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Educational Note

Guidance for the 2001 Valuation of Policy Liabilities of Life Insurers

Document 20180

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MEMORANDUM

TO: All Life Insurance Practitioners
FROM: Simon Curtis, Chairperson
Committee on Life Insurance Financial Reporting
DATE: October 25, 2001
SUBJECT: **Guidance for the 2001 Valuation of Policy Liabilities of Life Insurers**

Document 20180

Introduction

The purpose of this letter is to provide guidance to Appointed Actuaries in several areas affecting the valuation of the 2001 year-end policy liabilities of life insurers.

The guidance in this letter represents a consensus view of members of the Committee on Life Insurance Financial Reporting (hereafter referred to as CLIFR in this note) of appropriate practice consistent with CIA standards. As documented in the draft Due Process paper, this letter has not gone through due process and therefore does not represent standards of practice.

The key topics covered in this letter are the following:

- Final and Full Implementation of the December 2000 “Standards of Practice for the Valuation of Policy Liabilities of Life Insurers,” which is required for all valuations with a valuation date after September 30, 2001
- Accounting Treatment of Changes due to implementation of the December 2000 Life SOP
- Guidance on Emerging Issues and Other Topics, where CLIFR believes expansion of the guidance provided in the Life SOP is both warranted and topical. This includes:
 - What Constitutes Compliance with Standards of Practice
 - Grouping of In force for Application of CALM
 - Treatment of Non-Fixed Income Assets Backing Liabilities
 - Balance Sheet Allowances for Acquisition Expenses (DAC)
 - Income Tax Treatment in the Valuation and Substantively Enacted Tax Rates
 - Valuation of Segregated Fund Investment Guarantees
 - Broader Application of Stochastic Techniques
 - Term of the Liability
 - Critical Illness
 - Expected Mortality and Future Mortality Improvements
 - Preferred Underwriting

December 2000 Life SOP

The “Standards of Practice for the Valuation of Policy Liabilities of Life Insurers” (hereafter referred to as “Life SOP”) was distributed to the membership on December 20, 2000. The Life SOP defines standards of practice for the valuation of policy liabilities of life insurers, prepared in accordance with Generally Accepted Accounting Principles in Canada. The Life SOP replaces the approved Valuation Technique Papers, the Provision for Adverse Deviation paper, and Sections 3 and 4 of the Recommendations for Life Insurance Company Financial Reporting as Standards of Practice. The full list of standards of practice being replaced is attached as Appendix A.

The Consolidated Standards of Practice – Practice Specific Standards for Insurers document is a discussion draft. That document does not yet represent standards of practice.

For practical reasons, the old Standards of Practice for the Valuation of Policy Liabilities of Life Insurers remained in force for valuations with a valuation date up to and including September 30, 2001. This transition period was intended to allow Appointed Actuaries sufficient time to implement technology required to effectively apply the new standard. As the transition period has now expired, compliance with the Life SOP is required for the valuation of the 2001 policy liabilities of life insurers.

The new standards contain several changes from the old standards, the most material of which are the following:

- 1) the Canadian Asset Liability Method (CALM) is the new standard valuation method;
- 2) the range of 0.50%-2% for the margin for adverse deviations on valuation interest rate assumptions for non-par guaranteed products has been replaced with scenario testing for establishing a margin for interest rate risk;
- 3) there has been a change in the lapse rate margin for adverse deviations and its application;
- 4) the use of a zero term of the liability for a segregated fund contract where there is no material insurance risk is mandated where no standard existed before;
- 5) specific guidance is provided for establishing expected returns and margins for adverse deviations for non-fixed interest assets under CALM;
- 6) all permanent and temporary tax differences related to the policies and their supporting assets are to be included in the valuation;
- 7) the 20%-80% C-3 M/FAD for annuity products has been removed.

With respect to the CALM, Appointed Actuaries are reminded that the Life SOP mandates that valuation methodology for the valuation of policy liabilities for 2001. Many Appointed Actuaries may have been valuing liabilities according to the Policy Premium Method (PPM) up to September 30, 2001. As outlined in the Life SOP Section 6.4.1, “the PPM conforms to the Canadian Asset Liability Method if appropriate rates of interest are used for discounting. Appropriate rates of interest to use for discounting rates depend on the yields on existing assets, which in turn are based on asset cash flows in relation to the statement value of assets. Discount rates also depend on the interest rate scenario assumed and, therefore, scenario testing is required to determine the appropriate discounting rates.”

