5000—Public Personal Injury Compensation Plans

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5100 Scope

.00 Part 1000 applies to work within the scope of this part 5000.

.01 The standards in this part apply to an actuary's work on the valuation of benefits liabilities of a public personal injury compensation plan, including its benefits liabilities in respect of a self-insured employer, and to any other items required under the terms of an appropriate engagement for a public personal injury compensation plan, for the purpose of its financial statements and for the purpose of providing input into its funding arrangements.

.02 The standards in this part do not apply to an actuary's work for an employer on the valuation of benefits liabilities and other related items in respect of its employees who are covered by a self-insured element of a public personal injury compensation plan, where such work is covered by the Practice-Specific Standards for Post-Employment Benefit Plans. Nevertheless, the standards in this part may provide useful guidance for such work.

5200 Extension of Scope

.01 The standards in this part may also 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 benefits or policy changes, or work on experience-rating programs.

.02 The standards in this part do not, however, provide useful guidance in the case of an entity merely because it is a monopoly, such as a monopoly of benefits that are optional or a government monopoly that is required to operate like a private sector entity.

5300 General

5310 Circumstances affecting the work

.01 The actuary's work on the valuation of the benefits liabilities or other items for the purpose of the financial statement of a public personal injury compensation plan or for the purpose of providing input into its funding arrangements should take into account the circumstances affecting the work. [Effective February 1, 2018]

.02 The circumstances affecting the work would include

- terms of the relevant statute,
- relevant accounting standards and policies, and
- terms of an appropriate engagement under which the work is being performed,

and the circumstances affecting the work may include the funding policy of the public personal injury compensation plan.

.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 the provision of advice on the funding of the public personal injury compensation plan, its financial position, its financial condition 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 formal or informal funding policy, an accounting policy 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, 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.

5320 Data

.01 Where sufficient, reliable and relevant data are not available for the valuation of a specific benefit, the actuary should make appropriate assumptions or introduce appropriate methods to compensate for any perceived deficiencies in the data. [Effective February 1, 2018]

.02 Sufficient, reliable and relevant data may not be available to the actuary in various circumstances, for example,

- the relevant statute may have been amended to provide a new or revised benefit,
- an applicable policy of the public personal injury compensation plan may have been revised recently,
- the public personal injury compensation plan's claim adjudication practices or administration practices may have changed recently,
- a recent appeal decision may be expected to have a material effect on future benefit payments, or
- economic conditions or health care practices in the relevant jurisdiction may have changed, which may be expected to have a material effect on benefits.

.03 Where the data are not sufficient, not fully reliable or not sufficiently relevant to expected future experience for a specific benefit, the actuary may consider taking one or more of the following actions,

- introducing appropriate assumptions regarding missing, incomplete or unreliable data, and
- adjusting data and historic claim settlement patterns for the purpose of the work, as appropriate, to remove any perceived distortions, such as the effect of historical inflation or one-time benefit changes.

5400 Benefits liabilities

5410 Methods

.01 The actuary should value the benefits liabilities assuming that the public personal injury compensation plan continues indefinitely as a going concern entity. [Effective February 1, 2018]

.02 The value of the benefits liabilities is the value, by the actuarial present value method, of cash flows after the calculation date with respect to all claims incurred before that date and not fully discharged as of that date, whether reported or not, and for calculation dates on and after December 31, 2014, the value, by the actuarial present value method, of cash flows after the calculation date with respect to workplace exposures that have occurred prior to that date. The workplace exposures should include those which may potentially lead to occupational disease claims, in accordance with the policy of the plan. [Effective March 15, 2011]

.03 The cash flows after the calculation date on account of all claims incurred before that date should include all expenses expected to be incurred after the calculation date which are related to those claims, including relevant administration expenses. [Effective March 15, 2011]

.04 The actuary's work should take into account the benefits, relevant policies and administration practices of the public personal injury compensation plan as of the calculation date, and should take into account any definitive amendment to these items that is expected to have a material effect on benefits, unless the circumstances affecting the work require otherwise. [Effective February 1, 2018]

.05 The benefits liabilities should include an amount in respect of benefits for employees of a self-insured employer, unless the exclusion of such benefits is in accordance with the circumstances affecting the work. [Effective February 1, 2018]

.06 When estimating the benefits liabilities, the actuary should consider all claims, whether reported or not, until the claims are fully discharged or closed, with no or minimal chance of re-opening. [Effective February 1, 2018]

Occupational disease

.07 The actuary would value the benefits liabilities in respect of occupational disease claims, and would include the benefits liabilities for all occupational disease claims reported prior to the calculation date.

.08 For calculation dates on or after December 31, 2014, the actuary would also include in the benefits liabilities an appropriate allowance for all occupational disease claims expected to arise after the calculation date as a result of exposures incurred in the workplace prior to the calculation date in respect of occupational diseases with a long latency period that are recognized as such by the public personal injury compensation plan, by legislation, by regulation, or by appeal, regardless of the public personal injury compensation plan's approach to funding potential occupational disease claims. For calculation dates preceding December 31, 2014, the actuary may include in the benefits liabilities an appropriate allowance for such potential occupational disease claims.

