



Exposure Draft

Amendments to Section 3500 of the Practice-Specific Standards for Pension Plans – Pension Commuted Values

Actuarial Standards Board

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Document 217075

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Memorandum

To: All Fellows, Affiliates, Associates, and Correspondents of the Canadian Institute of Actuaries, and Other Interested Parties

From: Conrad Ferguson, Chair
Actuarial Standards Board
Gavin Benjamin, Chair
Designated Group

Date: July 20, 2017

Subject: **Exposure draft – Amendments to Section 3500 of the Practice-Specific Standards for Pension Plans – Pension Commuted Values**

Comment Deadline: **September 18, 2017**

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Introduction

This exposure draft (ED) proposes changes to the practice-specific standards for pension commuted values (section 3500). It was approved for distribution by the Actuarial Standards Board (ASB) on June 30, 2017. Due process has been followed in the development of this ED.

A [notice of intent](#) (NOI) to provide the background and general information on these proposed changes was distributed by the ASB on October 15, 2015, with a deadline for comments of December 19, 2015. An update on the progress of this review was provided at the Canadian Institute of Actuaries' (CIA) Pension Seminar held on November 8, 2016.

Background

The ASB is committed to conducting general reviews of all parts of the Standards of Practice on a quinquennial basis. The mortality assumption prescribed under section 3500 was reviewed by another designated group and changes to the mortality assumption became effective on October 1, 2015. Following the change in the mortality assumption, the ASB established a designated group (DG) to review the standards of practice for pension commuted values (section 3500), other than the mortality assumption prescribed by section 3500, ahead of the quinquennial review of part 3000. This review was to assess the continued appropriateness of the basis for calculating

commuted values (CVs), considering the interests of a number of stakeholders including terminating plan members, non-terminating plan members, and plan sponsors.

Feedback from Stakeholders

The DG solicited input from various stakeholder groups in the development of this ED.

The DG appreciates the feedback received and has taken it into account in the preparation of the ED. The following sections of this memorandum outline some of the key issues that were raised by stakeholders and considered by the DG, and identify particular areas where additional feedback from stakeholders is being requested.

Summary of Key Issues Raised by Stakeholders and DG Response

The following sections, while not exhaustive, summarize key comments provided by stakeholders in response to the questions asked in the NOI and the DG's response to these comments.

1. What Should a CV Represent?

i. What should a CV represent?

The DG received 27 responses to this question, about two-thirds of which supported the economic value approach described in the October 2015 NOI. About one quarter of the respondents favour an approach based on the plan sponsor's going concern funding assumptions and a few respondents believe that legislators, and not the actuarial profession, should establish what a CV represents.

ii. What is the rationale for the response to i. above?

The most prevalent rationale for those who support the economic value approach is that it is viewed as fairest, and the most equitable value to place on the pension promise that the former plan member forgoes due to receiving a CV. Some submissions indicated that they agree with the reasons put forward in the NOI and others also indicated that the economic value approach allows for the use of consistent assumptions across all plans, which is not the case for the going concern approach.

The main rationale for those who support the going concern approach is that the CV basis should ideally be cost neutral to the plan sponsor from an ongoing funding perspective. Others also indicated that for optional CVs, the going concern approach is a fair approach for all stakeholders, including terminating plan members (since they also have the option of selecting a deferred pension instead of the CV), non-terminating plan members, and the plan sponsor. Some jointly sponsored pension plans (JSPPs) also added that they are exempt from solvency funding and that it is unfair to non-terminating plan members to pay the economic value to a terminating member since they are in effect subsidizing those who leave the plan as a result of the cost sharing nature of most JSPPs.

DG comments – The DG is in agreement with the majority of respondents who support the economic value approach. The DG’s view is that a CV should continue to represent the economic value of the obligations discharged by the pension plan. While each approach has advantages and disadvantages, the economic value approach is market based, consistent with financial economics principles, and strikes a reasonable balance between terminating plan members, non-terminating plan members, plan sponsors, and other affected parties. The DG notes that the approach for calculating the economic value of a pension differs between a traditional defined benefit pension plan and certain multi-employer and target benefit pension plans, as discussed in section 2 below. To ensure that it is clear to all stakeholders what a CV is meant to represent, the DG proposes the addition of a new paragraph to the CV standard that states clearly that the CV is intended to represent an economic value (i.e., the value that the marketplace would attribute to that pension, while reflecting certain simplifications in the calculations and requiring that certain assumptions be common among different plans).

- iii. Should the value of a CV differ depending on whether an individual has the option of electing the CV (e.g., in the case of a regular termination of plan membership) or the individual is forced to receive the CV (e.g., in the case of a person employed in the province of Québec whose pension entitlement is paid in the form of a CV upon plan wind-up)?

The DG received 21 responses to this question, 14 of which support a single approach to calculate a CV whether or not the CV is optional. Six responses support different values and one response is open to both approaches.

DG comments – The DG agrees with the majority of respondents who support a single approach to calculate a CV, as the economic value of the pension that the former member forgoes due to receiving a CV does not depend on whether or not receipt of the CV is optional.

2. Multi-Employer Pension Plans and Target Benefit Pension Plans

- i. Should MEPPs and/or TBPs fall within the scope of section 3500?

Fourteen of 21 responses indicated that these types of plans should fall within the scope of section 3500.

DG comments – The DG concluded that MEPPs and TBPs should fall within the scope of section 3500.

- ii. Should the methods and assumptions used to calculate CVs differ between single employer DB plans, MEPPs, and/or TBPs? If they should differ, what should the differences be (including whether the standards should permit more judgement when selecting the CV assumptions for MEPPs and/or TBPs)?

Fourteen of 19 responses indicated that the methods and assumptions should differ for these types of plans. A range of views was provided regarding the

preferred approach to calculate a CV from an MEPP and/or TBP. These views include providing the plan administrator with the discretion to select the assumptions and methods, using the going concern actuarial assumptions, and/or reducing the CV to reflect the funded status of the pension plan when the plan is not fully funded at the time the CV is paid.

DG comments – For a pension plan that contemplates the reduction in accrued benefits as one of the mechanisms to manage the risk associated with the plan as an ongoing entity, the DG views the pension promise to plan members as being different from the promise provided by a traditional DB pension plan (which does not contemplate a reduction in accrued benefits). Therefore, the DG agrees with the majority of respondents that the assumptions and methods used to calculate the CV payable from certain MEPPs and TBPs should be different from those used to calculate a CV payable from a traditional DB plan.

A number of approaches for calculating the CV of an individual who terminates membership in a MEPP or TBP were considered. The DG observes that, for these types of plans, the target pensions payable are often adjusted over time so that plan assets are expected to be sufficient to provide the target pensions. Therefore, a reasonable economic value of a terminating member's accrued pension is the member's share of the total pension plan assets at the time of receipt of the CV.

The DG recommends adding subsection 3570 to the standard (see the attached proposed changes to the CV standard). This subsection provides a methodology for calculating CVs for certain MEPPs and TBPs that attempts to allocate a reasonable share of plan assets to the terminating member.

