Office of the Superintendent
of Financial Institutions Canada

255 Albert Street
Ottawa, Canada
K1A 0H2

Bureau du surintendant
des institutions financières Canada

255, rue Albert
Ottawa, Canada
K1A 0H2

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MEMORANDUM

To: **Actuaries of Federally Regulated Pension Plans**

From: **Ronald J.M. Bergeron**
Senior Director, Supervision Sector

Subject: **Instructions for the Preparation of Actuarial Reports for Federally Regulated Defined Benefit Pension Plans**

In October 1997, the Office of the Superintendent of Financial Institutions (OSFI) published instructions that set out its requirements for actuarial reports of on-going plans. This is the second edition of the instructions, which are issued to promote compliance with the requirements of the *Pension Benefits Standards Act, 1985* (*PBSA*). In particular, they:

- set out minimum requirements for actuarial reports;
- provide guidance for actuaries preparing actuarial reports in matters relating to presentation, disclosure, level of detail and nature of the discussion; and
- identify areas in the actuarial report where further clarification from the actuary is often required.

These instructions must be followed for actuarial reports with valuation dates from June 1, 2000. However, they are not meant to limit the information the actuary may want to include in a report.

Authority for the instructions is granted under subsection 12(3) of the *PBSA*. An electronic copy of these instructions is available on our website: www.osfi-bsif.gc.ca.

If you have any questions or comments, please contact Denise Codère at (613) 990-8136.

Instructions

for the

Preparation

of

Actuarial Reports

for

On-Going
Federally Regulated
Defined Benefit Pension Plans

June 2000

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1.0 Regulatory Requirements

1.1 Filing Requirements

Actuarial reports must be prepared as of the effective date of the plan or an amendment to the plan that alters the cost of benefits provided under the plan, and thereafter at intervals not exceeding three years. For all funding actuarial reports filed on or after July 1, 2000, an Actuarial Information Summary (AIS) must be completed and filed with the report.

The administrator is responsible for ensuring that actuarial reports are filed within six months of the effective date of the valuation. In fact, OSFI reserves the right to refuse actuarial reports when the report is not due and it is filed more than nine months after its effective date.

The administrator must file actuarial reports annually when a solvency ratio less than one as of a valuation date is reported. Triennial filings resume with the filing of a report showing that the solvency ratio is one. This rule does not override the requirement to file an actuarial report as of the date of plan amendments that alter the cost of benefits.

The administrator must file a copy of any amendment within sixty days after the making of the amendment.

When a plan amendment is not retroactive to the valuation date and the going concern and solvency valuations of the current actuarial report do not cover the new plan provisions, a report must be filed as of the effective date of the amendment. This avoids cases, for example, where negotiated annual changes to the benefit formula for the three years after the valuation date are reflected in the going concern liabilities but are not reflected in the solvency liabilities until the next triennial filing date. Administrators may avoid preparation of an actuarial report as of the effective date of an amendment if the change has been recognized in the going concern and solvency valuations of a prior report.

1.2 Application of Professional Standards to Actuarial Reports

1.2.1 Actuarial Standards of Practice

Actuarial reports must be prepared in accordance with actuarial standards of practice for the valuation of pension plans issued by the Canadian Institute of Actuaries (CIA). These instructions do not duplicate the professional standards of practice.

While OSFI relies on the actuaries' work, the Superintendent may direct the administrator to have an actuarial report revised if, in his opinion, the actuarial assumptions or methods used are not adequate and appropriate for the plan. In those situations, the Superintendent may send a copy of the original report to the CIA for review.

1.2.2 Canadian Institute of Actuaries

OSFI requires that actuarial reports be prepared, signed and dated by a Fellow of the CIA.

1.3 Other OSFI Publications

1.3.1 PBSA Update

The *PBSA Update*, which is published biannually, informs the pension industry of changes to legislation and regulations, administrative policies and procedures, and *PBSA* standards. Some articles provide guidance to administrators and actuaries in the preparation of actuarial reports. Please note that these Instructions take precedence over articles previously issued in *PBSA Update*.

