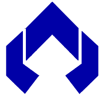

Office of the Superintendent of Financial Institutions

255 Albert, Ottawa, Canada, K1A 0H2

MEMORANDUM TO THE APPOINTED ACTUARY

(Life Insurance)

2001

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Appendix

1.0 Introduction

This Memorandum sets out the requirements and directions of the Superintendent, as well as the form to be used with regard to the Actuary's reporting on the valuation of policy liabilities and on other reporting responsibilities of the Actuary.

Another Memorandum to appear shortly reproduces or summarizes most of the stipulations of the *Insurance Companies Act (Act)* concerning the Appointed Actuary. The purpose of this Memorandum is to give the Appointed Actuary a precise but relatively concise reference about his role according to the *Act* and its application by OSFI.

2.0 Requirements and Directions

Two (2) copies of the Actuary's Report should be submitted to OSFI's Accounting and Financial Information Division. We also require one copy of the report in electronic form or on a diskette or a CD to be sent to the Accounting and Financial Information Division. The choice of acceptable word processing formats available can be found in Appendix VI.

2.1 Generally Accepted Accounting Principles

The annual return must be prepared in accordance with generally accepted accounting principles (GAAP). Section 667 of the *Act* requires the application of GAAP, with additional directions from the Superintendent, in the preparation of the annual return of a company, society, or provincial company. OSFI's November 1993 bulletin, "Accounting Principles – Foreign Life Insurance Companies", also established the requirement for a foreign life insurance company to apply Canadian GAAP in preparing the annual return.

2.2 Generally Accepted Actuarial Practice

The Superintendent expects and requires the Actuary to conform to the professional actuarial standards of practice[1] promulgated by the CIA, with all the additional requirements and directions of this Memorandum. Both GAAP and generally accepted actuarial practice specify that the Canadian Asset Liability Method (CALM described in Life SOP) is to be used in the valuation of actuarial and other policy liabilities.[2] Any additional guidance, such as educational notes, CLIFR letter, among others should be considered.

As CALM has been recognized as a standard of practice, the Actuary must discuss at length how it has been implemented (data, calculations, reconciliation, reviews, etc) and must ensure that clear and appropriate disclosure is made for all instances of non-compliance. Should the Actuary opine that materiality considerations justify approximations to CALM methodology, the report must include detailed justifications. If the used approach is materially different from any educational notes and guidance letters, please describe.

It is OSFI's interpretation that GAAP requires realized deferred gains/losses to be classified as liabilities. The Actuary should detail the consideration of these items in their valuation.

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[1] Note that the Standards of Practice for the Valuation of Policy Liabilities of Life Insurers (LifeSOP) (CSOP) is in effect and apply.

[2] See the Handbook of the Canadian Institute of Chartered Accountants (CICA) – Section 4210; and the current Memorandum from the CIA Committee of Life Insurance Financial Reporting (CLIFR) on "Guidance for the Valuation of Life Policy Liabilities".

2.3 Minimum Continuing Capital and Surplus Provisions (MCCSR) and Test of Adequacy of Asset Margins (TAAM)

Sections 515 of the *Act* requires a life company, society and provincial company to maintain adequate capital; and section 608 requires a foreign company to maintain an adequate margin for assets in Canada over liabilities in Canada. OSFI's guideline on MCCSR and TAAM, revised for the 2001 year-end, sets out requirements for the adequacy of capital test. The MCCSR and TAAM returns require the Actuary's confirmation that the instructions pertaining both to the MCCSR and TAAM guideline and the annual return have been followed. The Actuary is requested to also file a reference in the AA Report's Compliance Checklist; the guideline should not be subject to any interpretation, but any approximation should be disclosed.

The Actuary is reminded that CIA standards require that margins for adverse deviation in each assumption add provisions to the liabilities for the misestimation of an assumption's mean, and for the possible deterioration of this mean. Policy liabilities should be developed from basic actuarial principles, independent of the required capital determined under the MCCSR calculation[3].

2.4 Dynamic Capital Adequacy Testing

2.4.1 Dynamic Capital Adequacy Testing Report

The Superintendent directs that the expected future financial condition report, the Dynamic Capital Adequacy Test (DCAT), be prepared in compliance with the CIA standards, and filed with OSFI.[4]

The report must be prepared, sent to the Board and presented before the Board within one year of the beginning of the forecast period.

The Actuary is required to file the DCAT report by the earlier of December 31 or 30 days after the presentation to the directors and/or chief agent. Two (2) copies of the DCAT report should be submitted to OSFI's Accounting and Financial Information Division. We also require one electronic copy of the report on diskette or CD to be sent to the Accounting and Financial Information Division. The choice of acceptable formats can be found in Appendix VI.

2.4.2 Requirements for the Actuary's Report

The Actuary's Report must confirm that the DCAT report has been submitted to the directors or chief agent, and also include the Compliance Checklist described in the Appendix.

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[3] See section 4.7 special considerations regarding reinsurance.

[4] See CIA publication entitled: 1) Standard of Practice, Dynamic Capital Testing (December 1998); and 2) Education Note, Dynamic Capital Adequacy Testing – Life and Property and Casualty (June 1999).

The Actuary's Report should provide a summary of the exposure of the company, society, foreign company, or provincial company to significant risks.[5] It should detail whether or not the results have occasioned any changes to the actuarial and other policy liabilities reported in the annual return and to future policyholder benefits and/or costs.

2.5 Special Adverse Condition Report

The Actuary is required to provide a copy of the report on special adverse conditions to the Superintendent if, in the Actuary's opinion, suitable action is not being taken to rectify the matters. Such a report should be sent to the Deputy Superintendent, Supervision Sector, by registered mail or bonded courier.

2.6 Opinion of the Actuary

- the methods and procedures used in the verification of the valuation data are sufficient and reliable, and fulfil the required standard of care;
- the rate or rates of interest, and the rate or rates of mortality, accident, sickness or other contingencies used in calculating the (consolidated)[6]
- actuarial an other policy liabilities are appropriate to the circumstances of the company and the policies in force;
- the methods used to calculate the (consolidated) actuarial and other policy liabilities for non-cancellable accident and sickness policies and for claims under accident and sickness payable in instalments are appropriate to the circumstances of the company and of the said policies and claims;
- the valuation of (consolidated) actuarial and other policy liabilities has been made in accordance with generally accepted actuarial practice with such changes as determined and any directions made by the Superintendent;
- the valuation is appropriate under the circumstances of the company and the financial statements fairly reflect its results; and
- having regard for the results of the investigation performed pursuant to sections 368 or 630 of the *Act*, the value of (consolidated) actuarial and other policy liabilities, when taken together with the "Total Capital Available"[7]
- for purposes of the MCCSR return, makes good and sufficient provision for all unmatured obligations under the terms of the policies in force.

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Actuary

A copy of the opinion must be attached to both the Actuary's Report, and the annual return.

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[5] Canadian companies must complete their testing using the consolidated operations.

[6] Bracketed language applies to Actuaries of Canadian companies.

[7] Actuaries of foreign companies must refer to the "Net Assets Available" of the Test of Adequacy of Assets in Canada and Margin Requirements (TAAM).