Note that there was not consensus among DG members as to whether the funded ratio of the pension plan, as outlined in the methodology contained in the new subsection 3570, should be capped at some level (e.g., 100 percent) for purposes of calculating CVs. Some DG members think that not capping the funded ratio provides for a truer allocation of plan assets to the former plan member at time of receipt of a CV. Other DG members consider that not capping the funded ratio could result in the distribution of surplus assets to the former plan member receiving the CV, which may not be equitable for the remaining plan members and plan sponsors. The DG seeks feedback on whether there should be a cap placed on the plan funded ratio for purposes of calculating CVs under subsection 3570.

- iii. Some pension plans, such as jointly sponsored pension plans (JSPP), share certain characteristics of both single employer DB plans and MEPPs and TBPs. For example, accrued benefits under an Ontario JSPP cannot be reduced while the plan is ongoing, but benefits can be reduced upon plan windup if the plan is underfunded. How should CVs be calculated for JSPPs and other types of pension plans that are neither single employer DB plans, MEPPs, nor TBPs?

Certain JSPPs that are not required to fund on a solvency basis indicated that it is inequitable to remaining plan members and plan sponsors to pay CVs that are larger than the present value of the former member's pension entitlement calculated using the plan's going concern funding basis. This is especially inequitable to remaining active plan members, since active members share in the costs and risks associated with the plan, and the funding basis for the plan is based on agreement between the members and plan sponsors.

DG comments – The DG believes that the views summarized in the paragraph above have considerable merit. However, the approach for calculating the economic value of a former member's pension should primarily depend on whether a reduction in accrued benefits is one of the mechanisms used to manage the risk associated with the plan as an ongoing entity, as this establishes the nature of the promise provided by the plan to the former member (in the event that the former member does not elect a CV). Therefore, if a plan does not contemplate a reduction in accrued benefits while the plan is ongoing, it is the DG's view that subsection 3570 should not apply to the plan. The DG seeks further feedback on this question and the DG's comments.

3. Discount Rate Spread

- i. Is it appropriate to include an adjustment for liquidity in CV discount rates? If it is appropriate, is the 90 bps adjustment still appropriate or should a different adjustment be used? If a different adjustment should be used, what should the adjustment be and what is the justification for the magnitude of the adjustment?

The DG received 28 responses to this question, 19 of which support including an adjustment for liquidity in CV discount rates. Comments with respect to the appropriateness of the current 90 bps adjustment varied, with a number of submissions deferring to the ASB to assess whether the current adjustment is appropriate.

DG comments – The DG agrees that a liquidity adjustment to the discount rate is appropriate, given the illiquid nature of the pension that a former plan member is forgoing due to the receipt of a CV. Also, as described below, the DG undertook an analysis to assess whether the current fixed liquidity adjustment of 90 bps remains appropriate.

- ii. Should the adjustment for liquidity be market based or fixed? If a fixed adjustment is applied, should it be promulgated i.e., able to be updated from time to time without a review of the full standard of practice?

Twelve of 13 responses support a fixed liquidity spread but some believe a market-based approach would be desirable but may be too difficult to achieve or implement.

DG comments – Although most responses support a fixed spread, the DG observes that in the financial markets liquidity spreads do not remain static, but change as market conditions change. Therefore, the DG decided to investigate

the feasibility of implementing a market-based adjustment for liquidity, which would be more consistent with the mark-to-market assessment of the value of the pension that the former member is forgoing.

- iii. Should the adjustment for liquidity differ between pensions that are indexed and pension that are not indexed?

Seven of 11 responses support the same liquidity adjustment for indexed and non-indexed pensions.

DG comments – Since there is no difference between the liquidity of an indexed and non-indexed pension payable from a pension plan, the DG is of the view that the same liquidity adjustment should be made to the discount rates used to calculate the CVs for indexed and non-indexed pensions.

- iv. Should the discount rates include adjustments for other factors, such as credit risk and/or expenses? If other adjustments are appropriate, what should be the magnitude of these adjustments?

Most responses did not comment on including adjustments for other factors. Of the few respondents who indicated that other factors should be considered, most are of the view that credit risk should also be reflected.

DG comments – In 2015, the DG asked Fiera Capital and PH&N to provide their views on an appropriate spread for liquidity. Fiera Capital's analysis concluded that at the time of the analysis and in the previous five years (post-financial crisis), the liquidity premium should be in the range of 60 to 90 bps, while PH&N concluded that a reasonable estimate for a static liquidity premium would be between 70 to 120 bps. The DG notes that the fixed-income instruments referenced by Fiera Capital and PH&N for their analyses are more liquid than a monthly pension payable from a pension plan. Therefore, the liquidity premiums suggested by their analyses could be viewed as lower bounds for the purpose of calculating CVs.

The DG agrees with the need for a liquidity premium to be reflected in the discount rate used to calculate CVs. However, the DG concluded that the use of a time-varying, market-linked estimator for the liquidity premium would be more consistent with a mark-to-market assessment of the economic value of the pension payable from the pension plan.

The DG reviewed several options and has decided to recommend discount rate spreads based on a mix of two-thirds of the spreads on the yields of provincial bonds and one third of the spreads on the yields of investment-grade corporate bonds. The spreads would be calculated relative to Government of Canada (GoC) bond yields. The average discount rate based on data from January 2004 to February 2017 is slightly higher compared to the current methodology and varies depending on the observed period. The volatility of the discount rate (measured using the standard deviation) is generally reduced as seen below.

Period	Average Rate (std deviation) 1–10 Years			Average Rate (std deviation) 10+ years		
	Current Spread Approach (90bps)	Proposed Spread Approach (2/3 Prov + 1/3 Corp)	Difference	Current Spread Approach (90bps)	Proposed Spread Approach (2/3 Prov + 1/3 Corp)	Difference
2004-2007 (pre-financial crisis)	5.05 (0.28)	4.55 (0.32)	-0.50 (+0.04)	5.71 (0.57)	5.48 (0.54)	-0.23 (-0.03)
2008-2009 (financial crisis)	3.89 (0.47)	4.41 (0.41)	+0.52 (-0.06)	5.42 (0.15)	6.01 (0.50)	+0.59 (+0.35)
2010-2017 (post-financial crisis)	2.67 (0.64)	2.79 (0.59)	+0.12 (-0.05)	4.13 (0.65)	4.54 (0.58)	+0.41 (-0.07)
Total	3.58 (1.18)	3.57 (0.99)	-0.01 (-0.19)	4.80 (0.94)	5.05 (0.81)	+0.25 (-0.13)

Source: Fiera Capital and FTSE/TMX Canada

Some charts in the appendix compare the discount rates and the spreads above GoC bond yields over the observed period under the current approach and the proposed approach.

The rationale for the DG’s recommended approach is that provincial bonds are considered highly secure and are therefore an appropriate reference point for calculating dynamic CV discount rate spreads. However, since provincial bonds are more liquid than a defined benefit pension promise, the reflection of investment-grade corporate bond yields provides for an additional adjustment for liquidity and reflects a small adjustment for credit risk, while maintaining a dynamic approach for calculating the discount rate spreads.

4. Discount Rate Structure

- i. Should a full yield curve or a simplified approach be used to establish the CV discount rate assumption?

The DG received 24 responses to this question. The majority (19 out of the 24) support the existing simplified approach.

DG comments – While a full yield curve could be developed for calculating CVs, this may imply a false level of precision in the discount rate assumptions. As such, the DG is in agreement with the majority of responses on this issue.