1.3.2 OSFI Guidelines

These Instructions do not address the reporting of information specific to wind-ups or conversions. Guidelines for wind-up and conversion valuations are available for report content and issues specific to these valuations.

2.0 Content of the Actuarial Report

While OSFI does not intend to prescribe the format or content of an actuarial report, the report must be clear, complete and organized. It should provide an executive summary of the key findings and plan events as well as address the following:

- Actuarial Opinion.
- Data.
- Actuarial Basis – Assumptions and Valuation Methods.
- Going Concern Financial Position.
- Solvency Financial Position.
- Reconciliation of Financial Position – Analysis of Experience.
- Contribution Requirements.

2.1 Executive Summary

The executive summary is an overview of key findings that occurred since the last actuarial report. It should highlight the events that affect, or will affect, the plan's funding requirements.

2.2 Actuarial Opinion

The actuary must disclose a qualification or limitation concerning any aspect of the actuarial report. The CIA standards require the actuary to state opinions with regard to data, assumptions, methods, and conformation. The actuary can give an opinion using the wording

in the standards provided the conditions set out in the standards have been met. If the actuary does not opine according to this wording, OSFI will assume the opinion is qualified.

2.3 Data

2.3.1 Membership Data

The CIA standards require the actuarial report to include a summary of the statistics pertaining to the members in sufficient detail to permit another actuary to be satisfied as to the reasonableness of the valuation results. For OSFI's purposes, the following details should be provided:

- Number of members according to group (e.g., active, deferred, retired, etc.).
- Separation of the membership data into identifiable groups is expected when assumptions and methods applied to value the benefit entitlements of one group are materially different from another group. OSFI has found that members of distinct groups with significant benefits, for example disabled members receiving a generous pension, are sometimes reported as active members.
- Average age, average service and average salary for active members.
- The information for active members should be broken down for distinct benefit classes, if material; for example, when a final average benefit formula is applicable for non-union employees and a flat benefit formula is applicable for union employees.
- Average age and average pension for inactive members, broken down by basic and bridge benefit, if the bridge benefit is material.
- A reconciliation of membership from the last filed actuarial report explaining large fluctuations in membership (e.g., downsizing or acquisitions).

2.3.2 Summary of Plan Provisions

The CIA standards require the actuary to include a brief summary of the provisions that materially affect the valuation results in the actuarial report.

OSFI has noted in the past that one or more of the following provisions are sometimes not included in the summary:

- Normal form of pension and whether the spousal benefits are subsidized.
- Pensionable retirement conditions.
- Early retirement subsidies.
- Bridge benefits.
- Disability benefits.

- Indexation before and after retirement.

OSFI looks to the official plan text to establish plan provisions as of the valuation date that materially affect the going concern and solvency valuation results.

2.4 Actuarial Basis

The CIA standards address the selection, disclosure and appropriateness of going concern methods and assumptions. Therefore, these instructions for the preparation of actuarial reports describe only the problems OSFI has had with the going concern actuarial basis.

The CIA *Valuation Technique Paper on Wind-Up and Solvency Valuations of Registered Pension Plans* addresses the selection, disclosure and appropriateness of solvency methods and assumptions and requires the actuary to follow what is prescribed by the applicable legislation. These instructions for the preparation of actuarial reports, therefore, describe OSFI's requirements relating to the valuation methods and assumptions used to determine the financial position of the plan for solvency valuations.

2.4.1 Asset Valuation

The administrator must establish a statement of investment policies and procedures in respect of the plan's portfolio of investments and loans. The investment policy should consider that a plan's sensitivity to various economic scenarios depends on its provisions, demographics, and financial situation. The administrator must submit the statement of investment policies and procedures to the actuary of the plan who should take the statement into account when establishing the actuarial basis.

