

October 9, 2020

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Subject: Preparation of Actuarial Reports for Defined Benefit Pension Plans published December 20, 2019 – Comments by the Canadian Institute of Actuaries

On December 20, 2019, OSFI issued proposed revisions to the [Instruction Guide for the Preparation of Actuarial Reports for Defined Benefit Pension Plans](#) (the “Guide”). The revised Guide is being issued in draft form so that pension plan stakeholders have the opportunity to provide input on these changes. OSFI suspended consultations initiatives in the spring of 2020 and has since gradually restarted policy development work. Accordingly, the Canadian Institute of Actuaries (CIA) would like to offer the following commentary on the draft Guide’s provisions.

The current pandemic environment has increased stress on the funding of pension plans and the financial security of Canadians. We encourage OSFI to consider the current environment when contemplating any changes in the Guide. Implementing more onerous funding requirements in the short term before conditions stabilize may adversely affect Canadian businesses, and therefore Canadian pension beneficiaries, which should be weighed against long-term objectives.

Comments on Section 2.7.2 – Going Concern Assumptions and Valuation Method

1. Reduction in the maximum discount rate from 6.0% before expenses to 5.75% before expenses and margins

Typically, both the expected long-term rate of return and the margins would be higher for plans which employ a higher equity allocation vs. a lower equity allocation. As illustrated below, the proposed change to limit the discount rate to 5.75% before margins and expenses could result in a plan with an investment policy that has 100% allocation to equities having to use a lower discount rate than a plan with a 50% fixed-income, 50% equity allocation. We do not believe this outcome is appropriate.

	100% equity allocation	50% equity/50% bond allocation
Expected rate of return, before expenses and margins	7.00%	5.50%
Reduction to meet maximum rate	(1.25)%	N/A
Limited discount rate	5.75%	5.50%
Margin for adverse deviation	(1.00)%	(0.50)%
Going concern discount rate	4.75%	5.00%

We believe that OSFI should set the maximum discount rate after the application of the margin, as in the current Guide (i.e., the margin would not further reduce the maximum discount rate).

2. The maximum rate should be adjusted by the actuary for a plan using an asset mix expected to generate a lower return than that obtained by using a 50% fixed-income allocation

The Guide requires the maximum discount rate of 5.75% to be adjusted for plans with more than 50% in fixed income. However, OSFI does not provide details on how this maximum discount rate was derived. Results may not meet OSFI expectations if actuaries are not given background information on how OSFI determined the 5.75% discount rate. This information would help actuaries in appropriately adjusting the discount rate corresponding to a lower allocation.

While the Guide shows comments on sound actuarial practices throughout, please note that equity allocations in excess of 50% could result in higher rate of return expectations than 5.75%. As such, OSFI’s guidance entails a contradiction with the practice it expects actuaries to adopt.

3. Treatment of investment management fees for alternative asset classes

Alternative asset classes are often used to diversify risks and sources of expected returns.

We understand that most administrators who use such asset classes typically do so in conjunction with extensive risk analysis and modelling (i.e., understanding risks relevant to their situation and applying appropriate risk mitigating measures as encouraged by OSFI).

Treating active management fees as passive expenses, as proposed in the Guide, would undermine the going concern discount rate (in other words, working under the assumption that asset managers could not cover their own costs). An administrator may not consider such asset classes if they result in a detrimental effect on plan funding as OSFI is suggesting in the Guide. The impact is most apparent on the maximum discount rate, where the additional expected gross rates of return are suppressed.

The reduction in going concern discount rate would subsequently require an increase in cash funding. Counterintuitively, appropriate risk management actions would lead to higher funding requirements and therefore be discouraged. We suggest that OSFI consider one of the following:

- Allow the actuary to assume a passive fee to be applied as a proxy for passive management in asset classes that traditionally are actively managed.
- Assume the manager will cover its fees, or allow the actuary to offset these fees from the gross expected return (prior to any margins due to the application of the maximum discount rate).