- ii. If a simplified approach remains appropriate, should there be changes to the current structure? For example, should there be an ultimate rate that is fixed (i.e., the rate does not vary based on changes in GoC bond yields)?

The DG received 18 responses to this question. Of those who responded, 12 prefer a varying ultimate rate while six suggest a fixed rate. Four of the 12 who agreed to varying ultimate rates suggest the addition of one or two select periods to the simplified structure.

DG comments – The DG agrees with the majority of respondents that creating a fixed ultimate rate would not be in line with the interpretation of the CV as being an economic value of the pension benefit payable from the plan, as it is unlikely that the financial markets would calculate the value of the pension based on the assumption of a fixed ultimate discount rate.

5. Basis for Inflation Assumption

- i. Is the break-even inflation rate (BEIR) an appropriate measure of price inflation for purposes of calculating CVs?

The DG received 21 responses to this question. Of those who responded, 16 agree that the BEIR is an appropriate measure of price inflation, while five disagree.

DG comments – The DG acknowledges that the BEIR does not provide a perfect measure of long-term price inflation expectations due to factors such as supply-and-demand imbalances in the Goc real return bond market at certain times. However, in the DG’s view the BEIR is the best readily available measure of long-term expected inflation.

- ii. If use of the BEIR is not appropriate, what approach should be used? For example, should other inputs, such as the expectation of experts, be reflected in the assumption?

The DG received 18 responses to this question. Of those who responded, nine suggest using the Bank of Canada target inflation rate, while five prefer the opinion of a panel of economists. One respondent suggests that the inflation assumption be based on historical inflation experience, and two suggest using the same assumption used in the going concern valuation. Lastly, one respondent suggests the creation of a range that the administrator (or the actuary) can use as a guide to establishing a plan-specific inflation assumption.

DG comments – The BEIR is easily measurable, readily available and reflects current market expectations for price inflation, while most of the suggested alternatives require significant subjectivity or reflect a relatively short-term horizon. The DG remains of the view that the BEIR is the most appropriate measure of price inflation for purposes of calculating CVs.

- iii. Is the material difference between the premium for an indexed group annuity and the CV for the same pensions an issue that needs to be addressed? If this is

an issue that needs to be addressed, what changes to section 3500 would be appropriate?

The DG received 22 responses to this question. Among those who commented, 18 believe that the discrepancy does not need to be addressed, but it needs to be explained better. Generally, the reasons for this were that there is a small market for indexed annuities in Canada and that pensions are not annuity contracts. Also, some respondents believe that an inflation risk premium should not be included in the CV.

The remaining four respondents believe that the issue needs to be addressed and suggest the inclusion of lower liquidity and credit adjustments to the CV discount rates for indexed annuities in order to narrow the gap between annuity purchase premiums and CV values.

DG comments – The DG agrees with the majority of respondents, since a CV is not meant to represent the cost of annuitizing the former member’s pension. Also note that the pricing of indexed annuities is heavily influenced by the nature of the assets used by insurers to back these annuities, which often are selected with a focus on providing a significant hedge against inflation risk. It is the DG’s view that CVs for indexed pensions should not be influenced by the manner in which insurers invest the premiums for indexed annuities.

6. Assumed Increase In Average Wage Index

- i. Is a real average wage index increase assumption of 1% per year appropriate? If not, what would be an appropriate assumption?

The DG received 18 responses to this question, the majority of which are in favour of retaining the real average wage index increase assumption of 1 percent per year.

DG comments – Given the historical analysis summarized in the NOI and in the absence of a strong rationale for changing the assumption, the DG agrees with the majority of responses on this issue.

- ii. Since some experts expect that increases in the real average wage index will be smaller in the short term than in the long term, would it be appropriate to adopt a select and ultimate assumption?

The DG received 12 responses to this question, one-third of which support the introduction of a select and ultimate assumption. Only two respondents provided a reason for supporting this approach, both of which are to reflect the difference in past experience between the long and short term. Most respondents who favour retaining only one assumption gave reasons for doing so which include simplicity, not introducing false implied accuracy, and retaining the current approach due to the lack of materiality of the assumption.

DG comments – The DG agrees with the majority of respondents who support a single assumption for the reasons of simplicity and avoiding implying false accuracy with respect to this assumption.

7. Complex Indexing Approaches

- i. Should the standards of practice be more specific with respect to the valuation of certain complex indexing approaches? If yes, in what way should the standards be modified?

The DG received 24 responses to this question, most of which comment that the standards could not realistically address all approaches, and recommend that any details instead be included in an educational note.

DG comments – The DG agrees with the majority of responses and does not recommend that more detail regarding complex indexing approaches be added to the standard. Rather, the DG recommends that any additional detail be added to an educational note.

- ii. Is it appropriate in certain circumstances to use stochastic simulations to calculate the expected indexing resulting from an excess interest or other complex indexing approach?

The DG received 18 responses, mostly agreeing that the standard should be enhanced to allow for stochastic simulations, although some expressed concern over the difficulties and cost of such simulations.

DG comments – The use of stochastic simulations will be appropriate in some, but not all, situations. The actuary should have the ability to use his/her discretion as to whether the use of stochastic simulations is appropriate in a given circumstance. The DG recommends amending the standard to clarify that the use of stochastic simulations is permissible in the case of an excess interest or other complex indexing approach, but is not required in all circumstances.

- iii. Is it ever appropriate for the CV calculation to reflect the funded status of the pension plan at the valuation date?

The DG received 20 responses, mostly indicating that the funded status of the plan should be permitted to be reflected in certain circumstances, such as when indexing is conditional on the funded status.

DG comments – The CV for a traditional DB plan should generally not depend on the funded status of the plan. Some plans provide indexing that is conditional on the funded status of the plan. In these cases, an actuary would be expected to use stochastic or deterministic methods to estimate the expected future level of indexing in the plan which does take into consideration the funded status of the plan. The estimated level of future indexing would then be utilized in the calculation of the CV.

For MEPPs and TBPs, the approach to calculate CVs outlined in proposed subsection 3570 of the standard does result in the funded status of the plan affecting CVs for these plans.

8. Assuming the Option That Results in the Greatest Value

- i. Is the need to assume that a member will select the option that has the greatest value biased in favour of the member?

The DG received 18 responses to this question, most of which believe there is bias in favour of the member.

- ii. Should a different assumption be used? If a different assumption should be used, what should the assumption be?

The DG received many different suggestions, including a weighting of different retirement ages and the use of the earliest unreduced retirement age. None of the suggested alternate approaches were supported by more than three submissions, with seven submissions indicating that the current assumption should remain unchanged.

DG comments – The DG believes that the current assumption of the option that has the greatest expected value may be biased in favour of the member in some cases. However, given that the DG is not aware of any alternative approaches which are always unbiased and practical to implement, the DG recommends that the current approach should remain unchanged.

9. Calculating a CV Higher Than the Standard

- i. Is it appropriate for an actuary to disclose that a CV which is higher than the CV calculated in accordance with section 3500 due to requirements of the plan or applicable legislation was calculated in accordance with the standards of practice?

Two-thirds of the respondents indicated that the existing disclosure approach is appropriate. The remaining third generally felt that the disclosures should be enhanced to require a statement if the CV is higher (or lower) than would have been produced by applying the assumptions and methods prescribed in the standards, disclosure of the reason why the CV is higher/lower, and a statement as to whether the calculation is in line with the standards.