2.7 Supplementary Actuarial Requirements

2.7.1 Cash Value Deficiencies and Negative Actuarial Liabilities

The Superintendent directs that the Actuary continue to test for cash value deficiencies on an aggregate basis by major blocks and negative actuarial liabilities on a policy-by-policy basis.[8] The Actuary's Report should disclose the methods used to calculate these provisions. These amounts should be disclosed separately in the Actuary's Report, with description and detail given for each major block. The Actuary should consider these amounts in determining the distributable surplus.[9]

In principle, the implementation of CALM could lead to difficulties in the calculation of these values and the MCCSR/TAAM; CALM is a portfolio-based method that does not produce seriatim policy liabilities.

1. The MCCSR requires negative actuarial liabilities to be calculated on a policy-by-policy basis. These values may not be available in a valuation carried out under CALM.

2. The MCCSR requires policy liabilities to be divided in specific groupings for purposes of certain calculations of the C-2 and C-3 components. These classifications may not be consistent with the classifications or groupings of policies used by insurers in the application of CALM.

Note that since the MCCSR treats cash value deficiencies on a portfolio basis, the introduction of CALM will not cause any difficulties in this regard.

It will be necessary, under a strict application of CALM, to introduce methods for the appropriate allocation of policy liabilities to the various categories required for the calculation of the MCCSR. OSFI intends to ask the CIA for assistance in developing allocation principles and methods in the future.

For the 2001 year-end calculations, OSFI understands that most Canadian life insurance companies intend to implement CALM through approximation. The method entails an application of CALM before the end of the year and the derivation of a set of interest rates to be used for discounting such that a seriatim PPM valuation at year end would produce the same aggregate policy liability.

Therefore, it is anticipated that seriatim policy-by-policy liabilities, and in particular, negative actuarial reserves, will be available for this year's valuation. Consequently, the form of the MCCSR calculation will not change in 2001 to accommodate the introduction of CALM. A change of this type may be made in the future.

The Appointed Actuary's Report should clearly describe the approach taken in this year's valuation to accommodate CALM as well as the calculation of the MCCSR.

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[8] Separate aggregate tests for calculating cash value deficiencies will be maintained for the MCCSR and the annual returns.

[9] See subsection 165(2), 331(3) and 464(2) of the Act, and October 1992 paper on "Guidelines Regarding the Protection of Participating Policyholders". Foreign company and fraternal benefit society Actuaries should also endeavour to follow the spirit of these requirements.

2.7.2 Participating Closed Blocks Reporting

When a company has established participating closed blocks for any part of its business, and in particular, closed blocks in the Par Account Restructuring of Canadian Demutualizations, an annual report is required from the Appointed Actuary listing the following:

i A financial analysis of the experience in each of the participating accounts over the past twelve months;
ii A projection of the surplus in the closed component on its own and the Par Accounts in total;
iii A projection of the gain/loss position of the closed component;
iv The identification of accumulated gains or losses in experience fluctuation accounts (if applicable);
v The dividend recommendation (or most recent dividend recommendation);
vi A description of other factors influencing the dividend recommendation, e.g. competitors' actions; and
vii The ongoing disclosure of par PfAD, and Closed-Block PfAD. If any changes occur in PfAD, a justification for those changes should be included.

The Appointed Actuary is also required to give opinions on an annual basis in response to the following questions:

(a) Are the participating accounts being maintained in accordance with any commitments made at the time of demutualization, including the Conversion Proposal, the Operating Rules and any other reports?
(b) Are the assets in the Closed Block sufficient to provide for the contractual benefits, plus reasonable policyholder expectations of non-guaranteed elements? Are dividends being managed in a way that neither a material surplus (tontime) nor deficit situation develops?
(c) Is the dividend recommendation in compliance with the dividend policy (or policies) of the company?
(d) Are allocations of investment income, expenses, etc. between the account fair and equitable? Are the allocations being determined on the basis outlined in the Operating Rules?
(e) Is the asset mix consistent with the prior period and with the Closed Block investment policy?

The Appointed Actuary should refer to the instructions already produced by OSFI on Par Account Restructuring in Canadian Company Demutualizations.

3.0 Report Format

The format outlined in this section must be respected. The Actuary should disclose where information requests are extraneous to the business in force.

The Actuary should refer to the CIA standards[10] for guidance on report text, disclosure situations, and language.

3.1 Required Exhibits

The following exhibits[11] should preface the Actuary's Report:

Opinion of the Actuary

(i) Compliance Checklist
(ii) Disclosure of Compensation
(iii) Item Reference
(iv) Actuarial Liabilities

Canadian Companies	Foreign Companies
-consolidated	-non-consolidated
-non-consolidated	

(v) Changes in Actuarial Assumptions and Methods

3.2 Verification of Data

The Actuary's Report must state the procedures used in the verification of valuation data (e.g. data from benefit records in-force, actuarial data used for calculation of liability and data from asset records used for matching). The extent of the Actuary's use of the work of the Auditor should be detailed.

In complying with generally accepted actuarial practice, the Actuary must meet a certain standard of care with respect to the data used in valuations. This standard of care, specified in the Recommendations, requires the Actuary to establish suitable check procedures for the verification of data. The *Act* requirement that the Actuary file a report, with the annual return, assumes that the Actuary has met the standard of care, as required by the CIA.

The CIA/CICA's "Joint Policy Statement" (JPS)[12] notes that the Actuary may "consider using the work of the Appointed Auditor with respect tot the accuracy and completeness of data used to determine the amounts" contained in the annual return. The Superintendent assumes that tests of accuracy and completeness comprise more exhaustive and different checking than would normally arise in the course of the Actuary's own work in complying with the Recommendations. The JPS outlines that the Actuary may use the Auditor's work provided that the Actuary "takes reasonable care to determine that there is a basis for such use". This reasonable care includes the establishment of communication between the two professionals, ensuring the Auditor is aware of the intended use of the work, and aware of the Actuary's needs. Discussion on "any problems expected in meeting the needs...on a timely basis" should also form the basis for using the work.

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[10] See the Recommendation, the June 1992 "Appointed Actuary's Report for Insurance Company Published Financial Statements" and the October 2001 "Standard of Practice for the Valuation of Policy Liabilities of Life Insurers"
[11] See the Appendix to this Memorandum, excluding the opinion which is found in section 2.6.
[12] See the CIA/CICA's Memorandum on the JPS dated March 19, 1991.

While the JPS offers the Actuary the option to use the Auditor's work, the existence of the JPS does not override the *Act's* requirement for filing reports with the annual return that fulfil the required standard of care. The Actuary of a foreign company must be particularly mindful of this, given the later filing dates of foreign company Auditor's Report.[13] The Actuary must ensure that the required reliability and sufficiency checks have been completed. The Actuary's professional responsibility cannot be deferred to work not yet completed by an Auditor. Qualifications should be limited to potential errors arising outside the natural scope of the Actuary's duties. If such errors have a material impact on an Actuary's results, the appropriateness of the valuation will have to be confirmed, and the Actuary's report will have to be refiled.

The Actuary should also indicate any reliance on or use of the work of another Actuary (e.g. consultants) in meeting this Memorandum's requirements and directions.