When implementing scenario testing for interest rate risk as outlined in Section 6 of the Life SOP, Appointed Actuaries should ensure that the valuation provides appropriately for asset default and investment expenses.

With respect to the change in lapse rate margin, as outlined in Section 7.2.4 of the Life SOP, the standard range for margins for adverse deviations on rates of lapse and partial withdrawal is 5% to 20% of the expected assumption. For each duration, the direction of the margin should result in an increase in the liability net of reinsurance. It may be difficult practically, in a CALM environment, to implement MfADs on lapse and partial withdrawal rates for each duration. Reasonable grouping of policies can be applied for this purpose, but it would generally not be appropriate to group lapse-supported products with non-lapse-supported products. The Appointed Actuary must carefully assess the aggregate level of PfAD, and ensure that if an approximation is used the results are in compliance with the standards.

With respect to non-fixed income assets under CALM, as outlined in Section 7.3.1.2 of the Life SOP, the expected rate of returns would not exceed appropriate long-term average historical returns. As outlined in Section 7.3.2.2, the margin for adverse deviations should include a 20% reduction to the capital growth rate of this long-term return, as well as allowance for a drop in the value of the investments of 25% to 40%, where 30% is intended to be applicable to a diversified North American common stock portfolio.

December 2000 Life SOP - Accounting Impact

In consultation with the CICA, CLIFR's view is that, in general, the effects of the change from the existing Standards of Practice to the Life SOP (often referred to as the change from PPM to CALM) should be categorized as a change in accounting estimate rather than a change in accounting policy. The CALM is an extension of the methodology employed in the old standard. Changes in policy liabilities that result from changes in accounting estimates should be reflected in operating income for 2001.

CLIFR has identified one principal area where changes resulting from the application of CALM would be categorized as a change in accounting method. This is in the area of segregated fund valuation, where there was no prior guidance. In this instance, there may be a significant change in practice for those life insurers that have recognized future revenues in excess of future expenses on segregated funds, but are no longer allowed to do so. The CICA has written an article for accountants that communicates a consistent position [www.cica.ca/cica/cicaweb/site/asp/public/e_acsbpdf2001/\\$file/e_AcSBarticle.pdf](http://www.cica.ca/cica/cicaweb/site/asp/public/e_acsbpdf2001/$file/e_AcSBarticle.pdf). The Appointed Actuary is encouraged to discuss such situations where there may be a change in methodology with the company's accountants and auditor as it may be appropriate to report this change as a change in accounting policy that is not reflected in operating income, but is instead accounted for as a non-recurring adjustment of surplus.

Compliance with Standards of Practice

CALM is a theoretically rigorous method but the calculations required are complex to implement. OSFI has asked CLIFR to provide guidance to Appointed Actuaries on the degree to which valuation methods implemented must rigorously use the CALM methodology.

CLIFR would like to emphasize that compliance with the "spirit and intent" of standards is not sufficient if the result does not materially reproduce an exact application of CALM.

Any implementation that is not an exact application of CALM is an approximation. While approximations are permitted, CLIFR wishes to remind Appointed Actuaries that there are standards regarding approximations that must be followed, mainly that:

- results of approximations must materially reproduce the exact method; and
- the Appointed Actuary must be able to demonstrate that sound analysis has been performed in judging materiality.

Materiality of sensitivity of approximation(s) should determine the frequency with which such analysis should be performed. CLIFR believes key approximations to CALM should be assessed for each key reporting date. Other approximations to CALM should be assessed at least annually. This assessment can be done off-cycle, which is in advance of the reporting date so approximations can be appropriately calibrated.

In particular, approximations to interest rate risk testing (and other scenario-tested variables) should be assessed for each key reporting date unless the Appointed Actuary can clearly demonstrate non-materiality or non-sensitivity. Also, approximations to using an explicit cash roll forward from an explicit asset portfolio should generally be assessed for each key reporting date (e.g., discount rate approach) unless the Appointed Actuary can clearly demonstrate non-materiality or non-sensitivity.

Grouping of In Force for Application of CALM

The Canadian Asset Liability Method is naturally applied on an “Aggregate” basis rather than on a seriatim basis. The December 2000 Life SOP provides no guidance to Appointed Actuaries on how grouping or segmentation of the business should be done in order to apply CALM.