DG comments – The DG agrees with the majority of responses that the existing disclosure approach should remain unchanged, since it encourages flexibility in the design and administration of pension plans.

However, for pension plans that fall under subsection 3570 (target pension arrangements) of the standards of practice, it is the DG's view that a CV which is higher than the CV calculated in accordance with subsection 3570 is not in accordance with the standards and that disclosure of such would be required in these instances.

10. Disclosure Requirements

- i. Should these disclosures be required only for an external user report, or should they be required for both an external user report and an internal user report?

The DG received 20 responses to this question, the bulk of which were in favour of requiring that the disclosures in subsection 3550 be required for both external user reports and internal user reports.

DG comments – The DG agrees with the majority of responses, as requiring these disclosures for both external and internal user reports enhances clarity, consistency, and transparency when communicating CVs to an intended user of an actuary’s work.

- ii. Should the disclosure requirements be enhanced to improve transparency regarding an actuary’s involvement in the calculation?

Responses on this issue were split, although not all respondents provided the rationale for their views. Respondents who indicated that the current disclosures are sufficient generally also noted that the standards cannot be forced on non-actuaries.

DG comments – The DG concluded that an enhancement to the disclosure requirements to improve transparency regarding an actuary’s involvement in the calculation is not warranted. The DG notes that when an actuary communicates the results of a CV calculation to an intended user of the actuary’s work, unless the actuary discloses otherwise, it is presumed that the actuary takes responsibility for the calculation.

- iii. For an indexed pension, should the actuary disclose the discount rate in real terms, or should the actuary disclose the non-indexed nominal discount rate and the indexing assumption separately?

The majority of respondents favour enhancing the standard to require disclosure of the non-indexed nominal discount rate and the indexing assumption separately.

DG comments – The DG is in agreement with amending the standard to require separate disclosure of the discount rate and indexing assumption, as it enhances clarity and transparency with respect to the assumptions used for the calculation.

11. Recomputation Period

- i. Should the actuary continue to be required to select the period after which a CV recomputation is required?

The DG received 20 responses to this question. Fifteen respondents indicated that the decision should be left to regulators and/or the plan administrators, but many gave nuanced responses. Some said that there should be a set maximum period before recomputation (e.g., six to 12 months), some said that it depends on what the CV represents, and one said that there should be a threshold for

recomputation based on changes in interest rates. Five indicated that there should be a set period with no discretion provided to the actuary.

DG comments – It is the DG’s view that setting the recomputation period should not be the responsibility of the actuary, but rather the responsibility of the plan administrator or pension legislation. However, the DG has concluded that a recomputation period should be established by the actuary if the plan administrator or legislation do not provide one. The DG recommends nine months as the recomputation period in the event no period is otherwise established. The nine-month period was felt to be reasonable as it would generally allow the necessary time for the CV option to be provided to the former plan member, selected, and paid within legislative deadlines without requiring a recomputation. Note that the actuary would not establish a recomputation period if one has been provided, regardless of whether or not the recomputation period is shorter or longer than nine months.

Issues on Which Input is Being Specifically Sought

Feedback on all aspects of the proposed changes, as well as suggestions for other changes not presented in this ED, are all encouraged. The DG identified a few specific areas where additional input is being specifically sought. These include the following:

1. Should there be a cap placed on the plan-funded ratio for purposes of calculating CVs under subsection 3570?
2. Are the criteria for defining the pension plans that will fall under subsection 3570 appropriate, or should different criteria be used?

Feedback

Interested parties are invited to formally submit their feedback on these proposed revisions by September 18, 2017. Parties wishing to comment on this exposure draft should direct those comments to Gavin Benjamin at gavin.benjamin@towerswatson.com, with a copy to Chris Fievoli at chris.fievoli@cia-ica.ca by September 18, 2017.

