of new injuries for rate setting purposes, the actuary should:

- Describe the sources of information on the plan's assets;
- Describe the plan's assets, including their market value, the assumptions and methods used to value the assets, and a summary of the assets by major category;
- Report the financial position for funding at the calculation date;
- Describe the determination of new injury costs or required revenue (all components separately) for periods following the calculation date; and
- Report the estimate of new injury costs or required revenue (total and all components separately) for a specified period following the calculation date and disclose the amount that constitutes the portion of new accident costs attributable to the incurred exposure to long latency occupational diseases during the same period, where applicable. [Effective January 1, 2023]

.07 An external user report would be sufficiently detailed to enable another actuary to examine the reasonableness of the valuation.

.08 The descriptions and estimates required in an external user report may be satisfied by reference to another report provided the actuary is satisfied that the work presented in that report is appropriate. For instance, the liability estimate for potential future occupational disease claims or future administrative expenses may be based on a previous study of the plan's experience that is updated periodically. The details underlying these estimates could be incorporated by referencing the last study on which they are based rather than incorporating that material directly into the valuation report. Similarly, a report prepared for one purpose (e.g., funding) may reference material in a report prepared for another purpose (e.g., financial reporting) where appropriate.

.09 An internal user report may appropriately abbreviate the reporting requirements for an external user report. The degree of abbreviation would take into consideration the circumstances affecting the work and the intended audience.

.10 The actuary's advice on funding may describe a range for required revenue including disclosure of any premium rate adjustment resulting from the application of the funding policy or expected new injury costs. Funding requirements may be expressed in dollars or as a percentage of assessable payroll.

### Disclosure of Unusual Situations

- .11 The items that the actuary values for the financial statements may be misleading if the financial statements do not present them fairly. The actuary's report signals to the reader of the financial statements that there is, or is not, fair presentation.
- .12 In an unusual situation, fair presentation may require explanation of an item that the actuary values for the financial statements. Usually, the notes to the financial statements would provide that explanation, including, where appropriate, disclosure of the situation's effect on the financial statements. In the absence of such explanation, the actuary would provide it by a reservation in reporting.
- .13 The question, "Will an explanation enhance the user's understanding of the public personal injury compensation plans financial position or performance?" may help the actuary to identify such a situation. Unusual situations may include:
- Any significant changes to the relevant statute, strategic direction, or management policy, or any significant appeal decision that would likely change management policy or practice, since the prior calculation date and the consequent effect on the benefits liabilities;
  - Any pending definitive or virtually definitive amendment, policy change, or change to administration practice, confirm whether or not such amendment or change has been reflected in the insurance contracts and other obligations or benefits liabilities;
  - Subsequent events of which the actuary is aware, whether or not the events are taken into account in the work, or, if there are no significant events of which the actuary is aware, include a statement to that effect;
  - A major change in coverage status from self-insured to premium paying or vice versa and the actual or expected impact on the financial position and financial performance; and
  - The circumstances affecting the work may result in a deviation from accepted actuarial practice in Canada. For example, the applicable legislation or the terms of the engagement may require that the actuary use a margin for adverse deviations that is outside the range that the actuary considers appropriate, or require that the actuary exclude the benefits liabilities in respect of certain claims, such as occupational disease claims. In such case, the actuary would disclose such deviation in the report.

### Consistency across financial reporting periods

- .14 Financial statements usually present results for one or more preceding financial reporting periods in comparison to those for the current period. Meaningful comparability requires the financial statement items for the various periods to be consistent, which can be achieved by the restatement of preceding period items that were previously reported on a basis which was inconsistent with that for the current period. A less desirable alternative to restatement is disclosure of the inconsistency.
- .15 A change in the method of valuation creates an inconsistency. A change in the assumptions for valuation reflecting a change in the expected outlook does not constitute an inconsistency although, if its effect is material, then fair presentation would require its disclosure.
- .16 A change in assumptions that results from the application of new standards may create an inconsistency.