CLIFR feels that the issue is addressed in the CSOP discussion draft:

“The actuary would usually apply the Canadian Asset Liability Method to policies in groups which reflect the insurer’s asset-liability management practice for allocation of assets to liabilities and investment strategy. That application is a convenience, however, which would not militate against calculation of policy liabilities which, in the aggregate, reflect the risks to which the insurer is exposed.”

The provision for interest risk should be appropriate for the insurer as a whole. Where material, interest rate scenarios should be consistent across any asset/liability portfolios that are being tested independently. However, the Appointed Actuary should be cautious when determining the amount of provision for interest risk. The Appointed Actuary should ensure that the potential synergies (C-3 offset from one line of business to another) are real and persisting and not simply a transitory result.

While policy level allocation of actuarial liabilities may not be required for compliance with the Life SOP for determination of actuarial liabilities under Canadian GAAP, such allocation will likely be required for other purposes like determining future tax cash flows, current tax reserves, or MCCR calculation. Where such an allocation is required, the Appointed Actuary should develop and document a reasonable methodology for allocating the actuarial liabilities to individual policies or groups of policies that is consistent with the overall valuation method followed.

Regulators have indicated that their 2001 memorandums to the Appointed Actuary will provide guidance to the issue of policy level allocation.

Treatment of Non-Fixed Income Assets Backing Liabilities

In recent years, there has been increased use of non-fixed income assets by life insurers to support life insurance liabilities. The Prescribed Scenarios Section in the Life SOP (Section 6.3.1) does not generally anticipate this use of non-fixed income assets. An issue that has been raised is whether all trading of non-fixed income assets should be interpreted to be reinvestments under Section 6.3.1 of the December 2000 Life SOP, in particular for the restriction that reinvestments in the twentieth and later years are limited to risk-free normal coupon paying bonds.

In CLIFR's view, trades that replace non-fixed income assets with other non-fixed income assets of equal market value need not be treated as reinvestments under Section 6.3.1.

In addition, for a prescribed scenario, if the net cash flow forecasted for a period is positive, CLIFR believes it is reasonable that the Appointed Actuary would assume its reinvestment in debt investments, except that:

- the Appointed Actuary may assume reinvestment, i.e., new investments, in non-debt investments not to exceed their proportion of investments at the valuation date if the insurer controls investment decisions and if such reinvestment is consistent with its investment policy; or
- in the proportion expected to be selected by policyholders if policyholder control investment decisions (e.g., Universal Life type contracts).

Similarly, for a prescribed scenario, if the net cash flow forecasted for a period is negative, CLIFR believes it is reasonable that the Appointed Actuary would assume disinvestment of debt securities, except that:

- For insurer controlled investment decisions, the Appointed Actuary may assume short-term borrowing to cover temporary negative cash flows to the extent it is consistent with the investment policy. For sustained and for temporary negative cashflows not covered by short-term borrowing, disinvestment of non-debt securities should be assumed to the extent necessary to stay within investment policy ranges.
- For policyholder controlled investment decisions, in the proportion expected to be selected by the policyholders.

The limitations outlined above on re-investment in non-debt instruments are intended to apply in situations where reflecting an increased utilization of these instruments will reduce the policy liabilities.

Balance Sheet Allowance for Acquisition Expenses (DAC)

On July 12, 2001, the Practice Standards Council adopted a change to Section 4.9 of the Life SOP, deferral of acquisition expenses. The revised wording of Section 4.9 (www.actuaries.ca/publications/2001/20167e.pdf) of the Life SOP permits incurred acquisition expenses to be held as a negative liability. Previously this wording had explicitly required any such allowance to be held as a DAC asset.

This amendment is in response to a recent concern that there was a potential inconsistency between Section 4.9 of the standard of practice, and the section entitled "Acquisition Expenses" of Accounting Guideline AcG-9. Section 4.9 as previously written stated that any unamortized acquisition expense balance would be presented as an asset account. However, Accounting Guideline AcG-9 is not consistent with this treatment. The revised Section 4.9 of the Life SOP allows the Appointed Actuary to adjust the value of the policy liabilities by holding a negative liability or a DAC asset, if appropriate in the context of the accounting presentation. On August 7, 2001, the CICA task force on insurance agreed to stop its own initiative on how to establish a DAC asset and, accordingly, leave in place the prohibition on DAC Assets in Accounting Guideline AcG-9. However, GAAP does permit any allowance for recovery of acquisition expenses to be held as a negative actuarial liability.