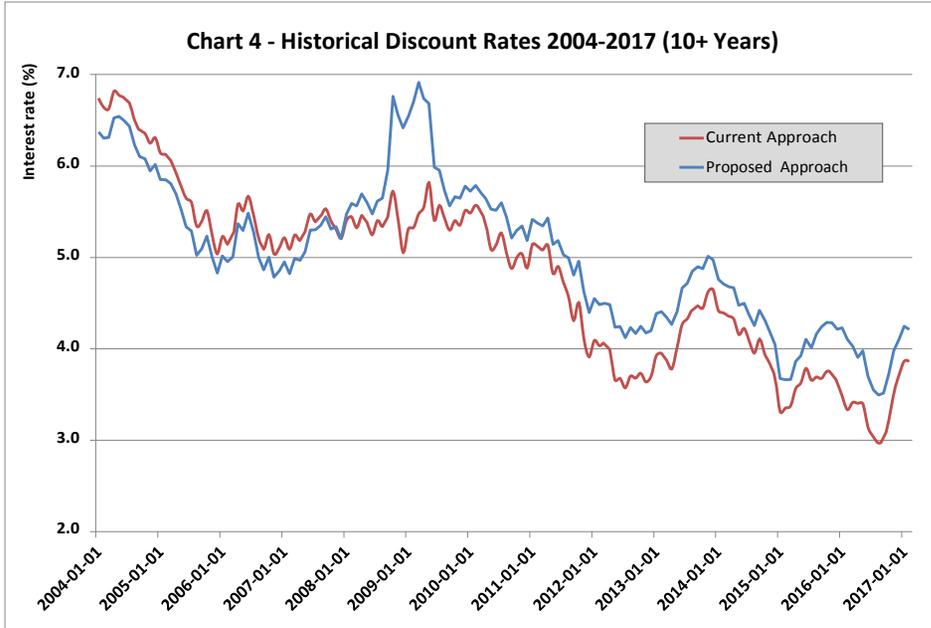
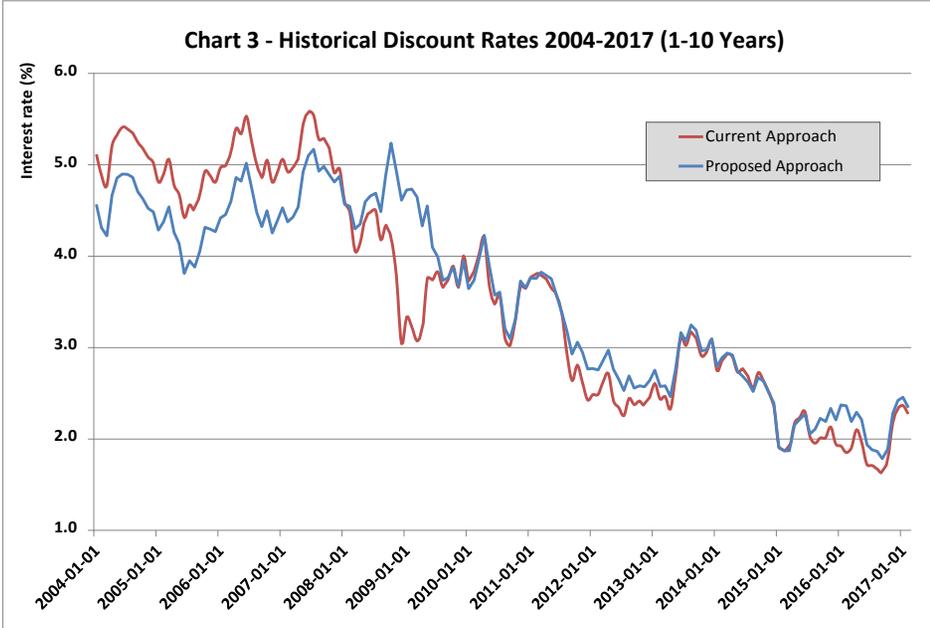
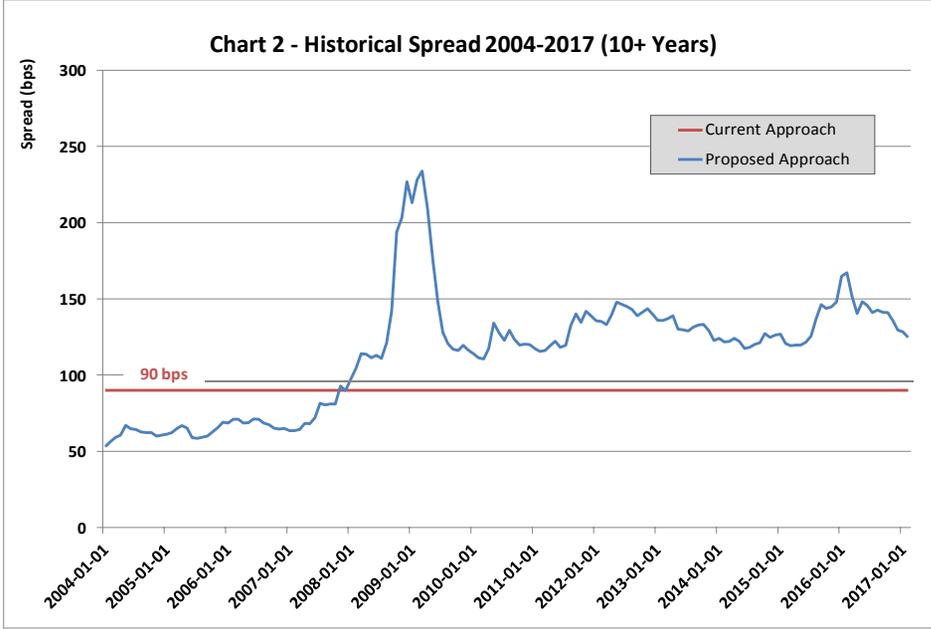
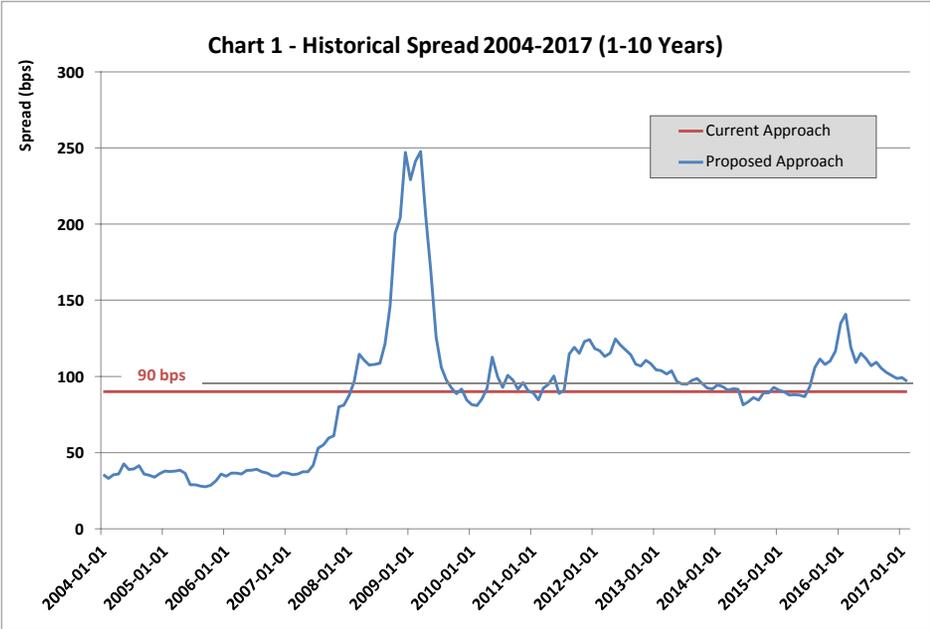
If the feedback does not result in significant changes to the proposed standard, it is expected that changes to the standard will be finalized in early 2018, with an effective date during the second quarter of 2018.

Members of the DG

The members of the DG are Gavin Benjamin (Chair), Ty Faulds, Dani Goraichy, Jamie Jocsak, José Legault, Tim McGorman, Mark Mervyn, and Catherine Robertson.

CF, GB

Appendix – Comparison of commuted value discount rates and spreads from 2004 to 2017



Source: Fiera Capital and FTSE TMX Canada

3500 Pension Commuted Values

3510 Scope

.01 The standards in this section 3500 apply to advice on the computation of commuted values, including commuted values to be paid from a pension plan that is registered under an Act when the method of settlement is a lump sum payment in lieu of an immediate or deferred pension resulting from death or individual termination of plan membership except for the specific circumstances that are described below in paragraph 3510.03. In particular, the standards in this section 3500 apply

- In a jurisdiction whether or not there is legislation in that jurisdiction that specifically provides for portability of pension benefit credits;
- Regardless of limits imposed by the Income Tax Act (Canada) on amounts that may be transferred to other tax-sheltered retirement plans;
- Regardless of the specific adjustments to commuted values in order to determine the lump sums paid from a pension plan required by applicable legislation or by the terms of the plan or by the plan administrator if the administrator is so empowered by the terms of the plan. An example of such an adjustment would be the requirement by pension legislation to reduce the lump sum payment to a former pension plan member if the plan is less than fully funded;
- As modified by subsection 3570, to the determination of commuted values of pensions and deferred pensions payable from target pension arrangements, such as certain target benefit plans and multi-employer pension plans. For purposes of this section 3500, a target pension arrangement is a pension plan for which applicable legislation contemplates the reduction to the accrued pensions of plan members while the pension plan is ongoing as one of the available options for maintaining the funded status of the pension plan, and where the reduction in accrued pensions is not necessarily caused by the financial distress of the plan sponsor or sponsors; and
- Under a reciprocal pension agreement between plan sponsors where the result of the reciprocal agreement is either to establish a pension amount determined on a defined contribution basis or to establish an account balance under a defined contribution provision of a plan, whether the account balance is to be converted immediately or subsequently into a pension.

- .02 The standards in this section 3500 also apply to the determination of a lump sum payment from the pension plan in lieu of an immediate or deferred pension to which a plan member's former spouse is entitled after a division of the member's pension on marital breakdown.
- .03 The standards in this section 3500 do not apply
- Under a reciprocal pension agreement between plan sponsors where the result of the reciprocal agreement is to provide defined pension benefits or target pension benefits for the plan member;
 - To the determination of commuted values of pensions and deferred pensions payable from pension arrangements that are not registered under an Act;
 - To the conversion of defined pension benefits or target pension benefits to a defined contribution arrangement where there is no termination of active employment;
 - To the determination of commuted values of pensions that have commenced payment and where commutation is at the discretion of the member, except as explicitly required under paragraphs 3510.02 or 3560.01; or
 - When calculating the capitalized value of pension benefits for actuarial evidence purposes, pursuant to part 4000, where such value does not relate to a commuted value payable from a registered pension plan.

