Autorité des marchés financiers

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Actuary’s Guide Regarding the Liability Report for P&C Insurers

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Table of contents

1 OVERVIEW

This Guide is intended for Appointed Actuaries of Quebec chartered damage insurers (P&C insurers). However, the *Autorité des marchés financiers* (AMF) considers use of the Actuary's Guide to be a sound management practice for all insurers authorized to carry on activities in Québec.

This Guide sets out the requirements of the AMF with respect to the content and preparation of the Actuary's Report (the Appointed Actuary's Report or AAR) specified in section 128 of the *Insurers Act,* CQLR, c. A-32.1. It describes the AMF's minimum expectations and provides guidance for the Appointed Actuary preparing reports in matters relating to presentation, level of detail and nature of the discussions to be included.

The term AAR refers to the detailed actuarial report submitted to a regulator. This includes the opinion of the Appointed Actuary concerning the appropriateness of the policy liabilities included in the insurer's financial statements, a detailed commentary, data exhibits and calculations supporting that opinion. The opinion must cover all policy liabilities, regardless of the IFRS Standard used (typically IFRS 9, IFRS 15 and IFRS17).

The AAR comprehensively documents the work done by the Appointed Actuary to calculate liabilities for insurance contracts issued and assets for reinsurance contracts held. The AMF views the AAR as a key component of its review of the insurer's financial position and profile.

The explanations provided in the AAR must be clear and complete to enable insurer management and the regulators to fully understand the work of the Appointed Actuary.

Definitions:

The Appointed Actuary must consider the following definitions when preparing the AAR, the supplementary tables and the Unpaid Claims and Loss Ratio Analysis Exhibit (UCLR Analysis Exhibit) required by the AMF:

- **Appointed Actuary**: The actuary charged with the functions provided for in Chapter VII of the *Insurers Act*;
- **Insurance contracts issued liabilities**: The sum of insurance contracts issued liabilities and reinsurance contracts issued liabilities, net of insurance contracts issued assets, as defined in the P&C regulatory financial return (P&C Return);
- **Reinsurance contracts held assets**: Reinsurance contracts held assets net of reinsurance contracts held liabilities, as defined in the P&C Return;
- **Gross**: Contracts issued by an insurer or reinsurance contracts issued by a reinsurer. For auto writers, the *Plan de Répartition des Risques* (PRR), other *Risk Sharing Pools* (RSP) and the *Facility Association Residual Market Mechanism* (FARM) are included;
- **Ceded**: Reinsurance contracts held. For auto writers, PRR/RSP are included;
- **Net**: Gross minus ceded;
- **Exhibit categories** or **Lines of business**: Presented in Appendix III and having the same meaning as the definitions used in P&C Return;
- **Actuary's categories** or **Actuarial lines of business**: The groupings selected by the Appointed Actuary based on the credibility and homogeneity of the data for reserving analysis purposes;
- **Loss Ratio**: Claims divided by earned premiums for 2022 and before when the earned premiums are used, otherwise claims divided by insurance revenue. For 2023 and after, loss ratio equals to claims divided by insurance revenue.

2 REGULATORY REQUIREMENTS

2.1 Application of Professional Standards to the Appointed Actuary's Valuation

Section 129 of the Act requires that the Appointed Actuary "apply generally accepted actuarial standards or any other standard established by the Authority." Therefore, when valuing insurance contracts issued liabilities and reinsurance contracts held assets, the Appointed Actuary must, subject to specific requirements established by the AMF, comply with the Standards of Practice of the Canadian Institute of Actuaries (CIA). Any deviations from the CIA Standards of Practice or the additional requirements set out in this Guide must be disclosed and justified in the AAR.

The CIA annually issues a letter (the Fall Letter) from the Committee on Property and Casualty Insurance Financial Reporting (PCFRC) and, from time to time, may issue other educational notes. While the Fall Letter and educational notes are not standards, the Appointed Actuary should disclose when either the educational notes and/or the PCFRC Fall Letter are/is not followed as well as the supporting justification.

This Guide does not contain any requirements that override or limit accepted actuarial practice in Canada.

In complying with accepted actuarial practice, the Appointed Actuary must meet a standard of care with respect to the data used in valuations. This standard of care, implicitly stated in the CIA Standards of Practice, requires the Appointed Actuary to establish suitable check procedures for the verification of data. The CIA Standards of Practice Subsection 1520 offers the Appointed Actuary the option to consider the External Auditor's (the Auditor) work. The AAR must discuss the extent to which the Appointed Actuary considers the work of the Auditor. Where the Appointed Actuary uses the work of the Auditor, the details of the Auditor's work should not be addressed in the AAR. If there are instances where the Appointed Actuary does not use the work of the Auditor because of any special circumstances, this must be disclosed in the data section of the AAR. The Appointed Actuary should describe the data verification that was performed.

The CIA Standards of Practice Subsection 1510 describes the Appointed Actuary's use of another person's work. Such use of the work of others should be disclosed in the section of the AAR where it most logically applies (e.g., at the insurer level, a specific product level, etc.).

With respect to any line of business (including, more specifically, accident & sickness business, pools (including PRR) and Facility Association), the Appointed Actuary should describe at a high level:

- Any use of the work of another actuary;
  - A copy of the other actuary's report must be attached to the AAR, except for reports related to pools (including PRR) and Facility Association;
- The scope of such use;
- A justification for such reliance; and
- The extent of the review of the other actuary's work should also be described.

2.2 AAR Filing Instructions

The AAR, including the supplementary tables, must be filed with the AMF no later than 60 days after the end of the fiscal year. For information regarding the monetary administrative penalty that may be imposed if an AAR is filed late or is incomplete, refer to the *Insurers Act* (specifically, sections 491 and 495).

The insurer must submit an electronic copy via the AMF E-Services. For security reasons, insurers should not submit reports through e-mail.

The AAR should be submitted as a searchable PDF file, created with a PDF software, rather than as a scanned, and therefore non-searchable, document. Furthermore, the file must be in a format that enables specific passages to be easily copied by AMF staff and information to be automatically extracted using the AMF's IT tools. Accordingly, the AAR must not be security-protected.