### Communication with the auditor

- .17 Communication with the auditor is desirable at various stages of the actuary's work. These include
- Use of work in accordance with the Joint Policy Statement;
  - The drafting of common features in the auditor's report and actuary's report;
  - The drafting of a report with reservations;
  - The presentation of the insurance contracts liabilities and other obligations; and
  - The treatment of subsequent events.



## Standard reporting language

.18 The standard reporting language is as follows:

### **Actuary's Report**

An external user report for work pursuant to Subsections 2820 and 2830 should provide the following six statements of [opinion](#), all in the same section of the respective report:

- A statement regarding [data](#), which would usually be, “In my opinion, the data on which the valuation is based are sufficient and reliable for the purpose of the valuation.”;
- A statement regarding assumptions, which would usually be, “In my opinion, the assumptions are appropriate for the purpose of the valuation.”;
- A statement regarding methods, which would usually be, “In my opinion, the methods employed in the valuation are appropriate for the purpose of the valuation.”;
- A statement regarding conformation, which should be, “This report has been prepared, and my opinions given, in accordance with accepted actuarial practice in Canada.”; and
- For valuations under subsection 2820, include a statement regarding appropriateness, which would usually be, “In my opinion, the [amount of insurance contracts liabilities] make appropriate provision for all personal injury compensation obligations given the plan’s accounting.”; or
- For valuations under subsection 2830, include a statement regarding appropriateness, which would usually be, “In my opinion the [amount of benefits liabilities and estimated funding requirements] make appropriate provision for all personal injury compensation obligations given the plan’s funding policy.”. [Effective January 1, 2023]

.19 The language in square brackets is variable and other language may be adjusted to conform to interim financial statements and to the terminology and presentation in the financial statements.

.20 An auditor's report usually accompanies the financial statements. Uniformity of common features in the two reports will avoid confusion to readers of the financial statements. Those common features include

- Addressees: Usually, the actuary addresses the report to the Board of Directors.
- Years referenced: Usually, the actuary's report refers only to the current year, even though financial statements usually present results for both the current and prior years.
- Report date: If the two reports have the same date, then they would take account of the same subsequent events.

### **Reservations in reporting**

.21 The examples that follow are illustrative and not exhaustive.

### **New appointment**

.22 A new actuary who is unable to use the predecessor actuary's work, but who has no reason to doubt its appropriateness, would modify the standard reporting language as follows:

I have valued the insurance contracts liabilities of [the PPICP] for its financial statements at [31 December xxxx] and, except as noted in the following paragraph, their change in the statement of financial performance for the year then ended in accordance with accepted actuarial practice in Canada, including selection of appropriate assumptions and methods.

The insurance contracts liabilities at [31 December xxxx-1] were valued by another actuary who expressed a favourable opinion without reservation, as to their appropriateness.

In my opinion, the amount of insurance contracts liabilities, is appropriate and the financial statements fairly present the results of the valuation. For the reason stated in the previous paragraph, I am unable to say whether or not those results are consistent with those for the preceding year.

.23 If the actuary doubts the appropriateness of the predecessor actuary's work as a result of a review of it, then the actuary would consider additional disclosure about the reasons underlying the reservation.

### **Impracticality of restatement**

- .24 The actuary would, if necessary, restate the preceding year valuation to be consistent with the current year valuation. If it is not practical to restate the preceding year valuation, then the actuary would modify the opinion paragraph in the standard reporting language as follows:

In my opinion, the amount of insurance contract liabilities is appropriate. As explained in Note [XX], the method of valuation for the current year is inconsistent with that for the previous year. Except for that lack of consistency, in my opinion the financial statements fairly present the results of the valuation.

Note [XX] would usually explain the change in the basis of valuation, explain the impracticality of applying the new basis retroactively, and disclose the effect of the change on the opening financial position at the end of the preceding year.