Further research may be required and sponsors should not be negatively impacted until there is strong evidence confirming that alternative asset classes include fee structures that are not recovered by incremental returns.

4. Mortality assumption

The Guide indicates that: “Selection of the mortality assumption requires professional judgement. OSFI expects the CPM2014 mortality table (and appropriate projection scale) to be used for going concern valuations, unless the actuary explains in the actuarial report why the use of the CPM2014 mortality table would not be appropriate. Where another base mortality table (i.e. CPM2014Publ or CPM2014Priv) is chosen or where adjustments are made in accordance with the CIA mortality study (e.g. for pension size or industry), or in some instances where adjustments are not made, a detailed justification should be included in the actuarial report.”

We first note that actuarial [Standards of Practice](#) (SOP) do not require an actuary to justify why an assumption would not be appropriate; rather, the SOP require an actuary to justify the use of an assumption.

Also, the sentence in the Guide is inconsistent with the actuarial SOP and the [Educational Note – Second Revision: Selection of Mortality Assumptions for Pension Plan Actuarial Valuations](#) issued in December 2017 (the “Mortality Assumption EN”).

The Mortality Assumption EN indicates that: “Important factors to consider in establishing a mortality assumption include the nature of employment and the relative amount of the pension payments. For example, published mortality studies clearly indicate that, other factors being equal, rates of mortality are greater

- For former blue collar workers than for former white collar workers;
- For former private sector workers than for former public sector workers; and
- For pensioners receiving small pensions than for pensioners receiving large pensions.”

We therefore believe that actuaries, using their professional judgment, are best equipped to select the appropriate mortality table and adjustments and to take into account the characteristics of the plan, the plan demographics, and the industry of the plan.

It is inappropriate for OSFI to indicate that the CPM2014 table, without adjustment, is appropriate especially when the Mortality Assumption EN states: “There is no one standard

mortality assumption that would apply to all plans. The actuary would apply judgment in selecting a best estimate mortality assumption for the plan under review.”

The Guide indicates that: “Very large plans with fully credible experience may choose to develop their own mortality table to reflect actual experience. **Other plans may have only partially credible or insufficient experience to develop broad adjustments to a published table. The adjusted basis should still provide for future mortality improvement.**” [Emphasis added.]

OSFI should clarify this statement since its intended message is unclear. The Mortality Assumption EN indicates that it is appropriate to use partially credible data for plans with large populations, but that do not meet the minimum 10,000 retirees. We agree that provisions for future mortality improvement are appropriate. However, they are usually independent of adjustments to the base tables.

5. Going concern assumptions

The Guide indicates “The financial position of the pension plan on a solvency basis should not affect the selection of going concern assumptions, as each valuation basis is independent. Assumptions should not be based on facts that are unrelated to the expected experience of the plan with respect to the relevant assumption.” We believe that this statement of the Guide should be deleted for the reasons noted below:

- Many plan administrators have put in place investment glide paths where the investment policy is expected to adjust when the solvency position of the plan improves or worsens. The SOP and [Revised Educational Note: Determination of Best Estimate Discount Rates for Going Concern Funding Valuations](#) indicates the actuary should take into account the ultimate asset mix when setting the going concern discount rate; and
- Some actuaries make an assumption as to the number of members expected to terminate and take a commuted value settlement and how the commuted value would be computed. Although there are several approaches to setting a commuted value assumption in a going concern valuation, it is possible that the actuary may consider the financial position of the plan on a solvency basis when setting assumed portability take up rates as well as the commuted value/solvency methodology.

6. Provision for adverse deviations

The Guide refers to the actuary setting the margin. We note that the SOP require the actuary to use the best estimate assumptions and that a margin would be the responsibility of the plan administrator and not the actuary. We note the Guide addresses three specified items (misestimation of the level of best estimate assumptions, misestimation of future trends, and volatility) that OSFI expects to be taken into consideration when setting a margin. However, it is unclear where or how a party would take these into account. We suggest these bullets be deleted or more description of what is intended to be provided as they provide little guidance in their current form.