2.4.2 Going Concern Assumptions and Valuation Methods

Problems OSFI has had with the going concern actuarial basis:

- Limited description of the asset valuation method.
- Non disclosure of some assumptions, leading to confusion as to whether an assumption had been made.
- Aggressive assumptions.
- Assumption or method changes with no disclosure of the change.

2.4.3 Solvency Assumptions and Valuation Methods

The actuary should provide information relating to the following assumptions and valuation methods used to determine the solvency assets and solvency liabilities. For reference, each assumption/method is followed by the relevant OSFI requirements.

- **Asset Valuation Method**

  The actuary should disclose as of the valuation date, the market value of assets according to the financial statements of the plan and explain any difference between this asset value and the market value of assets used in the solvency valuation.

  Although a value related to the market value averaged over no more than five years is permitted for solvency valuations, the value of assets determined on the basis of market value is preferred as it makes the valuation results more objective, useful and consistent with the valuation of the liabilities. Smoothing of the liability discount rate is not permitted.

- **Actuarial Cost Method**

  The accrued benefit cost method is required for solvency valuations.

- **Interest Rates**

  Pension benefits at full or partial wind-up of the plan are normally provided through the purchase of annuities. The primary obligation of a defined benefit plan is a deferred or immediate pension unless the participant chooses a transfer value.

  As the pension benefit credits for the solvency balance sheet are usually an estimate of the cost of purchasing annuities, the plan may gain or lose when annuities are actually purchased on plan wind-up. Normally this is of no great concern, but, if there is little or no surplus at plan wind-up, the payment of all accrued benefits through annuity purchases may not be possible.

  Because the solvency valuation is a determination of the liabilities on plan wind-up, the members' entitlement to a pension has implications, for and should be reflected in, the solvency valuation results.

  The assumptions for valuing benefit entitlements that would be discharged in an actual wind-up by a lump sum transfer should be in accordance with the CIA *Recommendations for the Computation of Transfer Values from Registered Pension Plans* (CIA Transfer Value Recommendations).

  The assumptions for valuing benefit entitlements that would be discharged in an actual wind-up by the purchase of annuities should reflect the single premium rates for annuities. For members who would have a right, upon wind-up, to receive an immediate annuity or the commuted value of such an annuity, OSFI expects the actuary to value the option that creates the highest solvency liability. Furthermore, the actuary should explain the interest rate assumption used to value the benefit entitlements.

- **Salary Scale**

  Only if it is assumed that employment continues on wind-up of the plan and if the plan text defines final earnings over a term that ends when employment ends is a projection of salary expected. The calculation of such additional pension to be generated by future salary increases would be subject to employment and mortality contingencies.

- **Indexation Before and After Retirement**

  An implicit assumption in accordance with the CIA Transfer Value Recommendations or an explicit assumption based on the plan provisions is required.

- **Pre- and Post-retirement Mortality Table**

  A mortality assumption in accordance with the CIA Transfer Value Recommendations is required.

- **Retirement Ages**

  Some administrators are not fully aware of the implications of the definition of pensionable age, its interplay with sections 16, 17 and 23 of the *PBSA* and its effect on solvency funding requirements.

  Pensionable age is defined as the earliest age at which an unreduced pension benefit is payable to a member under the terms of the pension plan without the consent of the administrator. Pensionable age may depend on service. This is usually the same as what some plans define as normal retirement age. While a plan may have several pensionable ages based on a number of factors, there is only one pensionable age for any particular member.

  The minimum retirement age assumptions to be used in the solvency valuation are:

  (1) Members who are within 10 years of pensionable age at the valuation date are entitled to a pension payable immediately with applicable reduction for the period from attained age to pensionable age.

  (2) Members who are not within 10 years of pensionable age are entitled to a deferred pension payable from pensionable age.