## 6100 Scope

.01 The standards in part 6000 apply as follows:

- Section 6200 applies to advice that an actuary provides regarding the funding, funded status, financial position, or the financial condition with respect to a post-employment benefit plan, except where such advice relates to items covered by section 6300 or section 6400;
- Section 6300 applies to advice that an actuary provides regarding the funding, funded status, financial position, or the financial condition with respect to the wind-up, in full or in part, of a post-employment benefit plan; and
- Section 6400 applies to advice that an actuary provides regarding financial reporting of a post-employment benefit plan's costs and obligations in the employer's financial statements, or the post-employment benefit plan's financial statements, or the financial statements of a trust associated with the post-employment benefit plan, where the calculations and advice are provided in accordance with an applicable financial reporting standard.

For the purposes of determining whether section 6300 applies, the wind-up of a post-employment benefit plan would involve the termination of future benefits for some or all plan members, the termination of some or all plan benefits and the distribution of some or all of the plan's assets, if any. Examples of work with respect to wind-ups include the calculation of benefit plan costs or entitlements:

- When a benefit trust is being replaced with an insured arrangement;
- Where assets from a company's liquidation may be provided as cash in lieu of employee benefit plans upon insolvency or upon the wind-up of a post-employment benefit plan trust; and
- Where the plan sponsor offers cash in lieu of future benefits.

The cessation of benefit accruals or termination of a post-employment benefit plan, not involving the termination of plan benefits and distribution of plan or other assets, would not constitute a plan wind-up. For example, the closure of a post-employment benefit plan to future new members would not constitute a wind-up.

- .02 The standards in sections 6200 through 6400 apply to an actuary's advice with respect to a post-employment benefit plan that provides benefits other than pension benefits to the plan's members and their covered spouses and dependants, whether funded or not, whether insured or not, and whether in the private or public sector. Such plans include any arrangement that provides:
- Long-term employee benefits (and compensated absences) including long-service leave or sabbatical leave, jubilee or other long-service benefits, long-term disability benefits, and profit sharing, bonuses, and other deferred compensation such as retiring allowances that are to be paid far enough into the future to be considered to be a post-employment benefit (long-term employee benefits would generally include benefits that commence or continue to be payable more than 12 months after the initial incident that caused the benefit to be paid; for example, long-term disability benefits);
  - Short-term employee benefits (and compensated absences) that accumulate or vest, such as accumulated sick days or vacation days that can be saved in one period and drawn or paid out in another period;
  - Benefits to which plan members become entitled when they are no longer actively at work, such as post-employment life insurance or post-employment health care; and/or
  - Termination benefits payable to an employee as a result of termination of employment, if some or all of the benefits are payable on or after the date of termination of employment.
- .03 The standards in sections 6200 through 6400 do not apply to an actuary's advice with respect to any arrangement that is:
- A plan within the scope of part 3000 Pension Plans, section 2800 Public Personal Injury Compensation Plans, or part 7000 Social Security Programs;
  - A short-term employee benefit plan such as wages, salaries, and social security contributions, paid annual vacation/leave and paid sick leave, profit sharing and bonuses (if payable within 12 months of the end of the period to which they relate) and non-monetary benefits (such as medical care, housing, cars, and free or subsidized goods or services) for current employees that do not accumulate or vest;
  - A post-employment benefit plan whose benefits are all guaranteed by a life insurer; or
  - A social security program such as the Canada Pension Plan and Québec Pension Plan.

- .04 The standards in sections 6200 through 6400 also apply to an actuary's advice to an employer with respect to the self-insured element of a public personal injury compensation plan that covers the employees of that employer; for example, self-insured workers' compensation plans.
- .05 An actuary's advice with respect to a post-employment benefit plan may relate to items such as:
- Required or recommended funding of the plan;
  - Projected cash flows of the plan with or without future new entrants;
  - Determination of the actuarial present value of the projected or accrued benefits of the plan with or without future new entrants;
  - Determination of amounts for financial reporting of a plan's cost; or
  - Determination of the obligations for reporting in the employer's financial statements, or the plan's financial statements, or the financial statements of a trust associated with the plan.