Comments on Section 2.7.3 – Solvency Assumptions and Valuation Method

7. Termination scenario

The Guide expects the actuary to prepare termination scenario under the “most likely” situation that would lead to the plan terminating at the valuation date. We note this goes beyond the SOP requirements. In practice, it may be difficult to assign probabilities to the termination scenarios and it may involve assessing possible events for which the actuary does not have sufficient expertise. The SOP allows for a plausible termination scenario to be considered in preparing the termination scenario.

8. General comments on proposed disclosure requirements

Additional disclosure constitutes challenges for all interested parties (OSFI, plan sponsors, and plan administrators).

The Guide states that OSFI expects actuaries to detail any approximation and provide a rationale for why their use does not materially affect the results of the valuation. It further states that it expects actuaries to exercise care in using approximations to ensure the resulting sensitivities are reflective of a more accurate measurement of risk.

We point out that section 1410.13 of the SOP states: “To report appropriate approximations in a longer report may provide information useful to users, but such reporting would avoid unintended reservation, as the use of approximations is a usual part of work. The pervasiveness of approximations in work makes their complete reporting impractical.”

OSFI should focus on disclosure of material assumptions, as opposed to a lack of disclosure on approximations. As an example, actuaries approximate mortality and interest on a monthly basis, and other decrements at mid-year, instead of on a continuous basis. We believe it would be inappropriate to incur additional actuarial fees to detail approximations of this nature as is suggested by OSFI’s proposed wording. Further, it is unclear what OSFI’s expectation are with respect to the phrase that it “expects actuaries to exercise care in using approximations to ensure the resulting sensitivities are reflective of a more accurate measurement of risk.”

Treatment of subsequent events is provided for in the SOP. There should be no need for OSFI to clarify this within the Guide. We also note that many sections of the Guide repeat topics and wording from the SOP and CIA educational notes. By doing so, the Guide may result in contradictions or misalignment to the SOP or educational notes, especially when they may be revised. As such, we suggest that wording taken from CIA publications not be used in the Guide, except as a direct quote. It would be preferable to refer to such publications, as appropriate.

The multiple disclosure elements with respect to expenses is an example of OSFI requirements increasing actuarial costs and obfuscating results. We recommend that such disclosures be revisited.

9. Retirement assumption

The Guide states, “Liabilities for former members with deferred vested pensions who are past pensionable age at the valuation date should include retroactive payments with interest from the later of the date of cessation of membership and the date they reached pensionable age.”

We see little value in this addition, and materiality should be considered in setting this requirement.

10. Asset valuation method

Where the method of smoothing is to spread the difference between actual investment income and expected investment income, using an assumed rate of return no greater than the going concern discount rate could result in a biased asset valuation method. The CIA [Revised Educational Note: Guidance on Asset Valuation Methods](#) mentions that an asset valuation method should be free of any bias. The Guide, as drafted, means that the asset valuation method could be contrary to accepted actuarial practice. This proposed approach will create systemic gains on asset smoothing and could raise questions when equities are smoothed but fixed income assets are not. Smoothing equities only would require a higher assumption than the going concern discount rate to remain an unbiased method and OSFI's proposed requirement is contrary to sound actuarial practice in this regard.

In addition, depending on the smoothing method used, the actuary may determine that it may be appropriate to smooth returns relative to the best estimate expected rate of return (i.e., excluding margin for adverse deviation.)