Some companies have been recognizing a DAC asset on segregated fund contracts on the grounds that (i) such contracts are not, in substance, insurance contracts (no material insurance risks) and, therefore, are not subject to Section 4210 and Guideline AcG-9, and (ii) it is logical to recognize DAC to achieve revenue and expense matching (as is done also by mutual fund companies). After discussion with the CIA, the CICA has agreed that segregated fund contracts should be treated as life insurance contracts.

As a transition, for year-end 2001, the CIA and the CICA will allow companies that currently use a DAC asset rather than a negative liability to continue this approach for year-end 2001 only. For 2002 and the future, the only possible treatment will be to set up a negative liability as a balance sheet allowance for acquisition expense.

CLIFR recognizes that this year's guidance borrows heavily from the accounting standards. CLIFR believes it is important to provide guidance with respect to this matter. One objective is consistency with similar provisions established by the accounting profession (e.g., mutual funds).

In CLIFR's view:

For some types of policies, for example Segregated Fund contracts, it may be reasonable to expect the insurer to recover acquisition expenses from revenue that will be received beyond the term of the liabilities. In these cases, the cash flow for a policy may extend beyond the term of its liabilities to recognize cash flow that offsets the remaining non-recovered portion of such acquisition expenses.

However, the result produced by this extension must not result in a more favourable balance sheet position than would result had no acquisition expense been incurred, and no extension of the comprised cash flows beyond the term taken place.

Where such a cash flow extension takes place, normal valuation assumptions would be used to extend the cash flow projection. The Appointed Actuary will need to develop a methodology to establish the amount of acquisition expense to recognize at policy issue, justify its recoverability, and develop a methodology to write the initial negative liability amount up to zero on a systematic basis.

The initial policy liability adjustment (negative liability amount) cannot exceed acquisition expenses. Acquisition expenses are expenses incurred in the acquisition of new and renewal insurance policies and annuity contracts. They include only those expenses that vary with and are primarily related to the acquisition of the policies and contracts (e.g., commissions or commission equivalents, certain underwriting and policy issue expenses, medical fees).

In the future, the insurer will receive fee income (if the contract persists) or may receive surrender fee income (if the contract does not persist). If the projected income exceeds projected future expenses after margins for adverse deviations have been applied then there is clear justification for at least partial and possibly full recoverability. In testing the recoverability of the negative liability amount, the Appointed Actuary should only give consideration to projected net cash inflows beyond the term of the liability. Future net cash inflows that the insurer expects to receive over the term of the liability are already recognized in the valuation of the policy liabilities. The Appointed Actuary must be able to demonstrate that the realization of such future net cash inflows beyond the term of the liability is reasonably assured in order to justify the negative liability amount (i.e., recoverable using normal valuation assumptions, including margins for adverse deviations).

An Appointed Actuary would select a method for writing up the negative liability amount to zero consistent with the company practice. Appropriate practice for the write-up method would be:

- a) accelerated, as in the case of a declining balance method or a “step” pattern that declines with a contractually specified surrender charge;
- b) locked in, so that the amount of amortization will not fluctuate with market changes that may affect the level of annual management or other fees, except to the extent that recoverability is reduced; and
- c) matched with the pattern of net cash inflows on the related contract or group of contracts beyond the term of the liability, as established at inception.

A cost recovery method, by which an enterprise writes up the negative liability amount in amounts sufficient to eliminate any profit amount as they are incurred on the related contracts or groups of contracts in each period, is not appropriate.

The negative liability amount after the inception of the contract is therefore subject to both recoverability justification and a limit equal to the “unamortized” portion of the initial policy liability adjustment, where the pattern of “amortization” is established at inception of the contract.

In addition, a drawdown of the negative reserves that has been charged against income, either through the regular amortization/drawdown of the negative liability amount or because some portion had been deemed irrecoverable, cannot be reinstated.

Income Tax Treatment in the Valuation and Substantively Enacted Tax Rates

Because future income is not generated when business is projected on a valuation assumption basis, tax cash flows in the actuarial valuation reflect only permanent and temporary differences. While Section 7.2.8 of the Life SOP deals with income taxes, CLIFR would like to provide additional guidance in a few areas related to income taxation.