Act

- .04 For the purposes of this section 3500, "Act" means a pension benefits standards act of a province or the federal government of Canada or the Income Tax Act (Canada).

Retirement Compensation Arrangements

- .05 Since Retirement Compensation Arrangements (RCAs) are not required to be registered under the Income Tax Act (Canada), this section 3500 applies to commuted values payable from an RCA only if the RCA is registered under a pension benefits standards act of a province or the federal government of Canada.

3520 Method

- .00 A commuted value calculated in accordance with the methods and assumptions of this section 3500 is intended to represent the economic value of the immediate or deferred pension that would have been paid from the pension plan. That is, it is intended to represent the value that the marketplace would attribute to that pension, while reflecting certain simplifications in the calculations and requiring that certain assumptions be common among different plans.
[Effective Month XX, 201X]

- .01 The commuted value should be independent of the funded status of the pension plan at the valuation date, except in the circumstances described in paragraph 3540.16.1 and subsection 3570. [Effective Month XX, 201X]
- .02 The period for which the commuted value applies before recomputation is required may be established by the plan terms or applicable legislation, or by a plan administrator who is empowered to specify such period. Commuted values paid after the end of such period should be recomputed on the basis of a new valuation date. If the period for which the commuted value applies before recomputation is required is not established by the plan terms or applicable legislation, or by a plan administrator who is empowered to specify such period, the period should be established as nine months after the valuation date. [Effective Month XX, 201X]
- .03 The commuted value should be adjusted for interest, taking into account the requirements of applicable legislation, between the valuation date and the first of the month in which the payment is made. Unless otherwise required by applicable legislation, the interest rates used to calculate the commuted value should be used for such adjustment. [Effective Month XX, 201X]
- .04 The commuted value should reflect the plan member's full benefit entitlement as a deferred or immediate pensioner, as may be applicable, determined under the terms of the pension plan. In the case of a deferred pensioner, the commuted value should include the value of the death benefit that would have applied before commencement of the deferred pension. [Effective April 1, 2009]
- .05 A commuted value should not be calculated using methods or assumptions that produce a commuted value smaller than the value computed in accordance with this section 3500. [Effective Month XX, 201X]

Valuation date

- .06 The valuation date means the date as of which a value is being computed. Generally, this would be the date upon which the plan member becomes entitled to an immediate or deferred pension resulting from death or individual termination of plan membership, or as of such other date as may be determined either by legislation, by the terms of the plan, or by a plan administrator who is empowered to do so, on which the right to receive a commuted value becomes effective.

- .07 In the event that recomputation is required in accordance with these standards, a new valuation date would be established. Calculations would be made at the new valuation date in accordance with the standards in effect on the new valuation date.

Conditions attached to payment

- .08 Applicable legislation or the terms of the plan may attach conditions to the payment of the full commuted value when the plan is less than fully funded on a plan termination basis.

Benefit entitlement

- .09 The following applies except for commuted values calculated in accordance with subsection 3570. Where, at the valuation date, a plan member has the right as a deferred or immediate pensioner, as may be applicable, to optional forms of pension or optional commencement dates, and where such right is contingent on an action that is within the member's control and where it is reasonable to assume that the member will act so as to maximize the value of the benefit, the option that has the greatest value would be used in the determination of the commuted value. For example, where a member has terminated employment and, upon application, is eligible for a particular benefit that has a value, it is reasonable to assume that, upon acquiring expert advice, the member will apply for the benefit.
- .10 However, where such right is contingent upon an action that is within the member's control and where it is not reasonable to assume that the member will act so as to maximize the value of the benefit, an appropriate allowance would be made for the likelihood and timing of such action. For example, where a member is continuing in employment and is entitled to an unreduced pension that commences upon termination of employment, it may not be reasonable to assume that the member will immediately terminate employment in order to maximize the value of the benefit. In determining the likelihood and timing of such action, group data may be used.
- .11 The commuted value using these assumptions made in accordance with the preceding paragraphs 3520.09 and 3520.10 may prove to have recognized certain potential entitlements that are never realized, or may prove to have disregarded certain entitlements that ultimately provide value.

Alternative methods and assumptions

- .12 Except for commuted values calculated in accordance with subsection 3570, a commuted value may be calculated based on methods and assumptions that differ from those prescribed in these standards only if
- The resulting value is larger; and
 - Such value is required by the plan terms or applicable legislation, or by a plan administrator who is empowered to specify the basis on which commuted values are to be determined.

3530 Demographic Assumptions

- .01 Except for situations specifically noted below, the following should be assumed:
- Separate mortality rates for male and female members; and
 - Except for commuted values calculated in accordance with subsection 3570, mortality rates in accordance with a mortality table promulgated from time to time by the Actuarial Standards Board for the purpose of these calculations. [Effective Month XX, 201X]
- .02 No adjustment should be made to reflect the health or smoker status of the member. [Effective February 1, 2014]
- .03 The current age of the plan member should be used when valuing a pension. [Effective Month XX, 201X]
- .04 If the plan provides a contingent benefit only to the person who is the plan member's spouse at the date of termination of membership, the actual age of the spouse, if any, should be used in the computation. If this information cannot be obtained, an appropriate proportion married and age difference between the plan member and spouse should be assumed. [Effective February 1, 2014]
- .05 Where the plan provides a contingent benefit to a plan member's spouse and a change in the member's marital status after the valuation date is relevant to the determination of the commuted value, an appropriate assumption should be made concerning the likelihood of there being an eligible spouse, and the age of that spouse, at the time of death. [Effective Month XX, 201X]
- .06 When valuing deferred pensions, including deferred pensions for a plan member who may also be entitled to an immediate pension, the normal retirement age should be used, except in the situation where the terminated plan member has the right to elect an earlier commencement date and the consequent early retirement pension exceeds the amount that is of actuarial equivalent value to the pension payable at normal retirement age. The retirement age should be determined in a manner consistent with paragraph 3520.09 or subsection 3570, as applicable. [Effective Month XX, 201X]
- .07 The demographic assumptions would be the same for all types of immediate and deferred pensions.

Mortality

- .08 Commuted values would not vary according to the sex of the plan member when required by applicable legislation or by the terms of the plan or by the plan administrator if the administrator is so empowered by the terms of the plan. In this case, a blended mortality approach would be adopted by either developing a mortality table based on a combination of male and female mortality rates, or computing the commuted value as a weighted average of the commuted value based on male mortality rates and that based on female mortality rates. The relative proportions of males versus females would be appropriate for the particular plan.
- .09 If the requirement that commuted values do not vary according to the sex of the plan member is legislated and applies only to benefits earned after a particular date or only to a subgroup of plan members, the use of a blended mortality approach may be extended to commuted values of benefits earned prior to such date or to commuted values of benefits of all members.