11. Additional remarks

- Reconciliation of assets: The disaggregation of certain information (e.g., employer contributions between service cost, special payments, and transfer deficiency payments) required by the Guide in future valuation reports is readily available in the Annual Information Return (AIR) and the Audited Financial Statements of the plan. As such, we believe that the added disclosures do not add value to the valuation report and unnecessarily increase actuarial costs.
- Male/female distribution: This information is already provided in the AIR, therefore OSFI could retrieve it directly from the AIR. The value of this information within a valuation report is unclear. In addition, this may create gender discrimination issues; and we note that some members may not identify as male or female.
- Membership for each subgroup: The SOP require the actuary to disclose sufficient information, if the data already disclosed is not sufficient, to enable another actuary to determine if the results of the valuation are reasonable. The subgroup disclosure contemplated in the Guide appears to go beyond this objective.
- Section 2.11.1 of the Guide (Going-concern Risk Assessments): we believe that the Guide should refer to CIA SOP and educational notes instead of re-defining them in the Guide and requiring additional disclosures. There are a variety of possible adverse scenarios. The goal of plausible adverse scenarios required under the SOP is to show the users the financial impact of them, to make them more aware of risk. The next actuarial valuation would reflect the financial impact of actual adverse scenarios, much like we are experiencing in 2020.
- Flexible pension plans: We note that there appears to be a concern that systemic gains/losses in flexible pension plans will arise on conversion to pensions at retirement,

which OSFI implies should not be the case. We point out that the basis chosen for conversion of a member's flexible contributions/optional ancillary contributions into benefit enhancements, whether going concern or solvency based, will generate gains and losses under the other basis, from time to time. That is an unavoidable outcome under such a plan design. We are not aware of any case where such gains and losses have proven to be material at a pension plan level, and therefore we suggest that this should not be a required disclosure item.

- Transfer deficiency payments: Information about how an administrator intends to pay transfer deficiency payments should not be part of the disclosure of a valuation report. The administrator can change its policy, at any time, in respect of transfer deficiency payments. In addition, the directives themselves may change. This is an administration issue not an actuarial issue.

Comments on Section 2.7.4 – Alternative Settlement Methods

The new requirements proposed by the Guide for alternative settlement methods would represent a major change from current practice. There are a very limited number of pension plans that have been using alternative settlement methods and many of them have been using the approach for many years. It would be helpful to understand what concerns OSFI has regarding the current approaches being employed by actuaries. We also suggest delaying such a change until more extensive analysis and discussions can occur and until the severe repercussions of the pandemic crisis are behind us.

Nevertheless, we offer the following comments on specific elements:

- a) We agree that the level of benefit security under the replicating portfolio approach should be high. However, we believe that achieving the same level of benefit security as an annuity purchase is too high a standard (the Guide implies a 99.5% probability of all benefit promises being met).

Insurers would have recourse to access additional assets beyond the reserves set aside at the outset of the group annuity contract if highly adverse experience materializes in the future (assuming they remain solvent). If the insurer becomes insolvent in the future, some or all of the benefits would continue to be provided through Assuris.

In order to achieve the same level of benefit security, the plan sponsor would need to set aside much larger margins than a group annuity provider (if the plan sponsor is not expected to provide financial support in the future), and we believe this would not be appropriate.

We would propose that the CIA examine more closely with OSFI how the level of benefit security could be analyzed differently under a replicating portfolio approach. For example, one possible approach might be to determine an appropriate discount rate differential versus the annuity proxy.

- b) Related to the above point, we note that there is significant “model risk,” particularly when analyzing the extreme tails of distributions. It may be a little naïve to expect that

any such sophisticated model could allow precise measurements at or above 90% probability levels since it relies on a combination of numerous variables combined with historical correlation factors. Furthermore, different actuarial firms use different economic and statistical models, each of which may be reasonable. We are concerned that actuaries at different firms would come up with very different results when asked to determine the assets required to achieve a 99.5% probability of all benefit promises being met. This “model risk” reduces as the required probability decreases (i.e., we would expect much less variance in results below a 90% confidence level).

We do not believe that it is reasonable or practical to require that all firms use the same model, but suggest that a lower confidence level would also help alleviate this concern regarding lack of consistency.