Detailed filing instructions can be found in the document *E-Services – Disclosure Guide – Insurers*, which is available on the AMF website at www.lautorite.qc.ca under Professionals / Insurers / Disclosures / P&C insurance.

2.3 Filing Instructions for the Supplementary Tables

When filing the AAR, insurers must complete the corresponding supplementary tables, which are included in separate Excel spreadsheets. These supplementary tables permit the AMF to capture selected information in a format that facilitates data analysis. The Appointed Actuary must follow the instructions indicated on the first spreadsheet of the Excel file.

The Appointed Actuary may choose to include some or all such tables in the AAR. In any case, the supplementary tables (except for Table 8) must be completed and filed with the AMF in an Excel format.

2.4 Signature of the Appointed Actuary's Report

The AAR must be signed by the Appointed Actuary, who must be a Fellow of the CIA.

2.5 Internal Target Capital Ratio

The AAR must disclose the internal target capital ratio that is in effect at the end of the current fiscal year.

3 AMF'S REVIEW PROCESS

The AMF recognizes the confidential nature of the AAR. Reviews of the documents submitted by the insurer to the AMF may disclose that an Appointed Actuary's valuation warrants further assessment and questioning. The AMF may reject assumptions and methods where it appears that the insurance contracts issued liabilities and the reinsurance contracts held assets produced are inappropriate.

The AMF may request the Appointed Actuary to provide supplemental detail to sufficiently assess the assumptions and methods. The Appointed Actuary is expected to respond promptly to all supplemental requests. Supporting documentation of the insurance contracts issued liabilities and the reinsurance contracts held assets reported in the Annual Return and the AAR should be available at all times and should be made available to the AMF upon request.

Where the appropriateness of particular assumptions or methods is not sufficiently demonstrated, the AMF will require the Appointed Actuary to choose other acceptable assumptions or methods and to re-compute the insurance contracts issued liabilities and the reinsurance contracts held assets. In such a situation, the Appointed Actuary must re-file the AAR. The AMF may also require the insurer to amend the Annual Return. Alternatively, the AMF may ask the insurer to reflect the changes in the Annual Return for the following year. The AMF may request a report from an Independent Actuary.

4 FORMAT OF THE APPOINTED ACTUARY'S REPORT

4.1 Report Outline

While the precise content of the AAR is left to the Appointed Actuary's professional judgment, the AMF expects most AARs to contain the following sections, in the order they appear below:

- Introduction
- Expression of Opinion
- Supplementary Information Supporting the Opinion
- Executive Summary
- Description of Insurer
- Materiality Standards
- Data
- Expenses
- Portfolio Reporting
- Estimates of Future Cash Flows
- Discount Curve
- Risk Adjustment for Non-Financial Risk
- Liabilities for Incurred Claims
- Liabilities for Remaining Coverage
- Other Liabilities/Other Assets
- Other Disclosure Requirements
- Appendices

In Section 5 "Contents of the Appointed Actuary's Report", the above outline is used to discuss the required contents.

4.2 Table of Contents

A table of contents showing where the above information is located must be included at the beginning of the AAR. To facilitate the review, the AAR should include clearly identified sections and numbered pages. Reference to such pages should be part of the table of contents. The AAR should include an interactive table of contents to make the report easily navigable.

5 CONTENTS OF THE APPOINTED ACTUARY'S REPORT

5.1 Introduction

This section should identify:

- The insurer involved,
- The date of valuation,
- The scope of the AAR,
- The identity of the author,
- The author's full address, email address and telephone number, and
- The author's authority for preparing the AAR.

5.2 Expression of Opinion

Section 128 of the *Insurers Act* requires the AAR to be accompanied by a certificate (Expression of Opinion).

The Appointed Actuary must use the prescribed opinion format (see Appendix I). The opinion wording is as recommended in the CIA *Standards of Practice*. The AMF will consider any opinion that varies from this wording to be a qualified opinion.

This section must contain the signature of the Appointed Actuary, the Appointed Actuary's name (printed) and the date and location of signing. The signature must be inserted as an image on the Expression of Opinion page (as opposed to it being physically affixed to the Expression of Opinion page and the page being scanned).

The actuarial opinions presented to the shareholders and policyholders of the insurer should be essentially the same as the opinions filed with the AMF. Should this not be the case, the Appointed Actuary must disclose in the AAR the significant differences between the opinions, as well as the rationale for such differences. In addition, the Appointed Actuary must inform the Relationship Manager of the AMF in writing.

Any qualification or limitation concerning any aspect of the valuation should be noted in this section of the AAR. These qualifications or limitations should be similar to the ones included in the opinion for Canadian Annual Return presented to the shareholders and policyholders. Caveats or any form of disclaimer should be excluded from the opinion but could be included in Section 5.3 "Supplementary Information Supporting the Opinion".

5.3 Supplementary Information Supporting the Opinion

The reader of the AAR should be able to understand how the Appointed Actuary's figures are derived. This section should contain references to the report sections, exhibits and/or appendices where these results are derived or summarized. Where results from several places must be added together, a table should be included.

Consolidated reporting is required within the P&C Returns. However, the AMF expects Appointed Actuaries to prepare non-consolidated AARs. If applicable, the Appointed Actuary must include an additional exhibit and commentary that reconciles the information within the AAR to the consolidated information. The AMF expects Appointed Actuaries to value non-Quebec regulated subsidiaries under Canadian generally accepted actuarial practices and include these AARs as appendices or as a separate part of the AAR.

5.4 Executive Summary

This section must contain a summary of the key results and findings and any other information the Appointed Actuary wishes to bring to the attention of the reader. In particular, it must comment on the development of the total prior-year LIC.