3540 Economic Assumptions

- .01 Economic assumptions that vary depending on whether the pension is fully indexed, partially indexed, or non-indexed should be selected. For commuted values calculated in accordance with subsection 3570, the economic assumptions should be determined in accordance with subsection 3570. [Effective Month XX, 201X]
- .02 Economic assumptions should be selected based on the reported rates for the applicable CANSIM series for the calendar month immediately preceding the month in which the valuation date falls. [Effective Month XX, 201X]
- .03 Two interest rates should be calculated, one applicable to the first 10 years after the valuation date and the second applicable to all years thereafter. [Effective Month XX, 201X]
- .04 The commuted value of a fully or partially indexed pension should be at least equal to the commuted value applicable to a non-indexed pension in the same amount and having similar characteristics. [Effective April 1, 2009]

.05 The following three factors should be determined from the CANSIM series:

CANSIM Series	Description	Factor
V122542	Seven-year Government of Canada benchmark bond yield, annualized (final Wednesday of month)	i_7
V122544	Long-term Government of Canada benchmark bond yield, annualized (final Wednesday of month)	i_L
V122553	Long-term real-return Government of Canada bond yield, annualized (final Wednesday of month)	r_L

Note that the factors determined above are not the reported CANSIM series, but the annualized value of the reported figure. [Effective Month XX, 201X]

.06 A fourth factor should also be determined, calculated as the following:

$$r_7 = r_L * (i_7 / i_L)$$

[Effective Month XX, 201X]

.06.1 Four bond yield spreads should be determined, based on the index yields for the final Wednesday of the calendar month immediately preceding the month in which the valuation date falls, calculated as the following:

$$PS_{1-10} = (\text{Mid-Term Provincial index yield}) - (\text{Mid-Term Canada index yield})$$

$$CS_{1-10} = (\text{Mid-Term Corporate index yield}) - (\text{Mid-Term Canada index yield})$$

$$PS_{10+} = (\text{Long-Term Provincial index yield}) - (\text{Long-Term Canada index yield})$$

$$CS_{10+} = (\text{Long-Term Corporate index yield}) - (\text{Long-Term Canada index yield})$$

{NOTE TO DRAFT: Prior to the standard being finalized, the above definitions will be modified to refer to specific indices published by a data provider.}

[Effective Month XX, 201X]

.06.2 Two spread adjustments should be determined, calculated as the following:

$$s_{1-10} = (0.667 * PS_{1-10}) + (0.333 * CS_{1-10})$$

$$s_{10+} = (0.667 * PS_{10+}) + (0.333 * CS_{10+})$$

[Effective Month XX, 201X]

.07 The interest rates should be determined from the following:

	Non-Indexed	Indexed
First 10 years	$i_{1-10} = i_7 + S_{1-10}$	$r_{1-10} = r_7 + S_{1-10}$
After 10 years	$i_{10+} = i_L + 0.5 * (i_L - i_7) + S_{10+}$	$r_{10+} = r_L + 0.5 * (r_L - r_7) + S_{10+}$

[Effective Month XX, 201X]

.08 The commuted value should be calculated the using a two-tier interest rate of the following:

i_{1-10} for the first 10 years and i_{10+} thereafter.

[Effective Month XX, 201X]

.09 For pensions that are fully indexed to increases in the Consumer Price Index, the rates of pension escalation should be determined based on the implied rates of increase in the Consumer Price Index in the first 10 years and thereafter determined as follows:

c_{1-10} for the first 10 years: $(1 + i_{1-10}) / (1 + r_{1-10}) - 1$

c_{10+} for after 10 years: $(1 + i_{10+}) / (1 + r_{10+}) - 1$.

[Effective Month XX, 201X]

.10 For pensions that are partially indexed to increases in the Consumer Price Index, the rates of pension escalation should be determined by applying to those rates of increase in the Consumer Price Index, determined in accordance with paragraph 3540.09, the partial indexing formula of the plan. [Effective Month XX, 201X]

- .11 Where rates in pension escalation are related to increases in the average wage index, it should be assumed that the average wage index will increase at rates that are one percentage point higher than the rates of increase in the Consumer Price Index. [Effective Month XX, 201X]
- .12 A pension that is indexed according to an excess interest approach involves increases that are linked to the excess of formula A over formula B, where A is some proportion of the rate of return on the pension fund or on a particular class of assets, and B is a base rate or some proportion of the rate of return on another asset class. In determining the interest rates under formula A and formula B, the interest rates determined in accordance with paragraph 3540.08 should be used as proxies for the rate of return on the pension fund or on any particular asset class for which the rate of return is expected to be equal to or greater than the non-indexed interest rates determined in accordance with paragraph 3540.08. [Effective Month XX, 201X]
- .13 Prior to calculating the commuted value, the rates of interest and rates of pension escalation determined in accordance with this subsection 3540 should each be rounded to the nearest multiple of 0.10%. Only the interest and pension escalation rates to be used in the calculation of the commuted value should be rounded. Any rates of interest, increase or escalation used in calculations prior to the final step of the determination should not be rounded. [Effective Month XX, 201X]

Pension index frequency

- .14 For an indexed pension, the rates of pension escalation would be applied as determined above without adjustment only if the frequency of indexing is equal to the payment frequency. Reasonable approximations may be used to calculate an adjustment that takes into account the specific circumstances of the situation regarding payment frequency, indexing frequency, and time and amount of the first increase.

Pension indexed on an excess interest formula

- .15 If the pension is indexed on an excess interest formula and the particular asset class is one for which the rate of return is expected to be less than the interest rates determined in accordance with paragraph 3540.08, the rate of interest would be appropriately reduced to reflect the expectation of the difference between the interest rates determined in accordance with paragraph 3540.08 and the rate of return on the particular asset class. In determining the expected rate of return on a particular asset class for this purpose, the current economic environment as well as future expectations would be considered.

Other modifications

- .16 Where pension escalation rates are based on one of the above approaches but are either modified by applying a maximum or minimum annual increase, with or without carry forward of excesses or deficiencies to later years, or modified by prohibiting a decrease in a year where the application of the formula would otherwise cause a decrease in pension, the pension escalation rates otherwise applicable would be adjusted, based on the likelihood of the modification causing a material change in the pension payable in any year. In determining such likelihood, the current economic environment as well as future expectations would be considered. Either a stochastic or deterministic analysis may be used to determine the pension escalation rates.
- .16.1 Where pension escalation rates are based on the funded status of the pension plan, the pension escalation rates otherwise applicable would be adjusted, based on the likelihood of the plan's funded status causing a material change in the pension payable in any year. In determining such likelihood, the current funded status of the plan and the projected funded status in future years would be considered in determining the pension escalation rates. A stochastic or deterministic analysis may be used to determine the pension escalation rates.
- .17 Where pension escalation rates are not determined by reference to increases in the Consumer Price Index, the commuted value would be consistent with the values of non-indexed pensions and fully indexed pensions.
- .18

3550 Disclosure

- .01 When communicating the amount of the commuted value of a member's pension, the following should be provided:
- A description of the benefit entitlements involved;
 - A description of the actuarial assumptions used in determining the commuted value and the rate of interest to be credited between the valuation date and the first day of the month in which the payment is made. For indexed pensions, both the non-indexed nominal interest rates and the pension escalation assumptions should be disclosed separately;
 - A statement of the period for which the commuted value applies before recomputation is required;
 - When the payment of the full commuted value is subject to a condition based on the funded status of the plan, the additional contribution required for the payment of the full commuted value to be made or the recommended schedule for payment of the balance of the commuted value, if applicable; and
 - A statement as to whether the commuted value has been computed in accordance with these standards. [Effective Month XX, 201X]
- .02 Where the commuted value has not been determined in accordance with these standards, it should be clearly stated that the calculation is not in compliance with these standards and all areas of non-compliance and the reasons for the non-compliance should be disclosed. [Effective Month XX, 201X]
- .03 When communicating to the plan administrator an actuarial basis to be used in determining commuted values, it should be stated that the actuarial basis is in accordance with these standards. [Effective Month XX, 201X]

.03.1 The disclosures in paragraphs 3550.01 to .03 above would be made in both an external user report and a written internal user report.