3.3 Methods

As outlined in Section 2.2 of this Memorandum, application of principles of GAAP and CALM are expected to be used in the valuation of actuarial and other policy liabilities. The Standards of Practice for the Valuation of Policy Liabilities of Life Insurers (Life SOP) has been adopted by the CIA with an effective date of December 20, 2000. Preceding CIA standards of practice on valuation of liabilities for life insurance companies also remained in effect into 2001, until September 30, 2001. Actuaries cannot choose which set of standards to follow for the 2001 year-end valuation. OSFI's position follows that of the CIA, taking the view that the CALM described in the Life SOP is consistent with the application of principles of GAAP. However, OSFI expects that when any approximation is used to apply the new standard the actuarial liabilities for year-end 2001 will be equal to/exceed those that would have been calculated without the use of approximations.

OSFI is also concerned that any inappropriate synergies should not be considered in the valuation. The AA should take into considerations the real and expected allocation of revenues and expenses by lines, and should not assume in the valuation any synergy that is not supported by the practices of the company with respect to allocations by type of product and by line of business.

3.4 Approximations and Materiality

The Actuary's Report must include a description of any approximations used in the valuation.

The Actuary must detail the standards of materiality[14] used in the valuation, and detail the derivation of this standard. Agreements on materiality reached with Auditors should be summarized in the report.

3.5 Major Subdivisions

The major subdivisions of the report should follow the traditional splits by line of business, as used in the annual return[15] and identified in the Appendix (IV) of this Memorandum.

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[13] See subsection 644(1) of the Act.

[14] The Actuary is referred to draft CIA papers for consideration.

[15] See page 50.070 of the 2000 OSFI-54 Actuarial Liabilities – Summary, and page 85.070 in OSFI-55.

For Canadian companies, the Actuary should provide a summary of the actuarial liabilities on a consolidated basis, showing the legal entity. Detail should match page 20.091 (consolidated), and enable traces to page 50.070 (non-consolidated) of the annual return.

Where significant blocks of business are held outside of Canada, a summary should be provided that gives the proportion in force and liabilities (using CALM assumptions) by jurisdiction and by line of business. The Actuary should also report additional reserves required by other jurisdictions.

Enclosed in the Appendices is an index of this Memorandum. The Actuary might find it useful for finding subjects and confirming that all topics have been covered. It would be most helpful if the Actuary could attach an index to tier report similar in style.

3.6 Level of Detail – Provisions for Adverse Deviation

Within each major subdivision, the Actuary should discuss the valuation of principal blocks of business having distinct valuation basis. Blocks should be ordered by either year of issue of by size of blocks.

Each discussion of the valuation of a block of business should be sufficient to justify the conclusion reached. This would generally include details on the nature of the product, the gross and ceded volumes in force, the gross and ceded amount of actuarial liabilities and supplementary actuarial requirements, the amounts for incurred by not reported liabilities and the method of computation. Details should be provided on benefits, contract durations, reinsurance provisions, and the use of approximations or modelling. The Actuary should indicate whether actuarial liabilities have been calculated seriatimly.

Assumptions on the levels of mortality, interest (including default), lapse, expense (including inflation), renewal/conversion, disability/recovery, and other contingencies must be detailed. OSFI expects the Actuary to justify all assumptions. A separate description is required for assumptions of expected experience and the margin for adverse deviations.[16] Total provisions for adverse deviation should be shown by line of business and by assumption as illustrated on the next page and should be appended to the Actuary's Report. The provisions shown should be on a Canadian GAAP basis. This table should be done on a consolidated basis and split by region (e.g. Canada, US, and other). Details should be given for any approximations and the standard of materiality used to provide the required splits in the table.

The Actuary should disclose all material changes in assumptions and methods used to calculate the actuarial liabilities for each block of business including detail on the date of change, the impact on the liabilities, and the reasons requiring it. These changes should tie in with Required Exhibit (v) as outlined in the Appendix. Approximations, and the standard of materiality, should be described in reporting changes.

[16] See the Life Standards of Practice.

The Actuary should discuss the treatment of the impact of the changes caused by the implementation of the new standards of practice (CALM).

Line of Business	Reserves ($'000)	Provisions for Adverse Deviation ($'000)						report reference
		int./mis-match	mort./ morb.	lapse	expense	asset default	total PfAD	
Life par – individual insurance								
Life par – individual annuities								
Life par – group insurance								
Life par – group annuities								
Life nonpar – individual annuities								
Life nonpar – group insurance								
Life nonpar – group annuities								
A&S – individual								
A&S – group								
Total								

3.7 Changes in Methods and Assumptions

The changes in assumptions should be described in the specific Exhibit. They should also be described and justified in the sections on each assumption. We also recommend disclosing the preceding year figure for each assumption in parenthesis beside the new assumption. The changes should be split between those resulting from experience and those resulting from special, particular or one time circumstances, such as new standards applications, and any transaction (reinsurance, acquisitions, etc.) or any administrative operational and corporate changes.

The Actuary should disclose whether the impact of implementing CALM is material or not, and discuss what has been decided with the Auditor for the disclosure of the impact.

4.0 Additional Considerations

4.1 Mortality Assumptions

Detail on mortality assumptions must include a separation between expected experience and the margin for adverse deviations. The report must clearly and explicitly describe the mortality basis used in the valuation, including smoker/non-smoker detail. Detail on recent experience studies on the in-force business and the expected assumptions must be provided. The Actuary should report the results of comparing actual to expected ratios for the most recent three years. When setting the expected mortality assumption an Actuary using a flat rate adjustment to the mortality table at all future ages and all future durations should ensure that they have appropriate minimum PfADs at older ages and durations (given that LSOP may require higher PfADs since these risks have different experience, lower credibility, and/or the slower mortality improvement).

The Actuary's Report should include a discussion on compliance with the Life Standards of Practice and consideration of any educational notes. The actual provision for adverse deviations should be disclosed.

The Actuary should analyze mortality experience in relation to the CIA 86-92 individual mortality table approved by the CIA Council in 1995. The Actuary should discuss the construction of the mortality assumption. Mortality rates lower than those in this table, before margins for adverse deviations, must be supported by statistically valid studies of either the company's experience or Canadian mortality experience (as produced by the CIA Expected Experience Committee). Details should be provided in the report. This applies especially to preferred underwriting where available experience, particularly in the later durations, may be sparse.[17] In particular, the Actuary should grade the preferred underwriting assumption back to the standard assumption for a period of 15 years from issue, unless otherwise supportable by a statistically valid study.

In instances where the use of reinsurance may cause a product to be "death supported", the Actuary should make an appropriate adjustment to the mortality assumption.[18]

For life annuities in payment, detailed commentary should be included in the report about the selection of the annuitant mortality assumption, and the associated projection factors. Although it is expected that annuitant mortality will be projected to anticipate future mortality improvements for valuation purposes, this practice will not be accepted for life insurance business.