Amendments and subsequent events

.09 The actuary's valuation of the benefits liabilities would normally reflect all definitive amendments of which the actuary is aware on the calculation date, including those amendments with an effective date after the calculation date. Where the circumstances affecting the work require otherwise, the actuary may exclude the effect of a known definitive amendment, but the actuary would disclose the effect of such amendment.

5420 Assumptions

.01 The actuary should set assumptions that reflect the expectation that the public personal injury compensation plan will continue indefinitely as a going concern entity, but may make adjustment for short-term considerations, where appropriate. [Effective February 1, 2018]

.02 The actuary should select either best estimate assumptions or best estimate assumptions modified to incorporate margins for adverse deviations to the extent, if any, required by law or by the circumstances affecting the work, and should provide the rationale for the decision made with respect to the inclusion or exclusion of margins. [Effective February 1, 2018]

.03 Where a public personal injury compensation plan has an established practice of providing ad hoc increases to benefits, or a periodic update to rates or tables used in the administration of the plan, the actuary should recognize such established practice when valuing the benefits liabilities by assuming the continuation of such practice, unless a definitive policy decision to discontinue such established practice has been taken by the plan. [Effective February 1, 2018]

5430 Economic assumptions

.01 The needed economic assumptions include the expected rate of investment income, the expected investment expenses and, depending on the benefit being valued, one or more of

- expected rate of general inflation,
- expected rate of health care cost inflation,
- expected rate of wage inflation,
- if different, expected earnings increase specific to wage loss benefits, and
- expected rate of change of any other economic factor that may be applicable.

.02 The economic assumptions that are needed would depend on the nature of the benefits that are being valued, and may vary by year.

.03 The actuary would develop and disclose separate nominal assumptions, but may prefer to complete the calculations using rates that are net of inflation, net of expenses or net of some other factor. Such calculations may, however, be approximations.

.04 When determining the best estimate assumption for the expected rate of investment income, the actuary would take into account the expected pattern of risk-free rates of return, the expected additional investment return on the assets of the public personal injury compensation plan at the calculation date (if any) and the expected investment policy after that date. The expected additional investment return would depend on one or more of

- additional returns over risk-free rates expected to be earned on non-risk-free fixed income assets of the type and quality owned on the reporting date and expected to be acquired pursuant to the investment policy of the plan,
- additional returns over risk-free interest rates expected to be earned on other types of investments, including publicly traded common or preferred equities, private placements, real estate and private equity, and
- projected composition of the investment portfolio in future years.

In establishing the assumption for the expected rate of investment income, 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.

.05 The expected investment expenses would depend on the investment policy of the plan and the types of investments held and projected to be held in future.

.06 The actuary may adopt an assumption for the expected rate of investment income that varies depending on the part of the public personal injury compensation plan being valued, and the assets backing the liabilities in that part.

.07 The assumed expected rate of investment income need not be a flat rate but may vary from period to period.

5440 Non-economic assumptions

.01 When setting non-economic assumptions, the actuary would reflect all material contingencies.

.02 The actuary would recognize the effect of varying experience and settlement patterns that result from definitive or virtually definitive revisions to the plan’s benefits or claims practices and would consider the relevance of historical claims experience.

.03 When setting the assumptions for wage loss, disability, pension and other benefits, the actuary would take into account all applicable material contingencies, including the possibility of recoveries, relapses, mortality improvements, changing benefit levels and the intermittence of income replacement and rehabilitation benefits throughout the lifetime of claimants. Further, the actuary would consider the potential effect on future benefit payments of factors such as changing economic conditions, employment levels, the claimant's occupation and industry and seasonal variations.

5450 Margins for adverse deviations

.01 The actuary should not include a margin for adverse deviations when the circumstances affecting the work require a best estimate calculation or an unbiased calculation. [Effective February 1, 2018]

.02 The actuary should 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 February 1, 2018]

.03 If the actuary is required by legislation, regulation, accounting standards, the accounting policy 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 may use such imposed assumption, but the actuary should disclose that the margin is outside of the appropriate range and disclose the reason for using such margin. [Effective February 1, 2018]

.04 Examples of situations where the circumstances affecting the work might require an unbiased calculation include

- legislation governing the plan may require an unbiased calculation,
- the relevant accounting standards or the accounting policy of the public personal injury compensation plan may require the use of best estimate assumptions, 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, and hence require the use of best estimate assumptions.

.05 Examples of situations where the circumstances affecting the work might require the inclusion of a margin for adverse deviations include

- where the relevant accounting standards or the accounting policy of the plan, or its funding policy, require inclusion of a margin for adverse deviations, or
- where the level of uncertainty or volatility may be high, and not considered to be sufficiently mitigated by the underlying adaptability of the plan.

.06 Where the actuary includes a margin for adverse deviations, the actuary would provide the rationale for inclusion of the margin and for the selection of the specific amount of the margin. The rationale may include considerations such as

- funding policy or accounting policy of the public personal injury compensation plan,
- relative importance placed on the balancing of competing interests compared to the achievement of full funding,
- 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.