Disclosure of plan values which differ from these standards

- .04 In a situation where the use of commuted values (called plan values in this subsection 3550) that are different from those computed in accordance with this section 3500, is required by the plan terms or applicable legislation, or by a plan administrator who is empowered to specify the basis on which commuted values are to be determined, the following disclosure requirements are applicable:
- If the plan values are lower, it should be disclosed that the commuted values so calculated are in accordance with the terms of the plan or the applicable legislation but not in accordance with the standards; or
 - If the plan values are higher, it should be disclosed that the commuted values so calculated are in accordance with the terms of the plan or the applicable legislation and the standards. However, if the plan values are higher for commuted values that would be calculated in accordance with subsection 3570, it should be disclosed that the commuted values so calculated are in accordance with the terms of the plan or the applicable legislation but not in accordance with the standards. [Effective Month XX, 201X]
- .05 Where commuted values that do not vary according to the sex of the plan member are required to be calculated, and where that requirement applies only to benefits earned after a particular date or only to a subgroup of plan members, the extent to which the blended mortality approach has been extended to benefits earned before the particular date or to benefits of all members should be described. [Effective Month XX, 201X]
- .06 Where assumptions or methods described in these standards are used to calculate a commuted value in a situation where these standards do not apply, it should not be stated or implied that the commuted value has been computed in accordance with these standards. [Effective Month XX, 201X]

3560 Reduced Life Expectancy

- .01 The standards in this subsection 3560 applies to advice on the computation of commuted values, from a registered pension plan, where the right to receive the lump sum is based on subsection 51.1 of the regulations to the Ontario Pension Benefits Act. These standards may also be applicable in other directly comparable situations.
- .02 These standards do not apply where the right to receive a lump sum is not conditional upon medical certification, under legislation or the terms of the plan, even if the former member is known to be terminally ill.

.03 All standards set out in section 3500 apply, except as superseded by the following recommendations.

- .04 The commuted value should be calculated as of the date of the medical certificate specifying that the former member has life expectancy less than two years, even if other conditions for payment of the benefit (such as spousal consent) are not met until a later date.
- .05 The commuted value should be adjusted for interest and benefits paid to the date of payment.
- .06 The computation should not be adjusted to reflect the actual death or change in health of the former member after the valuation date. However, if a former pension plan member becomes eligible for immediate commencement of a pension after the date of the medical certificate and prior to payment of the benefit, this eligibility should be reflected in the calculation. [Effective April 1, 2009]
- .07 If the former member is entitled to a commuted value transfer based on the terms of the plan provisions or legislation that is not conditional on reduced life expectancy, the amount payable should be the greater of the amount calculated in accordance with this subsection 3560 and the amount computed in accordance with subsections 3520 through 3540 and subsection 3570, if applicable, without regard to shortened life expectancy. [Effective Month XX, 201X]

Benefit entitlement

- .08 The commuted value would reflect the plan member's full benefit entitlement as a deferred or immediate pensioner, as may be applicable, determined under the terms of the pension plan.

There are three possible cases:

- (a) A former member with deferred pension entitlement, not eligible for immediate commencement of pension.

In this case, the commuted value would reflect the present value of the death benefits that would be payable in respect of the former member. For this purpose, the value of the death benefit would be calculated as of the valuation date, assuming the former member died as of the valuation date.

- (b) A former member with deferred pension entitlement, eligible for immediate commencement of pension.

In this case, the lump sum value would be the greater of the amount determined as in (a) above and a value determined as if the member had retired at the date of valuation and elected the most favourable combination of the highest surviving spouse pension permitted by the plan (if there is an eligible spouse) and the longest guaranteed period available under the plan. This value would be determined as for pensioners in (c) below.

- (c) A former member in receipt of pension.

In this case, the commuted value would reflect the present value of pension payments for a period certain of four months from the valuation date, any additional guaranteed payments and any survivor benefits potentially payable.

Disclosure

- .09 When communicating the amount of the commuted value of a member's pension, a description of the survival period assumption would be provided.

3570 Target Pension Arrangements

- .01 The standards in this subsection 3570 apply to the determination of commuted values of pensions and deferred pensions payable from target pension arrangements, such as certain target benefit plans and multi-employer pension plans. For purposes of this section 3500, a target pension arrangement is a pension plan for which applicable legislation contemplates the reduction to the accrued pensions of plan members while the pension plan is ongoing as one of the available options for maintaining the funded status of the pension plan, and where the reduction in accrued pensions is not necessarily caused by the financial distress of the plan sponsor or sponsors.

.02 All standards set out in preceding subsections of section 3500 apply, unless indicated otherwise or as superseded by the following recommendations.

.03 A commuted value calculated in accordance with the assumptions and methods of this subsection 3570 is intended to represent an approximation of the share of the pension plan assets reasonably attributable to the plan member in respect of whom the commuted value is being calculated. [Effective Month XX, 201X]

.04 The commuted value should be calculated as the product of

- The actuarial present value on the valuation date of the member's benefit entitlement as a deferred or immediate pensioner, determined using going concern assumptions; and
- The funded ratio of the pension plan, determined using going concern assumptions. [Effective Month XX, 201X]

Assumptions

.05 The assumptions used to calculate the commuted value would be the assumptions used for the pension plan's going concern valuation from the most recent funding actuarial valuation report filed with the applicable pension regulator, except that any margins for adverse deviations explicitly disclosed in the actuarial valuation report would be removed from the assumptions.

.06 When calculating the commuted value of a deferred pension, the assumptions used to determine the actuarial present value of the member's benefit entitlement would be assumptions that are appropriate for purposes of performing an actuarial valuation of a pension plan consisting of only the group of deferred pensioner members of the plan.

Methods

.07 The calculation date for the funded ratio of the pension plan would be within three months of, but no later than, the commuted value valuation date.

.08 The funded ratio of the pension plan would be determined, as of the applicable funded ratio calculation date, as

- The market value of pension plan assets at the funded ratio calculation date; divided by
- The actuarial present value at the funded ratio calculation date of the projected benefits for the pension plan allocated to periods up to the funded ratio calculation date, based on the assumptions described in paragraph 3570.05.

.09 The actuarial cost method used to calculate the actuarial present value of the projected benefits for the pension plan allocated to periods up to the calculation date would be the same actuarial cost method that was used for the going concern valuation for the most recent funding actuarial valuation report filed with the applicable pension regulator.

- .10 The funded ratio of the pension plan may be based on an extrapolation of the actuarial present value of projected benefits disclosed in a previous external user report.

Disclosure

- .11 In addition to the disclosures specified in preceding subsections of section 3500, the data, assumptions, methods, and plan provisions used to calculate the funded ratio of the pension plan would be disclosed.