  The actuary should state the assumption for each of these categories. Statements such as "the age that maximizes the pension value" are not sufficient to determine if pensionable age has been properly accounted for, particularly if there are multiple pensionable ages and one or more has a service component.
  Examples:

	Pensionable Age	**10 Years Before Pensionable Age**
Example 1:	age 60	age 50
Example 2:	age 55, 20 years of service	age 45, 20 years of service
Example 3:	85 points	75 points

Examples 2 and 3 are more complicated because of the service component. In example 2, the entitlement for a member who has 20 years of service but is not yet age 45 at the date of valuation, is a deferred pension benefit payable at age 55. In example 3, the entitlement for a member who has less than 75 points at the date of valuation, is a deferred pension benefit payable when 85 points have been accumulated. In a solvency valuation, it is usually assumed that members do not accrue future service. Therefore, only one point is credited for each additional year of age.

If a plan has more than one pensionable age, the most costly benefit for each member should be valued when determining individual solvency liabilities. Assuming, for example, that a plan defines pensionable age as the earliest of age 60 or 85 points, the benefit valued for a member who is 48 and has 26 years of service (74 points) at the date of valuation should be an unreduced pension deferred to age 59, which is the age when the member reaches 85 points. Pensionable age is the earliest age at which an unreduced benefit is payable to this member without the consent of the administrator, is age 59.

Some plan texts define normal retirement age as age 65, with an early retirement reduction from age 65. Amendments are submitted which change the early retirement reduction factors and grant an unreduced pension at age 62. Although probably not the intent of the administrator, this amendment establishes a new pensionable age for the plan at age 62 and the age at which members may retire early at age 52. Some plans have run into further complications while trying to rectify unintended pensionable age provisions because amendments to the pensionable age may be considered a reduction in accrued benefits.

The purpose of pensionable age under the *PBSA* is to ensure that plan entitlements are provided consistently. Plan administrators and actuaries should verify how pensionable age is defined in plan texts and ensure that it is properly reflected in actuarial reports. Misunderstandings typically lead to incorrect determination of deferred vested members' pension entitlements, retirement and early retirement eligibility, death benefit calculations and their associated costs.

- **Vesting**

  Normal retirement benefits are fully vested on plan wind-up, despite age, service or term of employment. Bridge and subsidized early retirement benefits, payable without the consent of the plan administrator, are vested if the member had become entitled to them under the terms of the plan immediately before the plan wound-up.

- **Proportion of Members with Eligible Spouse and Age Differential between Spouses**

  If the spousal pension is subsidized, the assumption regarding the proportion of members with an eligible spouse and the assumption for age differential between the spouses should be in accordance with the CIA Transfer Value Recommendations.

2.5 Going Concern Financial Position

The actuary must include a going concern balance sheet comparing assets to the actuarial liabilities. The inclusion of the present value of special payments as an asset in the balance sheet is a misleading representation of the financial position of the plan and should not be included.

2.6 Solvency Financial Position

The solvency ratio is the ratio of the solvency assets (net of wind-up expenses) to solvency liabilities. A solvency deficiency is the excess of solvency liabilities over the sum of the solvency assets and the present value of certain special payments. The actuary must disclose both the solvency ratio and the solvency deficiency.

A balance sheet showing the solvency assets and the solvency liabilities should be included. An opinion that the solvency ratio is at least one is permitted; a balance sheet is required only if the solvency ratio is less than one or if the solvency ratio is greater than one but the actuary cannot show this from the going concern valuation. However, a balance sheet is preferred in all cases, as the valuation results are more meaningful. If only an opinion is given, the actuary must disclose the assumptions that would be used in the calculation of solvency liabilities, describe the benefit entitlements on wind-up and explain the opinion.

For plans with a solvency ratio less than one, the actuary should outline steps (e.g., special payments, increased contributions, benefit reductions, etc.) the administrator may take to make the plan solvent. If there are liabilities representing transfer deficiencies, they should be shown separately on the balance sheet.