It must also reference any significant changes in methods or assumptions from the prior AAR, significant issues and how they were resolved, data or other concerns identified by the Appointed Actuary and any other unusual circumstances identified as part of the valuation. **This section must also include any deviation from CIA Standards of Practice or from the requirements of this Guide.**

5.5 Description of Insurer

5.5.1 Ownership and Management

- The Appointed Actuary must provide a brief history of the insurer covering ownership and senior management. Changes over the past several years must be identified and potential impacts on the valuation as a result of these changes must be discussed.

5.5.2 Business

- This section must contain a brief description of the lines of business written, distribution channels and geographic distribution. It must also describe recent changes in business written, underwriting policies, claims policies and procedures as well as the impact of these changes.

- Furthermore, the Appointed Actuary must indicate whether the insurer is exposed to extraordinary losses (earthquakes, catastrophes, environmental liability, class actions, etc.) and must also disclose and explain such exposures, if any.

5.5.3 Reinsurance

5.5.3.1 Reinsurance Contracts Held

The Appointed Actuary must provide a comprehensive summary of reinsurance contracts held for the current year and the subsequent year. This summary must include all significant clauses of reinsurance contracts held and their **order of application**.

In this respect, the Appointed Actuary must provide a summary of the reinsurance program in the format shown in Table 8 of the supplementary tables. The reinsurance program summary may be presented directly in the AAR rather than in the Excel supplementary tables.

In addition, where applicable, the Appointed Actuary must present and complete the following table in the reinsurance section of the AAR (not in and as an appendix) and comment on it:

Applicable catastrophe reinsurance treaty	Current year	Next year
Retention[1]		
Maximum reinsurers' commitments[2]		
Amount payable by the insurer above the retention, if applicable[3]		
Amount of losses from which the catastrophe treaty is no longer applicable[4]		

To enable readers to properly assess the relevance of the reinsurance program, the Appointed Actuary should state the principles underlying the reinsurance program (e.g., the maximum probable loss) and explain in detail how the catastrophe program limit and retention were determined. It is also relevant to state the extent to which the current limit would cover the insurer's main risks.

[1] Total amount payable by the insurer before the reinsurers start to pay

[2] Maximum total amount that may come from reinsurers in the event that a catastrophic loss reaches the upper limit of the catastrophe reinsurance program

[3] In the event that the catastrophe reinsurance program is not 100% placed, corresponds to the sum of the amounts that will remain payable by the insurer between the retention and the upper limit of the catastrophe reinsurance program

[4] Must correspond to the sum of the retention, the maximum reinsurers' commitments and the amount payable by the insurer above the retention

Here is an example of how the AMF expects the table to be completed and commented on for an insurer with only one catastrophe reinsurance treaty covering 80% of $90 million in excess of $10 million for the current year and a catastrophe reinsurance treaty covering 90% of $150 million in excess of $11 million for following year:

Applicable catastrophe reinsurance treaty	Current year	Next year
Retention	$10M	$11M
Maximum reinsurers' commitments	$72M	$135M
Amount payable by the insurer above the retention, if applicable	$18M	$15M
Amount of losses from which the catastrophe treaty is no longer applicable	$100M	$161M

In this case, the Appointed Actuary could state, for example, that:

"The retention, the amount payable by the insurer above the retention, and the current year limit have been established so that the insurer does not have to pay more than 10% of equity or 5% of insurance revenue in the event of an earthquake in Western Canada with a frequency of once every 500 years. This limit would also cover winter storms, which are the natural disasters to which the insurer is most exposed, up to a probable maximum loss occurring once every 250 years. The retention has been established to correspond to a maximum of 5% of equity.

The reinsurance program for the following year is based on the same principles, except that earthquakes in Western Canada are now covered up to a claim with a frequency of once every 750 years and winter storms are now covered up to a probable maximum loss of approximately once every 350 years, which explains the significant variations in the table above."

In addition, the Appointed Actuary must then make a judgment about the relevance of the reinsurance arrangements for each of the two years in relation to the insurer's current and future obligations. The Appointed Actuary should also identify any "coverage gaps" and other features of these programs.

The Appointed Actuary must also describe any changes in the reinsurance contracts held during the experience period used in the report (including changes in retention or limits), particularly for all years where the impact of such reinsurance contracts held could be material and explain the rationale for the change(s).

Also, the Appointed Actuary must describe, where applicable, any reinsurance contract issued (type of arrangement; significant terms and conditions) and any changes to such arrangements during the past year and for the next year.

5.5.3.2 Reinsurance Contracts Held – Non-Performance Risk

The Appointed Actuary must explain how the allowance for the effect of any risk of non-performance by the issuer of the reinsurance contracts held is measured. The Appointed Actuary must indicate whether the adjustment is applied to the cash flows directly or to the discount rate or a combination of the two.

When making this allowance, the Appointed Actuary will not necessarily assess the financial condition of each reinsurer. However, the existence of any non-performance risk and the actions taken to address it must be described, for example:

- A dispute has arisen with a reinsurer;
- A reinsurance collectible is significantly overdue;
- The reinsurer has a history of not settling accounts promptly;
- The reinsurer is known to have been the subject of regulatory restrictions in its home jurisdiction; or
- The reinsurer has a poor credit rating.

It is expected that the Appointed Actuary will discuss reinsurance matters with management and the External Auditor of the insurer to determine whether there are unusual problems and/or delays expected to be encountered in collecting the relevant amounts from the reinsurers.

Where reinsurance agreements were commuted or changed, the Appointed Actuary must clearly indicate how any changed arrangements were considered.

5.5.3.3 Non-Traditional Risk Transfer Agreements

The Appointed Actuary must disclose the existence of any non-traditional risk transfer arrangements, such as catastrophe bonds (cat bonds), or material financial reinsurance agreements held where there is not significant insurance risk transfer between the ceding entity and the reinsurer, or where there are other reinsurance agreements or side letters that could offset the financial effect of the first reinsurance agreement. If no such agreements exist, the Appointed Actuary must state that there are no material non-traditional risk transfer agreements. The Appointed Actuary must also describe the process used to reach the above conclusion.