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[17] See the 2001 Memorandum from the Committee on Life Insurance Financial Reporting "Guidance for the 2001 Valuation of Life Policy Liabilities"

[18] See the 2001 Memorandum from the Committee on Life Insurance Financial Reporting "Guidance for the 2001 Valuation of life Policy Liabilities"

Concerning AIDS, the Actuary should refer to the Valuation Technique Paper (VTP) 8 that is not a standard of practice anymore but was developed at a time when very few AIDS deaths were reflected in base mortality tables and when the expected nature and incidence patterns of AIDS were different than they are today. Using a reducing percentage of the provision that results from applying VTP 8 avoids over-counting of AIDS deaths.

For 2001, either of the following options would be appropriate:

(a) If the expected mortality assumption is determined from the results of a study that has excluded AIDS deaths, then that mortality should be increased by 100% of the VTP 8 provision.

(b) If the expected mortality assumption is determined from the results of a recent study that included AIDS deaths, then that mortality should be increased by an appropriate percentage of the VTP 8 provision. The actuary should be satisfied that the expected mortality assumption so adjusted includes an appropriate allowance for remaining AIDS deaths.

4.2 Interest Assumptions

Detail on interest assumptions must include a separation between expected experience and the margin for adverse deviations. The report must clearly and explicitly describe the interest rates used in the valuation. Sensitivities and distinctions should be discussed by line of business.

The Actuary's Report should discuss compliance with the Life Standards of Practice . The actual provisions for adverse deviations should be disclosed, if available. The Actuary should detail how the provision for adverse deviation is calculated for interest rate risk. In light of considerations of the standards, the increase in liability over that determined using an expected assumption of the current yield curve should be designated as the provision for adverse deviation.

The Actuary should detail all considerations regarding guarantees in the various products.

Details on interest rates scenarios should be provided. .

Interest rates should be based on the expected cash flows from actual assets allocated to the various blocks of business. A review of current assets and expected default is required. All the assumptions made in the projection of cash flows should be documented in the Actuary's Report.[19] The Actuary should discuss the relationship between the interest assumption used in the valuation and the net investment income of the assets allocated to the liabilities. In describing the derivation of the interest rates used in the valuation, the Actuary should identify all reductions from the effective asset yield including margins for asset default risk (C1)[20], administrative expenses, investment expenses, mismatch risk (C3), and adverse deviations. If assets have floating interest rates, the probability of a drop in interest rates should be taken into account.

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[19] See draft section 3025 of the CICA Handbook.
[20] See also the Education Note on the CI risks dated May 1997 and LSOP 2001.

4.2.1 Asset Default Risk

Recent experience has shown that a company's viability is dependent, among other things, on the adequacy of the provision for future asset defaults. The Actuary should describe the process used to determine normal asset default costs, and asset default costs in excess of normal levels. With reference to the CIA "Guidance Note on the Assessment of the Overall C1 risk of a Company's Investments"[21], the Actuary should opine on the adequacy of the default provisions made, and indicate any changes from the previous year.

With respect to setting the expected assumptions and margins for adverse deviations for asset defaults, the Actuary should discuss any accounting provisions made for this contingency (see section 3025 of the CICA Handbook). The Actuary must ensure, and be able to demonstrate, that all default costs and risks have been covered, either through separate provision in the actuarial liabilities, or in conjunction with any accounting provisions.

In estimating the expected cash flows, account must be taken, not only of assets in default on the date of valuation, but also of defaults expected in the future. Full allowance should be made for economic losses which would include the following: loss of interest from the date of default to the eventual disposal of assets, expenses of sale, capital loss on sale of assets (or estimate of loss on sale), any reduction in the value of assets not expected to go into default, (due, for example, to a drop in credit rating) and carrying costs less any income generated.

A summary of asset default losses incurred in each of the past three years should be provided, and the losses in the most recent valuation year should be compared with the total C1 provisions released in that year (a comparison of actual to expected). The Actuary should detail the separate amounts contained in assets versus those contained in liabilities.

The Actuary should indicate how asset concentration and vulnerable assets were handled in determining the overall asset default provisions.

For the current and prior year-ends, the Actuary should describe all asset default provisions for each class of asset in terms of basis points and dollar amounts. (Such amounts should be traced back to those reported in the annual return).

The Actuary should also comment on the quality and composition of the assets allocated to surplus.

4.2.2 Liquidity Risk

The Actuary should describe the process followed to measure and manage the company's liquidity risk. Management's liquidity risk guidelines and targets should be described. As well, the process used to monitor results and take action in the event of a problem should be detailed. Also, the measurement of liquidity risk should be described along with the most recent results. An important reference is the February 1996 CIA Education Note "Liquidity Risk Measurement".

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[21] See the papers produced by the CI Sub-Committee of the CIA's Committee on Investment Practice. See also the Education Note on the CI Risks dated May 1997.

4.3 Lapse Assumptions

Detail on lapse assumptions must include a separation between expected experience and the margin for adverse deviations. The report must clearly and explicitly describe the lapse rates used in the valuation, and justification should be provided for the ultimate lapse rates used. Details of recent experience studies of the in-force business and the expected assumptions should be provided. The Actuary should report the results of comparing actual to expected ratios for the most recent three years.

The Actuary's Report should discuss compliance with the Life Standards of Practice. The actual provision for adverse deviations should be disclosed, if available.[22]

4.4 Expense Assumptions

Detail on expense assumptions must include a separation between expected experience and the margin for adverse deviations. The report must clearly and explicitly describe the expense assumptions used in the valuation. The Actuary's Report should discuss compliance with the Life Standards of Practice. The actual expense margin for adverse deviations should be disclosed, if available. Expenses should include provisions for expected future CompCorp assessments.

Details of recent expense studies and the expected assumptions must be given. Consideration should be given to the CIA's June 1992 research paper, "Analysis of Expenses for Valuation Purposes". In justifying the expense assumptions, the Actuary should report the results of comparing actual to expected ratios for the most recent three years, and discuss the portion of the total expenses provided for in the liabilities. Unit costs should be detailed, and comparisons should be made between valuation totals and the allocation totals for the company. The level of IIT and income tax should be disclosed and whether there is any provision or credit for accounting purpose should be disclosed. CLIFR fall letter is to be considered.

The report should summarize issue and administrative expenses by flat charge per policy, percentage of premium, charge per $1,000, and margin in the interest rate. A description of the allocation between issue and administrative expenses should be included, as well as the amounts for each in the following table. Assumptions on inflation rates should be detailed.

The Actuary should discuss whether increases in business were assumed to lower per unit costs. The potential impact of not meeting points of critical mass should be detailed.

Where management agreements provide for the payment of management fees to another company, the expense assumption should be a projection of the recent amounts actually paid by the company. Details on expected rate increases for third party administrator contracts should be included.

Where expense sharing agreements exist between a parent/subsidiary, often times a fixed or variable percentage of costs are shared. The Actuary's Report should disclose the existence of such arrangements, and detail any specific valuation considerations arising from them.

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[22] See also section 4210.25(e) of the CIA Handbook.

Branches are required to allocate the expenses covered by the head office on behalf of the branch operations. The Actuary should confirm that all of these direct and indirect expenses are included the actuarial valuation.