It is CLIFR’s view that when there are beneficial differences (permanent or temporary) for which the Appointed Actuary is relying on a favourable tax interpretation, the Appointed Actuary should take into consideration the risk of a successful adverse interpretation by the tax authorities (potential “limited shelf life”) in testing for recoverability.

To determine temporary and permanent tax timing differences to be reflected in the valuation, the Appointed Actuary must set best estimate future income tax rates. Section 3465 of the CICA Handbook states that income tax rates should be “enacted” or “substantively enacted” to be considered in the calculation of income tax assets or income tax liabilities. In last year’s Guidance Letter, CLIFR expressed that this is a reasonable criterion to use in determining whether to recognize future changes in income tax rates in the valuation of policy liabilities. That guidance is repeated for this year.

The May 2001 discussion draft of the Consolidated Standards of Practice – Practice Specific Standards for Insurer indicates that, for taxation, the best estimate should anticipate a “definitive or virtually definitive” decision to change the tax regime at the balance sheet date. With respect to income tax rates, CLIFR would not expect the CICA’s “enacted or substantively enacted” criterion to be different from the CIA’s proposed criterion.

Valuation of Segregated Fund Investment Guarantees

For valuation of the general account liability associated with segregated fund guarantees, CLIFR believes that establishing the liability for the guarantee element using stochastic techniques represents appropriate actuarial practice.

CLIFR believes that the Appointed Actuary applying stochastic techniques to value segregated fund guarantees should review the following two papers, “Use of Stochastic Techniques to Value Liabilities under Canadian GAAP” (July 2001) and “Report: CIA Task Force on Segregated Fund Investment Guarantees” (August 2000). These papers have research paper status and, therefore, do not represent standards of practice or Illustrations/Expansions of standards of practice. CLIFR believes that these documents are, nonetheless, a useful reference in the application of stochastic techniques in a Canadian GAAP valuation environment.

CLIFR does have the following specific recommendations for appropriate practice in applying stochastic techniques to value segregated fund guarantees:

- (a) The investment return model used to generate the investment return paths should follow the criteria and methodology laid out in Section 2.1 (Investment Return Models) of the above referenced August 2000 task force report;
- (b) Any modelling of hedges or other risk mitigation strategies should follow Section 2.3 (Modelling of Hedges) of the above mentioned August 2000 task force report;
- (c) The methodology to establish the PFAD for investment return risk should follow the CTE (Conditional Tail Expectation) approach described in both the above referenced papers. The appropriate range for the result is CTE(60) to CTE(90);
- (d) In determining the amount of unitized fee income available as revenue to offset the benefit expenses in the stochastic projection, the criteria laid out in Section 3.3.5 of the August 2000 task force report should be followed;
- (e) Unless there is clear intent and commitment to change, future total unitized revenues (management expense ratios) and the insurer’s risk management strategies (do nothing, reinsure, hedge) should remain the same as those applicable on the valuation date;
- (f) Future deposits should be increased at a reasonable level whenever future deposits materially increase the risk (e.g., fixed maturity date contracts where subsequent deposits are fully guaranteed over a period of less than 10 years);
- (g) Unless the Appointed Actuary has reliable experience to indicate otherwise, where elective resets of the guaranteed amount are available, not less than 75% of the cohort of policyholders eligible to reset should be assumed to reset each year where such a reset would cause a material increase in the guaranteed amount. A material increase in the guaranteed amount would be 15% or greater;
- (h) For contracts where a higher termination assumption reduces the net cost of the guaranteed benefits (i.e., after reflecting available margins to offset costs), unless the Appointed Actuary has reliable experience (i.e., credible and pertinent, such as experience on products with similar guarantees) to indicate otherwise, surrenders/lapses/withdrawals should not exceed a maximum rate of 8% per year at any duration. This 8% excludes any regular income withdrawals under payout features explicitly incorporated into the products (e.g., RRIF contracts income payouts);
- (i) The projection period should extend to contract maturity, including the impact of renewals (automatic resets) and voluntary resets;
- (j) The analysis should be done on a seriatim basis or on a basis that groups policies into cohorts having similar profiles with respect to nature of guarantee, time to maturity/expiry of the guarantee, and relationship of the starting unit value to the guaranteed unit value.