5.5.3.4 Related Party Reinsurance

The Appointed Actuary must disclose any related party reinsurance that has or could have a material impact on insurance contracts issued liabilities or on reinsurance contracts held assets, including, if applicable, intra-group pooling arrangements. The disclosure must include the parties involved, a description of the reinsurance and the impact on insurance contracts issued liabilities and reinsurance contracts held assets.

5.5.3.5 Retrospective Reinsurance Contracts Held

The Appointed Actuary must disclose any retrospective reinsurance contracts held that are carried on the balance sheet as asset for remaining coverage (ARC). The disclosure should include a description of the reinsurance and the amount of ARC where the underlying insurance contracts issued are carried as liability for incurred claims (LIC).

5.6 Materiality Standards

In preparing the insurer's Annual Return, the insurer management and the External Auditor routinely agree on a level of materiality. The AAR must report this materiality standard. In addition, the Appointed Actuary must disclose his/her materiality standard for the purpose of the valuation of the insurance contracts issued liabilities/the reinsurance contracts held assets and how it is selected. Finally, the Appointed Actuary must report the materiality standard used by the External Auditor for the MCT audit.

5.7 Data

The AAR must note the extent of the Appointed Actuary's review and verification of the data and the extent of the Appointed Actuary's use on data prepared by others. The AAR must also describe the methods and procedures used to ensure that the valuation data are sufficient, reliable and accurate.

In particular, the AAR must describe the type of data provided and the review and verification procedures applied thereto and the procedures and steps undertaken to ensure that the valuation data are sufficient, reliable and accurate.

The statutory requirement that the Appointed Actuary file an AAR with the Annual Return assumes that the Appointed Actuary has met the standard of care, as implicitly stated in the CIA Standards of Practice. In particular, this requires that the Appointed Actuary establish suitable check procedures to verify that the data utilized is reliable and sufficient for the valuation of insurance contracts issued liabilities and reinsurance contracts held assets.

Where the Appointed Actuary relies on the External Auditor for data validation, the Appointed Actuary must identify the External Auditor and state the scope of its work.

The Appointed Actuary should also indicate the date of the closing of the books as well as any change to this date in relation to previous years' valuations, for each year of experience used.

Finally, the Appointed Actuary must provide an exhibit reconciling actuarial data and accounting data for the current year, for each actuarial line of business or line of business, at the Appointed Actuary's choice, and in total, on a gross and net basis, for each of the following:

- Insurance revenue or earned premiums, at the Appointed Actuary's choice;
- Case reserve; and
- Claims and external adjustment expenses paid.

5.8 Expenses

The Appointed Actuary must disclose how directly attributable expenses are determined and how total insurer expenses are allocated among acquisition, policy administration and maintenance costs, and other (refer to the examples noted per paragraphs IFRS 17.B65(f), B65(l), etc.). The information must be split by insurance contracts issued and reinsurance contracts held.

The Appointed Actuary should also disclose the allocations of all directly attributable acquisition costs in a portfolio to groups in that portfolio and of any acquisition costs directly attributable to any future renewals of contracts (outside the boundary of the new contracts) to future groups using a systematic, consistent, and rational basis.

The Appointed Actuary must disclose the treatment of the acquisition costs for group of contracts with a coverage period that is one year or less at initial recognition.

Insurance acquisition cash flows incurred before the recognition of their related groups of insurance contracts are held as an asset. This asset is referred to as the asset for insurance acquisition cash flows.

- The Appointed Actuary must disclose the two recoverability tests (required per IFRS 17.28E and B35D) on insurance acquisition cash flows if facts and circumstances indicate that the asset may be impaired.

5.9 Portfolio Reporting

The Appointed Actuary must report how each of the portfolio is determined. The Appointed Actuary must also disclose any material changes from the prior year's AAR.

The reporting of each portfolio should include the following:

- Identify and describe the actuarial lines of business in each portfolio in Table 1 of the supplementary tables. Some actuarial lines of business may be found in more than one portfolio. The correspondence is not necessarily one to one.

5.10 Estimates of Future Cash Flows

The AAR must report all the components embedded in the future cash flows, which may include:

- Disclose the list of future cash flows that are included in the estimates and how these cash flows are generated.
- For claim expense cash flows, they are normally split between internal (unallocated) and external (allocated). Some actuaries combine external expenses

with incurred losses and base their analysis on the total of losses and expenses. Other actuaries calculate separate provisions for indemnity and external expenses. Both approaches are acceptable; however, the Appointed Actuary should clearly indicate the approach followed. A variety of methods are used for internal loss expense provisions. Any method in accordance with accepted actuarial practice is acceptable. The AAR must describe the method(s) as well as any changes in methods from prior AARs. The impact of such changes must be clearly indicated and, if material, included in the Executive Summary.

5.11 Discount Curve

The insurer must adjust the estimates of future cash flows to reflect the time value of money and the financial risks related to those cash flows, to the extent that the financial risks are not included in the estimates of future cash flows.

The AAR must report the following:

- Describe the Appointed Actuary's role within the insurer in setting the discount curve.
- Describe the approach(es) used to develop the discount curve (e.g., bottom-up, top-down, etc.).
- Disclose whether the discount rates obtained are expressed as spot rates or as forward rates.
- For the effects of financial risk (IFRS 17 Paragraph B74 (b)), if applicable, an insurer can use discount rates that reflect the effects of financial risk or adjust cash flows for the effect of financial risk or some combinations.
    a) If the insurer uses discount rates that reflect the effect of financial risk, describe how the discount rates are adjusted.
    b) If the insurer adjusts cash flows that reflect the effect of financial risk, elaborate and identify types of cash flows that are impacted.
- Provide the total discount rates by year by liquidity category in Table 3 of the supplementary tables. The liquidity categories should start with the most liquid category (with the lowest illiquidity premium) as category number 1, and so on so forth. The risk-free rates (spot rates) only need to be provided for the bottom-up (or hybrid) approach.
- For contracts measured under the premium allocation approach (PAA), the Appointed Actuary must disclose any groups of contracts (separately for LIC and LRC) where future cash flows are not adjusted for the time value of money and the effect of financial risk, under the following conditions:
    a) Future cash flows relating to LIC are expected to be paid or received in one year or less from the date the claims are incurred, or
    b) The time between providing each part of the services and the related premium due date is no more than a year for future cash flows relating to LRC.