In considering any outsourcing arrangements the Actuary should reflect the current actual costs of the arrangement in the reserves and consider how those costs should change over time when projecting them into the future. Details of these considerations should be provided.[23]

General Expenses and Taxes (excl. Income Taxes)

($000)

	Last Year Actual	**Current Year Actual**	**Current Year-end Expected**	**Current Year Actual/Expected**
Individual Life Par				
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)	....	....	....	....
Individual Life Npar	....	....		
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)			....	....
Individual Annuities	....	....		
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)			....	....
Individual A&S	....	....		
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)			....	....
Group Life	....	....		
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)			....	....
Group Annuities	....	....		
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)			....	....
Group A&S	....	....		
- issue	....	....	xxxxxxxxxxxxxx	xxxxxxxxxxxxx
- administrative	....	....	....	....
- other (specify)			....	....

N.B. The totals should reconcile to the amounts in the annual return. The issue expenses could be estimated from the latest expense study. The administrative expenses should reconcile with the valuation assumption results. Please specify any estimated or approximated amounts.

[23] The Actuary is referred in OSFI's Guideline of January 2000, "Outsourcing of Business Functions by FRFI's"

4.5 Matching of Assets and Liabilities

The Actuary's Report must include a discussion on the procedure used to match assets and liabilities, including the assumptions used in developing cash flows, the allowance for expenses, and the frequency of the matching process. Complete details on the level of segmentation used in the valuation of liabilities should be given. An illustration of the extent of matching portfolios by duration and yield, and comments on the level of immunization should be included.

Descriptions should be provided on the sensitivity studies undertaken to measure the effect of changes in market interest rates, and shifts in the yield curve; the controls that are in place to ensure the appropriateness of the type, duration, quality, and marketability of the assets held; and the provision made for the asset/liability mismatch (C3 risk). The August 1995 paper "Practical Aspects of Cash-Flow Testing in Determination of Reserves" by S.P. Mulgund is important to consider and the Life SOP .

The Report should include a table showing the net cash flows, produced by the matching process, for at least 10 years from the valuation date.

The Actuary should give a breakdown of assets used to back each business segment and surplus. Detail on the average duration of assets, by class, should be provided.

It is OSFI's expectation that only vested assets will be used by foreign companies to determine their actuarial liabilities.

Discussions should include the use of any derivative instruments[24], stock or real estate in the matching process.

Details should be provided on the company's use of deferred gains, including a discussion of compliance with the CIA's January 6, 1995 letter. Deferred gain liability should be split between assets backing surplus and assets backing liabilities.

The Actuary should detail whether or not the company actively trades assets, with references to the management and auditing procedures, and should detail how these practices impact the valuation.

Full details on any switching of assets should also be provided by the Actuary. It is OSFI's expectation that any switching of assets between surplus and liabilities, or between funds (par and nonpar) is done at market value. The Actuary should report any exceptions to this practice, giving full explanations of its appropriateness.

4.6 Inter-Segment Notes

A final Guideline on the subject of Inter-Segment Notes for Life Insurance Companies dated June 2000 was adopted by OSFI after discussion with the industry. The effective date of this Guideline was September 2000.

[24] See March 1996 CIA Education Note "Management, Risks, Regulation and Accounting of Derivatives"

The Actuary should provide the following information to enable a better understanding of the practice of the company.

a) Basic Information

The Actuary should complete the following table to describe the nature of the currently in force Inter-Segment Notes:

Issuing Segment	Borrowing Segment	Maturity Value	Maturity Date	Current Yield Rate

b) The Actuary should provide information on the tests performed.

The Actuary should describe the results of any testing performed with inter-segment notes (i.e. DCAT, cash flow, liquidity, default risk, etc.)

4.7 Reinsurance

The Actuary should detail compliance with the Life SOP.

The Actuary should summarize all material or new reinsurance agreements, both assumed and ceded. Detail should include the effective and expected termination dates, the type of reinsurance, and d description of the products covered. A more detailed description should accompany any agreements covering more than 15% of the total in force, including amounts in force, and actuarial liabilities, on a gross and net basis, for new business.

Discussions should include retention limits, any unregistered reinsurance, and any reinsurance with associated companies. Stop loss and catastrophe arrangements should also be clearly described.

The method of computing gross and net reserves for significant blocks of business subject to coinsurance, and treatment of expense sharing between the reinsurer and the direct writer should be detailed.

OSFI is concerned about the use of back-to-back reinsurance contracts. Any reinsurance arrangements where a company cedes a block of business to a reinsurer and then accepts the same block of business back on a different basis requires full disclosure in the Actuary's Report. No credit can be taken for these arrangements in the capital requirements.

It should also be noted that for any reinsurance financing arrangement that significantly alters the pattern of policy reserves, CSV deficiencies, or negative reserves, the Actuary should discuss whether this arrangement involves a true transfer of risk to the reinsurer. The Actuary may also be asked to calculate and disclose capital requirements as if the particular arrangement had not been in place.

4.8 Specific Product Types

4.8.1 Participating Insurance

The report should include a discussion on compliance with the Life SOP.

The additional responsibilities of sections 456 to 464 of the *Act* should be considered, and summarized in the Actuary's Report. The Actuary should include references to filing dates of the company's dividend policy, and the allocation of expenses and investment income.

The Actuary's Report should provide a complete description of the dividend scale, including details of the assumptions. The Actuary should specify whether terminal dividends have been included or excluded. The method of allowing for any transfer to shareholders should be discussed. The nature of any prospective changes in the dividend scales that have been taken into consideration should be disclosed.

Details of any test using non-par assumptions should be provided including the assumptions used, the results, and how they affected the valuation.

The Actuary should detail the consideration of deferred gains in valuing participating liabilities.

No provision for dividends payable in the following year is necessary in the valuation of participating business if an appropriate provision is reported in the annual return's liabilities statement.

4.8.2 Adjustable and Universal Life Products

The Actuary should detail compliance with the Life SOP. The Actuary should describe the valuation procedure followed, and justify the use of the approach. The Actuary should disclose details of the guarantees as well as risks inherent in the product takes and how the risks have been provided for in the valuation. Universal Life products with lapse supported characteristics should also comply with the SOP.

It is OSFI's view that individual policies with an adjustable cost basis include, but are not limited to, deferred annuities that guarantee new money interest rates for a specified period with a roll-over rate determined at the end of the period; single premium whole life policies with the initial coverage guaranteed for a specified period after which the coverage may be adjusted; annual premium whole life policies with the initial coverage (or premium) guaranteed for a specified period after which the coverage (or premium) may be adjusted; renewable and convertible term insurance policies that do not provide for guaranteed renewal premiums, or where the guaranteed renewal premiums may be replaced by the company at future renewal; and most forms of Universal Life insurance products.

Investment Strategy to Support UL

OSFI proposes that the Actuary complete a specific table (see below) for each major block of Universal Life product presenting, the actuarial liability, PFADs, account values, cash values, first year premiums, first year profit or loss, total gross premiums, results of tested scenarios, and the ceded reinsurance liability split by reinsurer. The results for the tested scenarios according to the LSOP are explicitly required.

In the case of co-insurance, when the reinsurance premium is guaranteed for the life of the product at a premium rate that could become proportionately lower than the premium for the direct product, the best estimate of the lapse rate assumption should depend on the features of the direct product.