2.6.1 Additional Information Required for Solvency Valuations

OSFI has noted two common problems with solvency valuations. First, the failure to describe the benefits being valued and second, the improper recognition of pensionable age. Therefore, disclosure of the following items in solvency valuations is required:

- A clear description of benefit entitlements at plan wind-up for the various groups of members.

  This description is more crucial when there are multiple pensionable ages in the plan and one or more of them have a service component.

  Some plan texts set a hierarchy for the payment of benefits on plan wind-up. Actuaries should be aware of these priority provisions when considering the benefit entitlements on a solvency basis.

- A description of how any benefit subject to the consent of the administrator has been valued.

  OSFI's policy allows the exclusion from solvency liabilities of a benefit genuinely subject to consent.

  Experience has shown that it is sometimes difficult for an administrator to deny consent to a benefit, where the administrator has consistently granted the benefit to all eligible members who apply for it. The administrator should establish the degree to which consent to a benefit may be denied by considering past administrative practices, employee understanding through booklets and other communications and collective agreements.

  For valuation purposes, the actuary should recognize the plan administrator's policy and practice regarding consent benefits. To that effect, the actuary should obtain confirmation, from the plan administrator, of the way consent benefits are handled on a day-to-day basis and how they would be treated in a wind-up situation. If a benefit subject to consent is excluded from the solvency liability, the actuary should so indicate in the actuarial report.

- Confirmation that the 50 per cent employer cost sharing rule for contributory plans has been accounted for, if applicable.

- A description of how bridge benefits have been valued.

2.7 Reconciliation of Financial Position – Analysis of Experience

The CIA standards require the actuary to include a reconciliation of the going concern valuation results in the actuarial report.

Problems OSFI has had with the reconciliation of the financial position are:

- Limited detail in the analysis.
- A change to an assumption or method for no apparent reason except that the change offsets an experience loss and puts the plan into a surplus position.
- No reflection of the effect of an enhancement to benefits or a change in assumptions or methods.
- Consecutive and significant losses for a particular assumption or method.

2.8 Contribution Requirements

The CIA standards require the actuary to disclose the rule for determining the actuarial funding contribution in respect of the period from the valuation date until the date on which the next valuation should be done. For OSFI's purposes, the actuary should, in addition, state the estimated dollar amounts of required contributions (i.e., normal cost) by source (member contributions, employer contributions). For plans with negotiated or fixed contributions, the actuary should also state the estimated dollar amounts of negotiated contributions.

Any material change in the rule for determining the actuarial funding contribution (i.e., normal cost) since the last actuarial report should be explained.

Actuarial reports for plans with negotiated or fixed contributions often do not contain a statement that the contribution rate is sufficient to fund the plan or, alternatively, a statement regarding the increase in contribution rate and/or reduction in benefit rate, required to ensure the adequacy of funding for the promised benefits. This is a requirement of the CIA standards.

The actuary should show the amount of special payments needed to amortize any unfunded liability or solvency deficiency. For each schedule, the actuary should disclose the amount remaining, the annual payment and the beginning and expiry dates. Generally, an initial unfunded liability can be funded over 15 years and a solvency deficiency over five years, although OSFI encourages accelerated funding. The actuary should reduce pro rata any special payment remaining, after the application of an actuarial gain to reduce the outstanding balance of an initial unfunded liability or a solvency deficiency, maintaining the original establishment date. Section 9 of the *Pension Benefits Standards Regulations, 1985* discusses funding requirements in detail.

Some pension plans contain provisions that prohibit or have the effect of prohibiting contribution holidays. Before using surplus to pay for normal costs, plan administrators should ensure that contribution holidays are authorized under the plan terms. OSFI's review

of contribution holidays focuses on solvency, not contractual legality. Contribution holidays cannot be taken if the solvency ratio is less than one, even if there is a surplus on a going concern basis.

Payments to a plan must be made not less frequently than quarterly. Any amendment to the contribution rate in effect until the next valuation date, due to a request for revision to the original actuarial report, is expected to be revised back to the original report date with amounts owing paid immediately.

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