5.11.1 Bottom-Up Approach

If the bottom-up approach is used, provide the following information:

- Risk-free rates
  - Describe the method(s) used to construct the observable portion of the risk-free curve (use government bonds, swaps, etc.)
  - Describe the source of the risk-free rates and the length of the observable period.
  - Provide the risk-free rates by year (if applicable) in Table 3 of the supplementary tables.
- Illiquidity Premium
  - Describe liquidity classes or categories (beginning with number “1” as the most liquid category with the lowest illiquidity premium, etc.) used to categorize insurance contracts/products and incurred claims and the number of liquidity classes used.
  - For LIC and LRC, respectively, list the actuarial lines of business (Auto, Property, etc) to be included in each liquidity class.
  - Describe the considerations used to assess the liquidity characteristics of insurance contracts (e.g., features, exit value, inherent value, exit cost, etc.).
  - Describe the technique(s) used to derive the illiquidity premium by liquidity class.
  - If the illiquidity premium is established using a top-down approach (hybrid approach), the AAR should also disclose the items in section 5*.11.2 Top-Down Approach*.
  - If a replicating portfolio approach is used to determine the illiquidity premium:
    - Describe the types of products where a replicating portfolio would be used for valuation including the rationale for choosing a replicating portfolio approach.
    - Describe how the replicating portfolio is constructed, i.e., how the insurer ensures that the replicating portfolio (IFRS 17 Paragraph B46) has the cash flows that exactly match the contractual cash flows of the group of insurance contracts in amount, timing and uncertainty, for all scenarios.
    - Describe at a high level the types of assets that are expected to be included for each replicating portfolio.

5.11.2 Top-Down Approach

If the top-down approach is used, provide the following information:

- Reference portfolio
  - Describe whether the insurer’s own assets or a hypothetical mix of assets or both are used.

- Describe the types of assets that are expected to be included for each liquidity category of a portfolio.
- Describe any adjustments to yield curve(s) to eliminate factors that are not relevant to the insurance contracts (i.e., credit risk, market risk and/or other risk adjustments, etc.). Provide details of what factors are eliminated and the methodologies of determining the adjustments by each asset classes:
  - Corporate bonds
  - Public equity
  - Non-fixed income assets other than public equity (be specific of the asset classes)
  - Others
- Describe any adjustments to reflect the differences in liquidity characteristics of insurance contracts and the reference portfolio.

5.11.3 Reference Curves for Liquid and Illiquid Categories

- The liquid and illiquid reference curves are defined as the *Fiera Capital's CIA IFRS 17 Reference Curves*.
- The Appointed Actuary must complete Table 2 of the supplementary tables for each year of the projection of the insurer's future cash flows.
- The Appointed Actuary must also disclose whether the Fiera Capital data were used to derive the illiquidity premium and provide reasons for this choice.
- If the reference curves are not the same as the insurer's discount curves used to calculate the present value of the estimates of future cash flows for financial reporting purposes, the Appointed Actuary should explain the choice and describe main factors causing the differences.
- If the insurer's discount curves are higher than the corresponding reference curves[5] at any duration, then the Appointed Actuary should compare and report the present value of the estimates of future cash flows obtained using the insurer's discount curves to the present value obtained using the reference curves.

5.12 Risk Adjustment for Non-Financial Risk

The Appointed Actuary must describe the adjustments made to the estimates of present value of future cash flows to reflect the compensation that the insurer requires for bearing the non-financial risk arising from the uncertain amount and timing of the cash flows.

The Appointed Actuary must describe his or her role within the insurer in setting the risk adjustment for non-financial risk ("risk adjustment" or "RA").

The Appointed Actuary must disclose the risk adjustment amount both on a gross and net or ceded basis and the technique used for setting the risk adjustment in Tables 4.1 and 4.2 of the supplementary tables. The Appointed Actuary must disclose the confidence level of the risk adjustment on the entity level in Table 4.1.

[5] The corresponding reference curves refer to the reference curves at the initial recognition if the locked-in yield curves are used for the CSM and OCI option.

The Appointed Actuary must specify the level of aggregation to determine the risk adjustment. If it is determined at a higher level of aggregation than groups of contracts, the Appointed Actuary must describe how the risk adjustment for non-financial risk would be allocated to different groups. In addition, the Appointed Actuary must describe how the risk adjustment would be allocated to the different actuarial lines of business.

If the insurer has multiple entities and diversification is being assumed between entities, the Appointed Actuary must explain the diversification between entities.

The Appointed Actuary must disclose information for setting the RA. For example, for the main approaches, the following should be disclosed:

Cost of Capital Approach:

- The projected capital amounts, cost of capital rate and discount rates used to determine the RA at the entity level. The information should be filled in Table 5.1 through Table 5.4 of the supplementary tables.
- The techniques used to determine the average capital amount and any adjustments made in the capital amount for calculating the RA (for example, removal of the capital component(s) related to risks other than the non-financial risks in scope of the RA).
- The approach and considerations in selecting the cost of capital rate.
- How the aggregate RA is allocated among portfolios and groups of contracts.
- If the insurer chooses to reflect the benefits of diversification in its RA, disclose:
  a) The techniques used to reflect diversification. If a correlation matrix is used, please disclose it.
  b) How is the diversification benefit reflected at the relevant level of consolidation?
- The technique(s) used to determine the confidence level of the RA amount.
- The Appointed Actuary must quantify, disclose and justify the impact of changes from the prior year in selected target rate of return on capital. The Appointed Actuary must also disclose in the Executive Summary cases where the impact of the changes in selected target rate of return on capital is material.