The Actuary should discuss the different funds available to the policyholders, the basis of the return on the funds, what assets are used to support the funds and where the fund resides (segregated or general funds). The reserve for all guarantees provided on these funds should be discussed.

($000)

UL LEVEL COI (direct or assumed coins.)							
Actuarial Liability .Gross incl. seg. fund**	Net excl seg. fund**	PADs	Account Values incl. seg. fund	Cash Values inc seg. fund	First Year Premiums	Total Net Premiums	Total Gross Premiums
Actuarial Liability (net) using other scenarios excl. seg. funds of $(000)							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Actuarial Liability ceded for each of the six reinsurers presenting more liability credit							
Re Name Basis (Y/Co)	……… ………	…… … ……	……… ………	……… ………	……… ………	…………. ………….	TOTAL… ……… ………….
Volume							
Ceded Liability							

** Off balance sheet seg. funds

(1) Base scenario without any adjustment to future policyholders changes (i.e. based on current charges) (COI); we do not consider as an adjustment any changes to the changes that are automatically done according to the policy and linked to some indexes or values

(2) LSOP #1 scenario (describe with or without) adjustment to future policyholders charges (COI)

(3) LSOP #2 scenario (describe with or without) adjustment to future policyholders charges (COI)

(4) LSOP #3 (describe) (5) LSOP #4 (describe) (6) LSOP #5 (describe) (7) LSOP #6 (describe) (8) LSOP #7 (describe)

($000)

UL YRT COI (direct or assumed coins.)							
Actuarial Liability Gross incl. seg. fund*	Actuarial Liability Net excl seg. fund**	PADs	Account Values incl. seg. fund	Cash Values incl. seg. fund	First Year Premiums	Total Net Premiums	Total Gross Premiums
Actuarial Liability (net) using other scenarios excl. seg. funds of $(000)							
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Actuarial Liability ceded for each of the six reinsurers presenting more liability credit							
Re Name Basis (Y/Co)	……… ………	…… … ……	……… ………	……… ………	……… ………	………… …………	TOTAL… ……… …………
Volume							
Ceded Liability							

**Off shore balance sheet seg. fund

(9) Base scenario without any adjustment to future policyholders charges (i.e. based on current charges) (COI); we do not consider as an adjustment any changes to the changes that are automatically done according to the policy and linked to some indexes or values
(10) LSOP #1 scenario (describe with or without) adjustment to future policyholders charges (COI)
(11) LSOP #2 scenario (describe with or without) adjustment to future policyholders charges (COI)
(12) LSOP #3 (describe) (13) LSOP #4 (describe) (14) LSOP #5 (describe) (15) LSOP #6 (describe)
(16) LSOP #7 (describe)

4.8.3 Lapse Supported Products

OSFI remains concerned about lapse supported products. The Actuary's Report must give specific details on lapse-supported products, and include a display, as below.

The Actuary should give additional details on the valuation of such products.

		$'000							
Plan	Valuation Basis	Amount in Force		Actuarial Liability		Type of Reins	Ult. Lapse Rate	Average Policy Duration	Sensitivity* (results of "prescribed scenario" test below)
		Gross	Ceded	Gross	Ceded				
TOTAL									

In addition, the Superintendent directs that all companies test and report the results, in the sensitivity column above, the impact *(i.e. the difference between the resulting liability vs. the basic liability) of using the following prescribed scenario: a lapse scale for lapse supported products that drops to 2% at the earlier of duration 10 and/or attained age 60, and grades uniformly to 1% at attained age 65.[25] This sensitivity test should be done with no adjustments to any of the other assumptions or parameters. Any material sensitivity will require full treatment in the following DCAT report. The handling of adjustable lapse supported products should be detailed.

4.8.4 Annuities

The Actuary should describe compliance with the Life SOP for the calculation of annuity reserves. Any approximations to the SOP methodology should be fully disclosed. The Actuary should explicitly describe the treatment of deferred gains in the valuation of the products.[26]

The Life SOP should be applied to all equity indexed annuities (as opposed to equity-linked annuities in the segregated funds). A separate discussion should be included describing the product, the assets used to support these annuities and how CALM is used in the valuation, taking into consideration any maximum guarantees and any options provided to the policyholders.

[25] This assumes that the valuation rate exceeds the tested scenario – i.e. the Actuary is not expected to increase lapse rates where a cliff at age 60 already incorporates a zero lapse rate in the valuation or where the test scenario is less conservative then the current valuation scenario.

[26] See the CIA FRC's letter of January 6, 1995 to all Appointed Actuaries.

The Actuary should provide full details on the valuation of any annuities that is not done according to CALM.

The Actuary should examine the experience to see whether additional liabilities are necessary to cover selection against the company. Particular attention should be paid to partial withdrawals without penalty, and full withdrawals not subject to appropriate market value adjustments. The Actuary should discuss the consideration of such situations.

4.8.5 Group Insurance

A new Education Note has been promulgated by CLIFR on group insurance. It replaces all non-promulgated technique papers produced on group insurance. This education note is a companion piece to the Life Standards of Practice (SOP), and provides illustrative information on the application of the SOP for group life and health policies. Although the application of the principles of GAAP and CALM is expected, the Actuary should discuss the methodology employed in its valuation.

The Actuary should detail any company holding harmless agreements.

For Group Creditor Life, and Accident and Sickness Business, the calculated actuarial liabilities should be compared to the refunds available (upon early termination of the certificate for reasons other than death or disability) to the certificate holders. The Actuary should clearly state the bases used to determine the refund. Any excess of the refunds available should be reported under cash value deficiencies and negative actuarial liabilities. The Actuary should also detail the treatment of experience rated refunds.

4.8.6 Accident and Sickness

Although an education note on the valuation of accident and sickness business have yet to be produced by the CIA,[27] the application of the principles of GAAP and CALM is expected. The Actuary must disclose the methodology employed in this valuation.

The Actuary is referred to the Life SOP on claims for consideration. The Actuary should justify the assumption made with respect to recovery from disability in the context of current inter-company experience, or rates derived from or adjusted to reflect the actual experience. For significant blocks of business, the description of the recent run-off analysis or other experience studies should be included. Where tabular claim factors have been modified, the adjustments should be described, and an explanation of the modification provided. All approximations used should be described and justified.

Liabilities should include a provision for claim adjustment expenses, and the discussion should disclose the nature of the method of calculation.

The Actuary should discuss the method of calculation of the amounts of incurred but not reported liabilities, including the allowance for adjustment expenses, and the periodic testing of the adequacy of the liabilities. For major blocks, this discussion should include a summary of the recent test results.

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[27] See relevant aspects of September 1994 discussion drafts on VTP 12, 13 and 14.

4.8.7. Segregated Fund Products Liability and Capital Provision

OSFI supports CLIFR's recommendation of the August 1, 2000 report of the CIA Task Force on Segregated Fund Investment Guarantees. The Actuary is expected to consider the advice in the report, the CLIFR recommendations and the Life SOP, detail these considerations and justify any deviations from them.