Once a liability for the segregated fund guarantee component of a policy/block of policies has been determined, the result should then be integrated with the valuation performed for the other elements of the policy/block of policies.

CLIFR recognizes that there may be situations where the exposure to this risk is immaterial and a simpler approach is warranted. In such circumstances, CLIFR recommends determining the policy liability for this risk by taking percentages of the total balance sheet requirement (TBSR) resulting from the application of the OSFI TBSR requirements for MCCSR (i.e., actuarial liability = $F \times$ calculated TBSR requirement).

The factor F varies as follows by type of Benefit and Fund Category and, therefore, requires this split of the TBSR. The result is intended to correspond to approximately a CTE(80) result assuming conservative MV/GV ratios for each Fund Category.

Guaranteed Minimum Death Benefits	$F = 0.65$ (all fund types)
Guaranteed Minimum Maturity Benefits	$F = 0.60$ (Money market)
	$F = 0.25$ (bond)
	$F = 0.30$ (balanced)
	$F = 0.50$ (diversified equity)
	$F = 0.55$ (intermediate equity)
	$F = 0.60$ (aggressive equity)

Broader Application of Stochastic Techniques

Section 6.4.7 of the Life SOP introduces stochastic methods as a valuation approach that can be applied to establish actuarial liabilities under GAAP, suggesting explicitly that “stochastic techniques may be appropriate for product features where there is a high degree of skewness of the associated cost distribution compared to the distribution of the underlying valuation assumption.” However, the Life SOP itself does not give any guidance on how to apply these techniques. Consistent with the guidance provided above on segregated fund guarantees, CLIFR believes the Appointed Actuary applying such techniques beyond segregated fund guarantees should review the papers “Use of Stochastic Techniques to Value Liabilities under GAAP” (July 2001) and “Report of the Task Force on Segregated Fund Investment Guarantees” (August 2000). While these papers are useful references, CLIFR would like to remind Appointed Actuaries that these papers have research paper status and, therefore, do not represent standards of practice or Illustrations/Expansions of standards of practice.

Term of the Liability

While Section 4.10 of the Life SOP addresses term of the liability for group contracts, it does not offer specific guidance as to appropriate practice in the situation where there are premium rate concessions beyond the next renewal date.

With respect to group life and health insurance, if the insurer has effectively granted premium rate concessions beyond the next premium renewal date, than the Appointed Actuary should consider extending the term of the liability used for valuation purposes. If the term of the liabilities is not evident, and if selection of a longer term would reduce policy liabilities, then the Appointed Actuary would be cautious in making such a selection. On the other hand, if selection of a longer term would increase those liabilities, then the Appointed Actuary would usually select the longer term.

Critical Illness

Critical Illness (CI) is a product of relatively recent origin in Canada. CI typically pays a face amount benefit based on the diagnosis of certain conditions like cancer, heart attack, stroke, and multiple sclerosis. Premiums are typically fully guaranteed and non-cancellable for the duration of the contract. CI can be issued on an acceleration basis (attached to a life policy, with death benefits being partially advanced on occurrence of a covered condition) or on a stand-alone basis. The latter is the most prevalent in Canada and the remaining discussion will refer to those types of policies only.

In the UK, where these products have been available for a number of years, CLIFR has learned that industry claims experience in the early years is worse than expected. Possible explanations for the increased claims include new diagnostic techniques that are quickly evolving and medical tests that are able to detect incidences of morbidity that were not detectable as recently as two years ago, as well as changing standards for definitions of heart attacks in the medical community. In addition, there is some evidence of anti-selection from the policyholders.

Appointed Actuaries should consequently pay particular attention when establishing the expected claims assumptions. Factors to consider are the level and quality of underwriting performed and the definition of insured events, as well as careful monitoring of emerging experience.

The Appointed Actuary may wish to rely on the experience of other countries, but caution should be exercised. It is important to recognize differences (local or otherwise) among countries when using foreign experience studies. The Appointed Actuary should also be familiar with the underwriting standards and definitions of insured events used to create such experience studies.

The Appointed Actuary should ensure that appropriate margins for adverse deviations are being used for these types of contracts. The level of the MAD should take into consideration the many risks factors associated with these types of contracts (medical advances, earlier detection, guaranteed non-cancellable premiums, medical changes in definition of heart attack, limited experience available).