Quantile Techniques Approach:

- The approach (i.e., Probability distribution for present value of cash flows, Monte Carlo simulation or other scenario modelling) to generate the risk distribution.
- The technique(s) used to determine the confidence level of the RA amount.
- How the aggregate RA is allocated among the portfolios/groups of contracts.
- If the insurer chooses to reflect the benefits of diversification in its RA, disclose:
  a) The techniques used to reflect diversification. If a correlation matrix is used, please disclose it.
  b) How is diversification benefit reflected at the relevant level of consolidation?
- The Appointed Actuary must quantify, disclose and justify the impact of changes from prior year in selected quantiles. The Appointed Actuary must also disclose in the Executive Summary cases where the impact of the changes in selected quantiles is material.

Margin Approach:

- The level of margin used for each actuarial line of business and its justification.
- How the margins reflect diversification among the non-financial risks in the insurer's various groups of contracts.
- The Appointed Actuary must quantify, disclose and justify the impact of changes from prior year in selected margins. The Appointed Actuary must also disclose in the Executive Summary cases where the impact of the changes in selected margins is material.

Combining/hybrid Approach:

The Appointed Actuary should disclose the above information required under applicable approaches when appropriate.

5.13 Liability for Incurred Claims

LIC is comprised of the fulfilment cash flows related to past service allocated to the groups of contracts. The fulfilment cash flows are comprised of the best estimates of future cash flows, an adjustment to reflect the time value of money (if applicable), and a risk adjustment for non-financial risk.

5.13.1 Estimates of Future Cash Flows

The AAR must contain details of the derivation of the future cash flows on a gross, ceded and net basis. Normally, the Appointed Actuary will calculate two of these cash flows directly and derive the third by addition or subtraction. The cash flows calculated directly will depend on the circumstances of the insurer and the preference of the Appointed Actuary; however, the individual cash flows should each be reasonable.

The data, analysis and commentary will normally be provided by actuarial line of business. Where the actuarial lines of business have changed from the prior AAR, the current year's AAR should clearly state the reasons for the changes. In some cases, it may be appropriate to use different actuarial lines of business for the ceded and gross/net cash flows. The AAR must disclose whether or not the insurer has exposure to mass tort and latent claims and if the insurer has had a subsequent event. If the insurer has such exposure, the Appointed Actuary must discuss the nature and treatment of those claims in the calculation of the estimates of future cash flows for LIC.

Where the actuarial lines of business do not include all the business written by the insurer (e.g., pools and associations), the AAR must clearly indicate the additional amounts and include them in a reconciliation exhibit.
In determining the future cash flows for each actuarial line of business, the Appointed Actuary must consider, at a minimum:

- Any amounts for salvage and subrogation;
- Any significant trends in the severity and frequency of claims;
- Any important changes in the coverage of the contracts;
- The changes in the cost of reinsurance and/or in reinsurance arrangements;

- Any changes in the lags in the reporting of claims and in the payment of claims;
- Changes to the loss reserving practices; and
- The effects of regulatory changes.

The AAR should discuss the existence of any significant development (adverse or favourable) in the changes in estimated ultimate that had been set up in prior years, reasons for the development, and changes to methods and assumptions that would eliminate the recurrence of any consistent development.

5.13.2 Discounting the Estimates of Future Cash Flows

The insurer shall adjust the estimates of future cash flows to reflect the time value of money and the financial risks related to those cash flows, to the extent that the financial risks are not included in the estimates of future cash flows, unless the insurer choose IFRS 17 Paragraph 59(b), in which case the Appointed Actuary must disclose the actuarial lines of business.

5.13.3 Risk Adjustment for Non-Financial Risk

An explicit risk adjustment is always required for LIC. The Appointed Actuary must disclose the approach and amount in columns 02 and 03 of Tables 4.1 and 4.2 in the supplementary tables.

5.13.4 Development of Prior-Year Liabilities for Incurred Claims

The Appointed Actuary should compare ultimate undiscounted estimates valued as of the current year-end (October 31, December 31 or March 31) with ultimate undiscounted estimates selected by the Appointed Actuary at prior year-end valuation, for one-year development, by completing Tables 6.1 (on a gross basis) and 6.3 (on a net basis) of the supplementary tables by actuarial lines of business. Where the Appointed Actuary uses the underwriting/policy year rather than the accident year, Tables 6.2 (on a gross basis) and 6.4 (on a net basis) must be completed. The Appointed Actuary should also specify the cause of material development (favourable or unfavourable) for each actuarial line of business. Moreover, the AAR should discuss material differences between the loss development of these tables and the development on page 60.45 of the annual return (or confirmation that there are none).

Where there are changes in the actuarial lines of business, the Appointed Actuary must allocate the ultimate undiscounted estimates from prior AAR to the current actuarial lines of business using a reasonable approximation.

Finally, the Appointed Actuary must complete Tables 6.5 (on a gross basis) and 6.6 (on a net basis) of the supplementary tables. These tables show, by actuarial lines of business, the development of prior-year LIC on a discounted basis including risk adjustment, internal adjustment expenses and classes of business not reviewed by the Appointed Actuary (e.g., pools). The Appointed Actuary must also explain any significant differences between the development totals presented in Table 6.1 and Table 6.5 and between the development totals presented in Table 6.3 and Table 6.6.

5.14 Liability for Remaining Coverage

Under the General Measurement Approach (GMA), the liability for remaining coverage comprises of the fulfilment cash flows related to future service allocated to the groups of contracts and the contractual service margin (CSM) of the groups of contracts. The fulfilment cash flows are comprised of the best estimates of future cash flows, an adjustment to reflect the time value of money, and a risk adjustment for non-financial risk.

Under the PAA, LRC excluding loss component at initial recognition and at the end of each subsequent reporting period is measured by adjusting premiums received for components such as insurance acquisition cash flows, investment component, etc. as required per IFRS 17.55-59. The premiums received are usually allocated on the basis of passage of time over the coverage period. The Appointed Actuary must disclose when the basis of allocation differs from the passage of time during the coverage period for any portfolio.

5.14.1 Measurement Approach

The Appointed Actuary should disclose the portfolios and groups of contracts and their associated measurement approach.