The Actuary should describe the investment model used in the valuation. This would include the type of model used, the parameters selected and the number of scenarios performed. The results of the recommended calibration process should also be described.

The assumptions used for mortality, lapse, expenses should be described and justified. The Actuary should detail the consideration used to select the margin offset used in the valuation.

If the recommended factor approximation is used the Actuary should describe the reasons for doing so. The application of the factor approach should be described.

For each product the Actuary should provide a general description of the segregated fund guarantees. This general description should include a description of the guarantee level at maturity and death, the reset and fund switching provisions, the product types/groups with a segregated fund guarantee, and other general product features. A description of any reinsurance arrangements or hedging programs should also be provided. We expect that the Actuary will provide the information requested in this section 4.8.7, regardless of any reinsurance arrangements. The following table should be filled in.

LIABILITY AND ADDITIONAL CAPITAL PROVISIONS CURRENTLY HELD

Product Group/Type	Segregated Fund Liability	Related Liability Held in General Fund	Additional Capital Provision
Total (company basis)			

For the segregated fund MCCSR requirement, the Actuary should describe the process used to apply the requirement to the business. The process used to slot funds into categories should be described. The considerations used to determine the appropriate margin offset should be detailed. Any interpolations should be described.

If any offset is taken for reinsurance or hedging it needs to be described in the Appointed Actuary's Report. Any calculation of factors for US business not found in the tables must also be described in the report.

A guidance note dated July 2001 has been published by OSFI. This provides direction for a capital offset for hedging programs. A discussion about this should be provided in the Appointed Actuary's Report.

OSFI is aware that there is incentive for the Actuary to improve the company's MCCSR ratio by holding higher segregated fund policy liabilities to reduce the capital requirement. This also has the added effect of reducing taxable income. The Actuary is reminded that the policy liability must be appropriate for the policies in force and the company.

4.8.8 New/Special Risk Products

The valuation of new business should be separately displayed from other in-force business.

The report of the Actuary should include a brief discussion of the features of all new products. Where the product is novel or experimental, and relevant experience data is not available, the discussion should explicitly identify both the expected experience assumptions, and the margins for adverse deviations. If the new product involves a new contingent events (e.g. long term care, unemployment credit insurance, critical illness, reverse mortgage) the Actuary should describe the work performed to measure the risk associated with this new contingency. (These considerations especially apply to the case of lapse rates of products whose nonforfeiture values are minimal or nil.)

The Actuary should discuss any material product concentration risk. In lieu of requiring a capital component in the MCCSR, individual companies are asked to address this risk in their AA Report.

4.8.9 Index Linked UL and Annuity Products

The report of the Actuary should include a discussion of the different products in force and their features. Included should be the size of the various products, the size of new business, the crediting mechanisms, the assets used to back the products, any guarantees, the risks of tracking errors or mismatches, the reserves held and the amount of the MfADs and PfADs.

The discussion should include where the assets are held (e.g. in the general fund, in the company's segregated funds, in external mutual funds). If there is not a direct link between the asset yields and the return guaranteed to the policyholder, the Actuary should discuss in detail the investment strategy used. For example, if a product guarantees a TSE index but the actual assets are in the general fund and are a combination of bonds, futures, swaps, etc., this requires a detailed description. The basis for reserves to cover tracking errors and guarantees should be explained.

The discussion should also cover the accounting treatment used to ensure consistency between the liabilities and assets in the financial statements.

4.9 Cash Value Deficiencies and Negative Actuarial Liabilities

As outlined in section 2.7 of this Memorandum, and except as noted below, the Actuary must continue to test for cash value deficiencies on aggregate basis by major blocks and negative actuarial liabilities on a policy-by-policy basis. The Actuary's Report should provide a brief description of the methods used to calculate the provisions.

Cash value deficiencies and negative actuarial liabilities should be presented in a tabular form by line of business, with comparative figures, first year and renewal, for the two preceding years. Material changes should be identified (e.g. resulting from changes in assumptions), and supported.

For deferred annuities, provisions in respect of those situations where cash values may exceed basic policy liabilities may be calculated on an aggregate basis. This aggregate is to be determined for separate blocks of business exhibiting materially different characteristics.

Deferred annuity contracts that provide for a market value cash out may have cash values in excess of the actuarial liabilities. At the same time, corresponding assets may have unrealized capital gains.

Provided that these liabilities and the supporting assets are well matched, it is not necessary to include in the provision for cash value deficiencies any amount in respect of deferred annuity contracts where deficiencies are attributed solely to market value adjustments.

Consideration should be given to cash value deficiencies arising from single premium group creditor contracts.

Cash Value Deficiencies and Negative Reserves are the result of the reserve calculation performed with all cash flows including reinsurance. Altering these numbers through reinsurance outside the reserve calculation solely for the purpose of improving the company's capital position is not considered a transfer of risk and must be submitted to the Superintendent for approval.

5.0 Review Procedures

The Superintendent recognizes the confidential nature of the contents of the Actuary's Report.

Reviews of the filed annual returns may disclose that an Actuary's valuation warrants further assessment and questioning. The Superintendent may reject assumptions and methods where it appears that the policy liability produced are inappropriate.

The review of an Actuary's Report may take place over an extended period after filing, and OSFI may notify the Actuary that supplemental detail is required to sufficiently assess the assumptions and methods. The Actuary is expected to respond promptly to all supplemental requests. Working papers required to support the computation of the actuarial and other policy liability figures reported in the annual return and the Actuary's Report should be available at all times at the company's head office in Canada,[28] and should be made available to OSFI upon request.

[28] See OSFI's November 1992 Guideline for foreign companies on "The Role of the Canadian Chief Agent and record Keeping Requirements"

Should the questioning of particular assumptions or methods not sufficiently demonstrate the appropriateness of the policy liabilities produced, the Superintendent will require the Actuary to choose other acceptable assumptions or methods, and to re-compute the policy liabilities. In such a situation, the Actuary will have to refile the Actuary's Report. The Superintendent may cause the company to amend the annual return. Alternatively, the Superintendent may ask the company to reflect the changes in the annual return for the following year. The Superintendent may request an Independent Actuary's Report, if deemed necessary.

5.1 Peer Review Program

5.1.1 Peer Review

The CIA's exposure draft Standard of Practice for peer review (June 2001) provides standards for peer review of work supporting opinions that are published after January 1, 2003. Early implementation will also likely be encouraged.

Meanwhile, OSFI is commissioning independent actuarial reviews (IAR) on a quasi-random basis. Thirty companies were subject to an IAR over the course of the last three years. The reviews are conducted by independent consulting actuaries and the cost is borne by the companies as per section 365.1 of the *Insurance Companies Act (ICA).*

OSFI will continue this approach until the CIA Standard of Practice is in effect. When it is in effect, OSFI will consider what additional, if any, requirements are appropriate, based on the adopted Standard of Practice, to ensure that the reliance placed on the Appointed Actuary is warranted and satisfactory.

5.1.2 Independent Actuarial Reviews

To encourage voluntary independent peer review and not duplicate the work that is already performed independently, if any, OSFI will not commission an independent actuarial review for any company that has already mandated an Independent Actuary to review the Appointed Actuary's work.