We do not understand the purpose and relevance of measuring the Conditional Tail Expectation (CTE) over a one-year period. Under a replicating portfolio approach, benefits may have to be provided over a period of 10 or 20 years, or even more. During a long period, it can be expected that certain years of unfavourable experience may be compensated (partially, fully, or even more) by years of favourable experience. We think it might be more appropriate to measure and disclose the following key metrics over the full projection period (or a major portion of it):

- The probability of all the promised benefits being paid in full.
 - The average portion of benefits that can be paid under the scenarios in which all the promised benefits cannot be paid (i.e., the CTE over the full projection period).
- c) We agree in principle that it should be permissible to allow an offset for any post-termination support expected to be available from the plan sponsor, where it is reasonable to do so (i.e., Amount E in the formula). However, we have the following comments:
- The Guide implies that pension actuaries should be responsible for determining the value of the financial support. Actuaries are not trained to assess the future financial health of plan sponsors. It would be more appropriate for the plan administrator to specify this value in the terms of engagement.
 - If a plan sponsor is deemed to be in a position to provide financial support in case of plan termination, it should be sufficient to simply assert that the value of the available financial support is sufficient to bring the required PfAD to the lower level (i.e., Amount E would be assumed to be equal to Amount D in such cases).
 - It would be helpful for the Guide to provide guidance acceptable ways for the plan administrator to assess the financial health and available support from the employer (e.g., credit ratings, agent Crown corporation status).
- d) In order to achieve a very high level of benefit security, significant margins need to be included when establishing a replicating portfolio. Consequently, there is a very high

likelihood that significant assets would remain after all the benefit payments have been satisfied. In the event that the replicating portfolio approach is established in an actual wind-up scenario, we think it should be clearly specified that any residual assets would revert to the plan sponsor. One alternative to achieve this result is through the use of solvency reserve accounts.

- e) The CIA SOP provide guidance on the calibration of stochastic models for both insurance companies and pension plans. The Guide is not clear as to which set of standards and guidance are expected to be followed. Subsection 3270 of the CIA SOP was developed for pension actuaries using stochastic modelling for use in pension plan funding. In that section, the CIA sets out required disclosures, which it has deemed to be sufficient for stakeholders to be able to assess the reasonableness of the approach used by the actuary. For the purpose of disclosing the assumptions and outputs of a solvency replicating portfolio model, the Guide should indicate that compliance with Subsection 3270 (adapted as necessary to suit the particular circumstances) should be sufficient.

The Guide requires additional PfADs from stress testing applied to the mortality rates and improvement rates. It would be helpful to understand how OSFI determined those levels of stress testing, what probability levels may be expected with such stress tests, and why the PfADs should be apportioned between the 90% and the 99.5% confidence levels in the same proportions as the PfADs for economic factors. We are skeptical about the appropriateness of those stress tests (especially with respect to future improvement rates) and we would suggest to remove them from the Guide.

Furthermore, the Guide (page 37 in the marked version) requires, for the purpose of setting PfADs, a measurement of additional expenses as a result of stress testing applied to the mortality rates and improvement rates. OSFI's intent for this item is not clear to us and it is also not clear how such additional PfAD would be determined. Currently, we can only interpret this as referring to the impact that people living longer than the best-estimate assumption would predict would have on expenses. We believe that any such impact would be quite small, likely below a reasonable materiality level. If this interpretation is correct, we suggest such measurement is not necessary. If this interpretation is not correct, please provide more information on OSFI's intent.

- f) The Guide provides an extensive list of disclosures, most of which are reasonable. However, we recommend that the actuary should have some latitude to adapt this list of disclosures to reflect differing models. For example, many models currently used by actuaries provide cash flows rather than individual demographics. Consequently, it would not be possible to prepare some of the demographic statistics described on page 40 of the marked version.

Thank you for taking the time to consider our comments. If you have any questions, please contact Chris Fievoli, CIA Staff Actuary, Communications and Public Affairs, at 613-656-1927 or chris.fievoli@cia-ica.ca.

Sincerely,

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Michel St-Germain, FCIA
President, Canadian Institute of Actuaries

The Canadian Institute of Actuaries (CIA) is the national, bilingual organization and voice of the actuarial profession in Canada. Our members are dedicated to providing actuarial services and advice of the highest quality. The Institute holds the duty of the profession to the public above the needs of the profession and its members.