- For groups of contracts measured under the PAA, provide justification for:
  - How the insurer has satisfied the eligibility requirements.
  - The method it has chosen to recognise insurance acquisition cash flows.
  - The process or procedure used to come to the conclusion of onerous groups of contracts.
- For each portfolio, the Appointed Actuary should identify the groups of contracts, measurement approaches and rationale for the grouping in Tables 7.1 and 7.2 of the supplementary tables for insurance contracts issued and reinsurance contracts held respectively. The Appointed Actuary must disclose any material changes on portfolios, groups of contracts and associated measurement approaches from prior year's AAR.
- For each portfolio, the Appointed Actuary must also disclose:
  - The considerations used to determine the groups of the insurance contracts for the purposes of recognizing insurance revenue,
  - The tests and/or considerations used to determine the groups of onerous contracts at initial recognition, no significant possibility of becoming onerous, and remaining contracts in the portfolio.

5.14.2 Estimates of Future Cash Flows

The AMF expects the Appointed Actuary to comment on all the components embedded in the future cash flows under the GMA or groups of onerous contracts under the PAA and particularly on the following (indicate if not applicable):

- Expected losses, loss expenses and servicing costs on the contracts in force;
- Anticipated broker/agent commission;
- Expected adjustments (plus or minus) to swing rated contracts;
- Expected future premium receipts;

- Expected changes to premiums as a result of audits, late reporting or endorsements;
- Expected commission adjustments on contracts with variable commissions; and
- Amounts provided for onerous contracts issued in advance.

The AAR must disclose whether or not the insurer has had a subsequent event. If there was a subsequent event, the Appointed Actuary should discuss the nature and treatment of the event in the calculation of the provisions for LRC.

The estimates of future cash flows should also include details of how future new business but not yet written for reinsurance contracts held is determined, i.e., the estimates of future cash flows of future reinsurance contracts held that cover the unexpired portion of insurance contracts issued. These cash flows include expected losses recoverable, which is net of expected future reinsurance costs.

5.14.3 Discounting the Estimates of Future Cash Flows

If applicable, the insurer shall adjust the estimates of future cash flows to reflect the time value of money and the financial risks related to those cash flows, to the extent that the financial risks are not included in the estimates of future cash flows. The Appointed Actuary must disclose if the estimates of future cash flows are discounted or not.

5.14.4 Risk Adjustment for Non-Financial Risk

For portfolios or groups of contracts measured under the PAA, an explicit risk adjustment calculation for the LRC is not required for groups of contracts that are not deemed onerous. However, if facts and circumstances indicate the groups of contracts become onerous, the Appointed Actuary must disclose the explicit risk adjustment in the calculation of the loss component. In this case, the Appointed Actuary must fill in column 06 of Tables 4.1 and 4.2 in the supplementary tables.

For portfolios or groups of contracts measured under the GMA, an explicit risk adjustment calculation is required. The Appointed Actuary must disclose the approach and amount for LRC in columns 04 and 05 of Tables 4.1 and 4.2 in the supplementary tables.

5.14.5 Contractual Service Margin

The Appointed Actuary should discuss the approach used to determine the discount rate locked in at initial recognition for the measurement of the CSM and the approach used to determine the interest to accret on the CSM.

The Appointed Actuary should disclose:

- How many groups are in each of the portfolios as stated in the Tables 7.1 and 7.2 of the supplementary tables, explain considerations used (e.g., how to segment levels of profitability) to determine the number of groups is appropriate. Explain how the contracts' profitability is assessed to assign to appropriate groups and provide justification to support the other criteria used.
- The general considerations used to determine the coverage units and to select the discount rate.

5.14.6 Loss Component

The Appointed Actuary should explain the key drivers for:

- The loss component for each of the groups of onerous contracts at initial recognition;
- The loss component for each of the groups of contracts for which a loss component arises at subsequent measurement; and
- Under the GMA approach, the Appointed Actuary should also discuss subsequent changes to the loss component for each of the groups of onerous contracts.

Where a reinsurance contract held covers only a portion of the group of underlying onerous contracts, the Appointed Actuary should disclose the systematic and rational allocation method to determine the portion of losses of the group of onerous contracts that is reinsured. The Appointed Actuary should disclose how the loss-recovery component is established.

The Appointed Actuary must describe the approach used to allocate the subsequent changes in the fulfilment cash flows of the liability for remaining coverage, as specified in paragraph 50(a) of IFRS 17.

For insurance contracts that are measured under the PAA, the Appointed Actuary must provide the commentary on the facts and circumstances associated with any groups of insurance contracts for which a loss component arises at subsequent measurement, and must contain the amount of the loss components on a group basis.

5.15 Other Liabilities/Other Assets

The Appointed Actuary must comment on the adequacy of Self-Insurance Retention (SIR) plans. SIRs represent the portion of a loss that is payable by the policyholder. They must be reported net of reinsurance, not net of the supporting assets. The AAR should describe these provisions and provide details on their calculation.

If there are liabilities or assets that are not included in the previous sections but determined by the Appointed Actuary, please describe these liabilities or assets, as well as the methods and assumptions used to value them.

6 OTHER DISCLOSURE REQUIREMENTS

6.1 New Appointment

If the Appointed Actuary was appointed to the role during the last year, the AAR must include the following disclosures:

- The date of appointment,
- The date of resignation of the previous Appointed Actuary,
- The date on which the AMF was notified of the appointment,
- A confirmation that the Appointed Actuary, as required by section 123 of the *Insurers Act*, has verified whether the former Appointed Actuary prepared the declaration under section 122 of the *Insurers Act* and, if so, a confirmation that the Appointed Actuary has consulted that declaration, and
- A list of the Appointed Actuary's qualifications, keeping in mind, but not limited to, the CIA's Rules of Professional Conduct.

6.2 Annual Required Reporting to the Board or Audit Committee

The AAR must disclose the date on which the Appointed Actuary presented the AAR to the board or to the audit committee of the board, as required by paragraph 128 of the *Insurers* Act. If the report has not yet been presented, the Appointed Actuary must disclose the expected date of presentation.