The reviewer should be external to the reviewed company. An external reviewer that has performed work for the reviewed company is acceptable if the external reviewer has not been involved in the work subject to review. An actuary of the reviewed company's auditor is acceptable but the work that the Independent Actuary performs is to be a separate stand-alone engagement from the audit.

The Office should receive a copy of the IAR report no later than 30 days after its presentation to the company, and in any event, no later than June 30, 2002.

In the case of a review completed prior to the year-end valuation, that is the IAR report is published on a pre-release basis, then the IA report should include evidence that the recommendations in the report have been appropriately considered by the Appointed Actuary in the current year end work.

In the case of an IAR report published on a post-release basis, then the IAR report should include evidence that the recommendations in the report will be appropriately considered by the Appointed Actuary prior to the next year-end valuation.

The AA report should include a discussion of the treatment accorded to the suggestions, recommendations and material issues brought forward by the independent actuarial review.

5.1.3 Scope and opinion of the Independent Actuarial Review

This review should encompass the year-end valuation and the Appointed Actuary Report, in particular items subject to sections 365 (or section 629, if a foreign company), 457, and 458 of the *ICA*, and comprise of a formal report and opinion. As well, the review should include a discussion and opine on the latest report produced subsequent to section 368 (or section 630, if a foreign company) of the *ICA*.

The report should review the actuarial and other policy liabilities of the Company. This involves an independent review of the work of the Appointed Actuary including the Appointed Actuary's Report and any other relevant studies. Though it does not involve detailed validation of the calculations, it should provide:

(i) an opinion on the appropriateness of the assumption and methods employed by the Appointed Actuary, and the consistency of the work with generally accepted actuarial practice;

(ii) a commentary on any areas of differences of opinion with respect to methods employed or selection of assumptions, including analysis of sensitivity of results to specific changes; and

(iii) an opinion that the actuarial and other policy liabilities are not, in aggregate, materially lower than the level produced by the Independent Actuary's selected methods and assumptions.

The review should encompass procedures and systems relied upon by the Appointed Actuary. This includes procedures and systems used:

(i) to test and check calculations and the valuation results, and
(ii) to reconcile them from year to year.

The opinion should be provided by a fellow of the Canadian Institute of Actuaries.

The opinion should state that the Independent Actuary is satisfied with the final report.

The Independent Actuary's report and opinion should be satisfactory to the Office.

APPENDIX

(i) Specific Compliance Checklist

Canadian Institute of Actuaries Standards of Practice

	LSOP	**CLIFR Letter**	**PAA ****	**DCAT**
In Compliance				
		Report Reference		
Not Applicable 1. No Business 2. Not Material				
Not in Compliance 1. Disagree 2. More Conservative 3. Lack of Time 4. Lack of Resource Systems 5. Other				

Note: (Describe areas, steps being taken to comply, expected date of compliance, expected impact of non-compliance)

....

....

....

Other Report Reference

Discussion on: Peer review*

CSOP*

MCCSR – TAAM Return

*** Draft Standards**

**** Standards of Practice for the Appointed Actuary of an Insurance Company – June 1992 (concerning the role of the appointed actuary)**

(ii) **Disclosure of Compensation**[1]

I confirm that all my direct and indirect compensation is derived using the following methodology:

____

____

____

____

____

I confirm that I performed the following roles of a Chief Financial Officer:

____

____

____

____

I confirm that I have performed my duties without regard to any personal considerations or to any influence, interest or relationship in respect of the affairs of my client or employer that might impair my professional judgment or objectivity.

I confirm that my ability to act fairly is unimpaired, that there has been full disclosure of the methodology used to derive my compensation to all known direct users of my services

____

Actuary

[1] This exhibit is based on the CIA's Rules of Professional Conduct (5,6 and 20) and the January 26, 1993 Memorandum "Compensation of the Appointed Actuary – Disclosure".

(iii) Item Reference

Office of the Superintendent of Financial Institutions

Item	Yes/No	Report Reference
Was there any change in assumptions or methods?		
Does the reserve include specific provisions for AIDS?		
Was there any asset default losses incurred during the past three years?		
Was there significant active trading of assets in the last year?		
Was there any change in asset trading practices in the last year?		
Was there any switching of assets in recent years?		
Is there any third party administrator?		
Was there any significant new reinsurance in the past 12 months?		
Were there any new products issued by the company in the past 12 months?		
Are the current dividend scales in accordance with the dividend policy of the company?		
Was there any change in the (allocation of) expense and investment income to the participating fund in the past 3 years?		
Was there any modification to the dividend policy during the past 3 years?		
Are there any direct or assumed guaranteed benefits on segregated funds?		
Has any report on the closed blocks been submitted?		

(iv) - a.

Actuarial Liabilities - Summary - ($ thousands) - As Shown in Annual Return

(p.20.091 for Canadian - p.85.070 for foreign companies)

	Par	Non-par	Total
Life			
Insurance			
Individual			
Group			
Total Insurance			
Annuities			
Individual			
Group			
Total Annuities			
Total Actuarial Liabilities			
Deduct:			
Total Liability for reinsured contracts			
Deferred Premiums (less loading)			
Net Actuarial Liabilities			
Accident and Sickness			
Individual			
Group			
Total for Accident and Sickness			
Net Actuarial Liabilities			

Supplementary Actuarial Exhibit - ($ thousands)

	Current Year	Prior Year
Cash Value Deficiencies		
Negative Actuarial Liabilities		
Reserves Required Other Jurisdictions		

(iv) - b. Actuarial Liabilities

INDIVIDUAL LIFE INSURANCE - PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - c. Actuarial Liabilities

GROUP LIFE INSURANCE - PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - d. Actuarial Liabilities

INDIVIDUAL LIFE INSURANCE - NON-PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - e. Actuarial Liabilities

GROUP LIFE INSURANCE - NON-PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - f. Actuarial Liabilities

INDIVIDUAL ANNUITY - PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - g. Actuarial Liabilities

GROUP ANNUITY - PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - h. Actuarial Liabilities

INDIVIDUAL ANNUITY - NON-PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - i. Actuarial Liabilities

GROUP ANNUITY - NON-PARTICIPATING ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - j. Actuarial Liabilities

INDIVIDUAL ACCIDENT AND SICKNESS ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(iv) - k. Actuarial Liabilities

GROUP ACCIDENT AND SICKNESS ($ thousands)

Description of Valuation Basis Used and/or Report Reference	Gross		Net		Liability Distribution
	Amount	Liabilities	Amount	Liabilities	
TOTAL					

(v) (a)

Changes in Actuarial Assumptions and Methods (resulting from actual to expected experience)

Line of Business	Report Reference	Last Year's Valuation Basis	This Year's Valuation Basis	Reason for Change	Impact of Change: Increase/ Decrease on Actuarial Liabilities ($ '000)
Total					

(v) (b)

Changes in Actuarial Assumptions and Methods other than resulting from actual to expected experience

Line of Business	Report Reference	Last Year's Valuation Basis	This Year's Valuation Basis	Reason for Change	Impact of Change: Increase/ Decrease on Actuarial Liabilities ($ '000)
Total					

Choice of Format for Diskette Filing

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