5460 Sensitivity testing

.01 The actuary should perform sensitivity testing of adverse scenarios, to illustrate and aid the understanding of the effect of adverse changes to assumptions. [Effective February 1, 2018]

.02 The adverse scenarios that the actuary tests should include at least

- a decrease of 100 basis points in the assumed rate of investment earnings in all future years,
- an increase of 100 basis points in the assumed general rate of inflation,
- a discount rate that is equal to the expected rate of return earned on a hypothetical fixed income portfolio, consisting of high-quality bonds of pertinent durations. [Effective February 1, 2018]

.03 The actuary would consider testing other scenarios, depending on the plausible material risks to which the plan may be exposed.

.04 The actuary may also perform sensitivity testing of favourable scenarios.

.05 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 the use of testing of integrated sensitivity scenarios, for example, the effect of a deep and prolonged recession.

5500 Other related items

.01 The actuary should compute, separately from the benefits liabilities, the present value on the reporting date of any future assessments that have been specifically earmarked to amortize a current deficit and any future scheduled reductions to assessments that have been specifically identified to reduce a current surplus, in accordance with the circumstances affecting the work. [Effective February 1, 2018]

.02 Where the public personal injury compensation plan has specifically earmarked a defined portion of specified future assessments to amortize a current deficit, the actuary would determine the actuarial present value of such earmarked assessments, and disclose such amount separately from the benefits liabilities and assets of the plan, provided that such disclosure is in accordance with the terms of the engagement.

.03 Where the public personal injury compensation plan has specifically identified reductions to future assessments to reduce a current surplus, the actuary would estimate the actuarial present value of such reductions to future assessments, and disclose such amount separately from the benefits liabilities and assets of the plan, provided that such disclosure is in accordance with the terms of the engagement.

5600 Gain and loss analysis

.01 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 February 1, 2018]

.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 the engagement. [Effective February 1, 2018]

.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, gains or losses due to investment returns on the plan's assets, legislative changes, 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.

5700 Reporting

.01 For work pursuant to this part, the actuary should prepare a report that

- states the calculation date and the prior calculation date,
- identifies the legislation or other authority under which the work is completed,
- describes any significant terms of the appropriate engagement that are material to the actuary's work, including the purpose of the work,
- describes the sources of data, benefit provisions and policies used in the work, and any limitations thereon,
- summarizes the data used for the valuation, the data tests conducted to assess the accuracy and completeness of the data used in the work, and issues regarding insufficient or unreliable data,
- describes 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,
- describes any pending definitive or virtually definitive amendment, policy change or change to administration practice, confirms whether or not such amendment or change has been reflected in the benefits liabilities, and identifies the effect of such amendment or change on the benefits liabilities,
- identifies any significant changes to the relevant statute, strategic direction or management policy, or any significant appeal decision that changes management policy or practice, since the prior calculation date and the consequent effect on the benefits liabilities,
- summarizes the benefits liabilities,
- states that there is no provision for adverse deviations, where that is the case,
- discloses any imposed margins that the actuary has used in accordance with paragraph 5450.03 that, in the opinion of the actuary, are outside of the appropriate range,
- reports the aggregate provision for adverse deviations included in the benefits liabilities,

- describes the treatment of liabilities for self-insured employers,
- discloses 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,
- describes and quantifies the gains and losses between the prior calculation date and the current calculation date, and provides an analysis and explanation of the significant gain and loss items, and
- describes the treatment of the liabilities for occupational disease claims, and states either that the amount of the benefits liabilities includes an appropriate allowance for potential occupational disease claims that are expected to arise after the calculation date as a result of exposures in the workplace prior to the calculation date or, if such is the case for calculation dates preceding December 31, 2014, that the amount of the benefits liabilities excludes such an allowance. [Effective February 1, 2018]

.02 Depending on the terms of the engagement, the report should

- describe the sources of information on the plan's assets,
- describe the plan's assets, including their market value, the methods and assumptions used to value the assets and a summary of the assets by major category,
- report the financial position at the calculation date, and
- report the actuarial present value of any future assessments earmarked to amortize a current deficit or of any reductions in future assessments intended to reduce a current surplus. [Effective February 1, 2018]

.03 If the report does not include the results of the sensitivity testing that was completed, the actuary should prepare a separate report for the management of the public personal injury compensation plan that does include such sensitivity testing results. [Effective February 1, 2018]

.04 The report should provide the following five statements of opinion, all in the same section of the report and in the following order

- 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 appropriateness, which would usually be "In my opinion the amount of the benefits liabilities makes appropriate provision for all personal injury compensation obligations and the financial statements fairly present the results of the valuation.", and
- a statement regarding conformation, which should be, "This report has been prepared, and my opinions given, in accordance with accepted actuarial practice in Canada." [Effective March 15, 2011]

.05 The report would be sufficiently detailed to enable another actuary to examine the reasonableness of the valuation.

.06 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 occupational disease claims. In such case, the actuary would disclose such deviation in the report.