6.3 Continuing Professional Development Requirements

The Appointed Actuary must disclose in the AAR that he/she is in compliance with the Continuing Professional Development requirements of the CIA.

6.4 Disclosure of Compensation

Given the Appointed Actuary's responsibilities under the Act, any Appointed Actuary who receives compensation linked to the insurer's performance (i.e., net income) or incentive compensation that may create conflicts of interest must disclose this fact in writing to the users of his/her work.

Therefore, the AAR should briefly describe the method used to determine each component of the Appointed Actuary's compensation that is received in addition to the base salary. This could include cash and/or stock-based bonuses, retirement and other significant benefits, other compensation (e.g., signing bonuses, severance packages), and perquisites (e.g., car allowances).

For each component of the Appointed Actuary's compensation listed above that varies with the performance of the insurer, the value of that component as a percentage of the base salary must be disclosed.

The AAR must further disclose whether the Appointed Actuary is a participant in a stock option plan or holds any shares of the insurer or a related entity.

If the Appointed Actuary serves as an external consultant to the insurer, the Appointed Actuary must disclose the proportion that the consulting fees payable for the Appointed Actuary's work for the insurer represents, as a percentage of the total revenue billed by the Appointed Actuary to all clients in the prior fiscal year (<10%, 10-25%, 25-50%, 50-75%, 75%+).

6.5 Reporting Relationships of the Appointed Actuary

The AAR must disclose the reporting relationships and dependencies of the Appointed Actuary.

For Appointed Actuaries who are employees of the insurer, the AAR must disclose the name and position of the person (or persons) to whom the Appointed Actuary reports as well as any changes in this regard over the past year. Both solid line and dotted line reporting relationships must be disclosed, as well any anticipated change.

When the Appointed Actuary is not an employee of the insurer, the AAR must disclose the names and positions of the main contacts within the insurer with respect to the different functions of the Appointed Actuary, such as the valuation, FCT, and MCT support (if any).

For example, the AAR must disclose the name and position of:

- The person who hired the Appointed Actuary; and
- The insurer employees with whom the Appointed Actuary discusses findings and reports.

6.6 Re-submitting the report

The AAR must disclose the reason(s) for resubmission.

7 UNPAID CLAIMS AND LOSS RATIO ANALYSIS EXHIBIT

7.1 Introduction

The AMF requires that insurers complete the Unpaid Claims and Loss Ratio Analysis Exhibit (UCLR Analysis Exhibit) and that it be submitted in Excel format.

The UCLR Analysis Exhibit, is constructed to allow the presentation and collection of industry loss information in a standard format. The compiled information allows for the analysis of the impact of discounting on estimates of future cash flows and the analysis of the evolution of loss trends. In order to achieve these objectives, the exhibits are constructed by class of insurance and by accident year and contain information on a current year and on a cumulative year basis.

7.2 Data

A page must be completed for each actuarial line of business and must reconcile to the corresponding exhibits or appendices in the AAR. Each actuarial line of business must be uniquely linked to one Annual Return line of business. For reinsurers, proportional and non-proportional business must be reported separately.

The insurer must specify on each page the aggregation basis, on which the Exhibit is completed, either “accident year” or “underwriting year”. The selected basis should be the same for all pages. Insurers completing the exhibits on a “report year” basis must select “accident year”.

The insurer must also specify on each page the corresponding liquidity category in Table 3 of the supplementary tables upon which the underlying discount rate for the actuarial line of business is derived.

If an actuarial line of business is a combination of two or more Annual Return lines, the Appointed Actuary must determine in which Annual Return line to place it to best represent the operations of the insurer. For actuarial lines of business where the insurance revenue is not available in the same detail as the claims (e.g., automobile-liability bodily injury and property damage), the Appointed Actuary should either estimate a split of the insurance revenue or combine the data showing it in the Annual Return line that best represents the line of business underwritten by the insurer.

A “Total” page must also be completed. This exhibit must balance to the AAR. An individual page does not have to be completed for a category that is not reviewed by the Appointed Actuary but the total fulfilment cash flows for the category must be included in Line 15 (“Other Provisions”) of the “Total” page. The Appointed Actuary should also provide a breakdown with commentary in the AAR when “Other Provisions” is greater than the selected materiality.

In the UCLR Analysis Exhibit, the estimate of present value of future cash flows (Column [7]) is expected to be less than the total estimate of future cash flows (Column [6]). If the amount in the column [7] is greater than the amount in column [6], the AAR must comment on the reason for the exception.

Claim counts reported in the UCLR Analysis Exhibit must be consistent with the way the Appointed Actuary defines and records claim counts in the AAR. The Appointed Actuary should provide the definition of claim count in the AAR, and describe any changes in the definition from the prior AAR. If it is difficult to obtain claim count information (e.g., reinsurers, assumed business, etc.), the Appointed Actuary should provide a rationale in the AAR for why claim count cannot be reported.

The definition of claim count could include, if applicable, but not be limited to:

- Whether an occurrence with payments for multiple coverages/parties is counted as one claim or multiple claims,
- Whether claims with no case outstanding and no payments are included in the definition of reported claim counts, and
- How reopened claims are treated.

The undiscounted loss ratio in the UCLR Analysis Exhibit should be calculated using insurance revenue or earned premiums, as reported in column [13] of the exhibit. For older accident years prior to IFRS 17, earned premiums could be reported instead of insurance revenue. The AAR must disclose whether insurance revenue or earned premiums is reported for prior accident years post IFRS 17, by line of business if applicable.

The UCLR Analysis Exhibit must be completed on a gross basis for each actuarial line of business and the total, and on a ceded basis for total. Any adjustments to the gross basis as reported in the AAR (e.g., industry pools or inter-company reinsurance) should be made in Lines 14 and 15 of the “Total” page.

8 Appendix I - Expression of Opinion

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

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

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

FCIA	
Signature of Appointed Actuary	Date opinion was rendered
FCIA	
Printed name of Appointed Actuary	Location opinion was rendered

The terminology in square brackets may be adjusted to reflect the terminology used in presenting the financial statements.