December 15, 2020

Marc Sauvé
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Office of the Superintendent of Financial Institutions

Subject: Follow-up on CIA Comments on Preparation of Actuarial Reports for Defined Benefit Pension Plans published December 20, 2019

The CIA submitted comments on October 9, 2020, to OSFI regarding proposed revisions to the [Instruction Guide for the Preparation of Actuarial Reports for Defined Benefit Pension Plans](#). Although we acknowledge that the final version of the guide has now been published, we feel that the following additional comments would be of value in the event that any future revisions are contemplated.

The original draft guide was released on December 19, 2019, and was originally intended to apply to actuarial valuations as at the end of 2019. Given delays caused partly by the COVID-19 crisis, some of the new rules are expected to first apply to year-end 2020 actuarial valuations and others to first apply to year-end 2021 actuarial valuations.

One of the key proposals is to revise the maximum discount rate assumption for the going-concern basis.

We recognize that OSFI has prescribed a maximum discount rate in the guide for many years. In our view, a fixed maximum discount rate is unlikely to be appropriate for all plans (given the diversity of investment strategies, risk tolerances etc.) and under all market conditions. The current maximum discount rate of 6% may have appeared quite conservative when it was first established, but very few plans would be affected by the limit in 2020 due to the sharp decline in interest rates and future return expectations. Consequently, our strong preference would be for OSFI to challenge valuations that are deemed to be using aggressive assumptions on a case by case basis, rather than applying a blanket approach. The remainder of our comments assume that OSFI decides to maintain the maximum discount rate in the guide.

The guide states on page 19:

The approach used by OSFI in setting the maximum going concern discount rate is not unduly influenced by short-term financial market volatility and interest rate fluctuations underlying the pricing of fixed-income securities. OSFI monitors financial market conditions and future expected returns and is currently of the view that generally, the discount rate for a plan should not exceed 5.75%, before implicit margins for adverse deviations and expenses....The maximum rate should be adjusted by the actuary for a plan using an asset mix expected to generate a lower return... than that obtained by using a 50% fixed-income allocation.

The CIA submission stated on page 2:

The Guide requires the maximum discount rate of 5.75% to be adjusted for plans with more than 50% in fixed income. However, OSFI does not provide details on how this maximum discount rate was derived. Results may not meet OSFI expectations if actuaries are not given background information on how OSFI determined the 5.75% discount rate. This information would help actuaries in appropriately adjusting the discount rate corresponding to a lower allocation.

The CIA would have liked to see more details on how OSFI derived that maximum discount rate in order to provide more detailed comments. However, we would like to highlight a certain aspect of this matter. A significant period has elapsed since the original draft guide was released, and since then, financial markets have evolved significantly, notably with respect to current bond yields having declined sharply. Most actuaries may be expected to take into account, to a certain extent, bond yields prevailing in the market at the valuation date. Therefore, even though we did not obtain background information on how OSFI determined the 5.75% discount rate, it could now be assumed that if OSFI were to revise the guide today, it might set that maximum discount rate at a lower level.

Therefore, we recommend that the guide define the maximum discount rate at least partly by including a reference to prevailing bond yields, so that the maximum discount rate is more likely to be appropriate as market conditions change.

For example, the Ontario funding regulations regarding the prescribed provisions for adverse deviations include a component comparing the valuation discount rate assumption to a benchmark rate that reflects current bond yields. We are not suggesting that OSFI use the same approach, but simply pointing out that referring to current market yields can be more relevant than a fixed discount rate.

We reiterate that the CIA would be pleased to exchange more information with OSFI regarding the approach it used to develop the maximum discount rate, and to offer more detailed input on how it could be improved.

Thank you for taking the time to consider our comments. If you have any questions, please contact Chris Fievoli, CIA Staff Actuary, Communications and Public Affairs, at 613-656-1927 or chris.fievoli@cia-ica.ca.

Sincerely,

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Michel St-Germain, FCIA
President, Canadian Institute of Actuaries

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