Expected Mortality and Future Mortality Improvements

Section 7.2.1 of the Life SOP prescribes no mortality improvement for insurance products with respect to the expected mortality assumption beyond the valuation date. CLIFR would like to clarify that the Life SOP similarly does not allow for a lower margin for adverse deviations based on expectation of future mortality improvements.

The above guidance is meant to apply to situations where mortality improvements would decrease the policy liabilities.

With regard to death-supported policies, future mortality improvements would increase the actuarial policy liabilities. CLIFR's view is that even in this situation, the expected mortality assumption for insurance products beyond the valuation date should still assume no mortality improvement.

However, the Appointed Actuary should make an allowance for future mortality improvement on death-supported business by increasing the PfAD, if appropriate to the circumstances of the company. The Appointed Actuary should ensure that the company's mortality PfAD is appropriate in aggregate.

Preferred Underwriting

CLIFR is currently developing an educational note to provide guidance on issues impacting the determination of expected mortality assumptions in the valuation. In the absence of completion of this note, we continue to remind Appointed Actuaries to review carefully and understand fully how recent moves to preferred underwriting and improved underwriting techniques (e.g., blood testing) are being reflected in the expected mortality assumption being used. With respect to preferred underwriting, CLIFR offers the following guidance:

It is reasonable to assume that mortality rates for preferred and non-preferred risks would revert over time towards overall standard regular underwriting mortality rates, with perhaps some residual differential (both positive and negative). In the absence of reliable experience, CLIFR recommends that the Appointed Actuary use caution in the length of time that the effects of preferred underwriting are expected to persist. It would be reasonable to assume that the effects of preferred underwriting wear off by the end of 15 years. In determining the run-off pattern, CLIFR recommends that the effects of preferred underwriting be assumed to wear off linearly between the last duration for which the insurer has reliable experience and the duration at which the effects are expected to completely wear off.

We continue to recommend that the margin for adverse deviations be at least as high as the average of the low and high margins. CLIFR also notes that the margin for adverse deviations would normally be higher than the margin for adverse deviations applied to the standard regular underwriting mortality assumption for the 15-year period during which the preferred mortality effects are present.

However, because there may be some residual effects of preferred underwriting that remain after 15 years, the assumption that the effects of preferred underwriting fully wear off over 15 years may lead to an inadequate mortality assumption for insurers whose emerging mix of business is more heavily weighted to classes with higher mortality than the standard regular underwritten mortality. Therefore, it may be appropriate that the higher margin for adverse deviations on preferred underwriting business continue to apply after 15 years.

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APPENDIX A

The “Standards of Practice for the Valuation of Policy Liabilities of Life Insurers”, distributed to the membership on December 20, 2000, replaces the following present standards, including amendments to these standards, as of October 1, 2001.

- **Life Only**

Recommendation for Life Insurance Company Financial Reporting – Parts 3 and 4, including explanatory notes

Valuation Technique Paper No. 1 – The Valuation of Lapse Supported Products (June 1985)

Valuation Technique Paper No. 2 – The Valuation of Individual Renewable Term Insurance (September 1986)

Valuation Technique Paper No. 3 – Future Cash Flow Investment Assumption for Ordinary Life Insurance Valuation (August 1989)

Valuation Technique Paper No. 4 – Valuation of Reinsured Policies (August 1989)

Valuation Technique Paper No. 5 – Valuation of Adjustable Products (August 1989)

Valuation Technique Paper No. 6 – Expected Mortality Experience for Individual Insurance (March 1989)

Provision for Adverse Deviations (November 1989)

Valuation Technique Paper No. 8 – Reserving for AIDS (December 1991)

Valuation Technique Paper No. 9 – Valuation of Single Premium Annuities (December 1993)

Valuation Technique Paper No. 10 – Valuation of Participating Policy Liabilities (September 1996)

Valuation Technique Paper No. 11 – Valuation of Universal Life Policy Liabilities (December 1999)

As well, the status of the following papers is reduced to Research Paper (i.e., general actuarial literature) status:

Valuation Technique Paper No. 12 – Valuation of Individual Accident and Sickness Insurance Issued By Life Insurers

Valuation Technique Paper No. 13 – Accident and Sickness Insurance Expected Experience

Valuation Technique Paper No. 14 – Valuation of Life Insurer Incurred Claim Liabilities

Educational Note – Valuation of Group Life and Health Policy Liabilities

Educational Note – C-1 Risk