2711.0240 DESCRIPTION OF ACTUARIAL MEMORANDUM INCLUDING AN ASSET ADEQUACY ANALYSIS AND REGULATORY ASSET ADEQUACY ISSUES SUMMARY.

Subpart 1. **Generally.**

A. In accordance with Minnesota Statutes, section 61A.25, subdivision 2a, the appointed actuary shall prepare a memorandum to the company describing the analysis done in support of the actuary's opinion regarding the reserves. The memorandum must be made available for examination by the commissioner upon request but must be returned to the company after examination and must not be considered a record of the Department of Commerce or subject to automatic filing with the commissioner.

B. In preparing the memorandum, the appointed actuary may rely on, and include as a part of the actuary's own memorandum, memoranda prepared and signed by other actuaries who are qualified within the meaning of part 2711.0220, subpart 2, with respect to the areas covered in such memoranda, and so state in the memoranda.

C. If the commissioner requests a memorandum and no memorandum exists or if the commissioner finds that the analysis described in the memorandum fails to meet the standards of the Actuarial Standards Board or the standards and requirements of this chapter, the commissioner may designate a qualified actuary to review the opinion and prepare such supporting memorandum as is required for review. The reasonable and necessary expense of the independent review must be paid by the company but must be directed and controlled by the commissioner.

D. The reviewing actuary has the same status as an examiner for purposes of obtaining data from the company and the work papers and documentation of the reviewing actuary must be retained by the commissioner; provided, however, that any information provided by the company to the reviewing actuary and included in the work papers is considered material provided by the company to the commissioner and must be kept confidential to the same extent as is prescribed by law with respect to other material provided by the company to the commissioner pursuant to the statutes governing this chapter. The reviewing actuary must not be an employee of a consulting firm involved with the preparation of any prior memorandum or opinion for the insurer pursuant to this chapter for any one of the current year or the preceding three years.

E. In accordance with Minnesota Statutes, section 61A.25, subdivision 2a, the appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in subpart 3. The regulatory asset adequacy issues summary must be submitted no later than March 15 of the year following the year for which a Statement of Actuarial Opinion based on asset adequacy is required. The regulatory asset adequacy issues summary is to be kept confidential to the same extent and under the same conditions as the actuarial memorandum.

Subp. 2. **Details of the memorandum section documenting asset adequacy analysis.** When an actuarial opinion is provided, the memorandum must demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in part 2711.0220, subpart 4, and any additional standards under this chapter. It must specify:

A. for reserves:

(1) product descriptions including market description, underwriting, and other aspects of a risk profile and the specific risks the appointed actuary deems significant;

(2) source of liability in force;

(3) reserve method and basis;

(4) investment reserves;

(5) reinsurance arrangements;

(6) identification of any explicit or implied guarantees made by the general account in support of benefits provided through a separate account or under a separate account policy or contract and the methods used by the appointed actuary to provide for the guarantees in the asset adequacy analysis; and

(7) documentation of assumptions to test reserves for the following:

(a) lapse rates, both base and excess;

(b) interest crediting rate strategy;

(c) mortality;

(d) policyholder dividend strategy;

(e) competitor or market interest rate;

(f) annuitization rates;

(g) commissions and expenses; and

(h) morbidity.

The documentation of the assumptions must be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions;

B. for assets:

(1) portfolio descriptions, including a risk profile disclosing the quality, distribution, and types of assets;

(2) investment and disinvestment assumptions;

(3) source of asset data;

(4) asset valuation bases; and

(5) documentation of assumptions made for:

(a) default costs;

(b) bond call function;

(c) mortgage prepayment function;

(d) determining market value for assets sold due to disinvestment strategy; and

(e) determining yield on assets acquired through the investment strategy.

The documentation of the assumptions must be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions;

C. for the analysis basis:

(1) methodology;

(2) rationale for inclusion or exclusion of different blocks of business and how pertinent risks were analyzed;

(3) rationale for degree of rigor in analyzing different blocks of business (include in the rationale the level of "materiality" that was used in determining how rigorously to analyze different blocks of business);

(4) criteria for determining asset adequacy (include in the criteria the precise basis for determining if assets are adequate to cover reserves under "moderately adverse conditions" or other conditions as specified in relevant actuarial standards of practice); and

(5) whether the impact of federal income taxes was considered and the method of treating reinsurance in the asset adequacy analysis;

D. summary of material changes in methods, procedures, or assumptions from prior year's asset adequacy analysis;

E. summary of results; and

F. conclusions.

Subp. 3. **Details of the regulatory asset adequacy issues summary.**

A. The regulatory asset adequacy issues summary must include:

(1) descriptions of the scenarios tested, including whether those scenarios are stochastic or deterministic, and the sensitivity testing done relative to those scenarios. If negative ending surplus results under certain tests in the aggregate, the actuary should describe those tests and the amount of additional reserve as of the valuation date which, if

held, would eliminate the negative aggregate surplus values. Ending surplus values must be determined by either extending the projection period until the in-force and associated assets and liabilities at the end of the projection period are immaterial or by adjusting the surplus amount at the end of the projection period by an amount that appropriately estimates the value that can reasonably be expected to arise from the assets and liabilities remaining in force;

(2) the extent to which the appointed actuary uses assumptions in the asset adequacy analysis that are materially different than the assumptions used in the previous asset adequacy analysis;

(3) the amount of reserves and the identity of the product lines that had been subjected to asset adequacy analysis in the prior opinion but were not subject to analysis for the current opinion;

(4) comments on any interim results that may be of significant concern to the appointed actuary. For example, the impact of the insufficiency of assets to support the payment of benefits and expenses and the establishment of statutory reserves during one or more interim periods;

(5) the methods used by the actuary to recognize the impact of reinsurance on the company's cash flows, including both assets and liabilities, under each of the scenarios tested; and

(6) whether the actuary has been satisfied that all options, whether explicit or embedded, in any asset or liability, including but not limited to those affecting cash flows embedded in fixed income securities, and equity-like features in any investments have been appropriately considered in the asset adequacy analysis.

B. The regulatory asset adequacy issues summary must contain the name of the company for which the regulatory asset adequacy issues summary is being supplied and must be signed and dated by the appointed actuary rendering the actuarial opinion.

Subp. 4. **Conformity to standards of practice.** The memorandum must include a statement:

> "Actuarial methods, considerations, and analyses used in the preparation of this memorandum conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis for this memorandum."

Subp. 5. **Use of assets supporting interest maintenance reserve and asset valuation reserve.** An appropriate allocation of assets in the amount of the interest maintenance reserve (IMR), whether positive or negative, shall be used in any asset adequacy analysis. Analysis of risks regarding asset default may include an appropriate allocation of assets supporting the asset valuation reserve (AVR). The AVR assets may not be applied for any other risks with respect to reserve adequacy. Analysis of these and other risks may include assets supporting other mandatory or voluntary reserves available to the extent not used for risk analysis and reserve support.

The amount of the assets used for the AVR must be disclosed in the table of reserves and liabilities of the opinion and in the memorandum. The method used for selecting particular assets or allocated portions of assets must be disclosed in the memorandum.

Subp. 6. **Required interest scenarios.** For the purpose of performing the asset adequacy analysis required by this chapter, the qualified actuary shall follow standards adopted by the Actuarial Standards Board; nevertheless, the appointed actuary must consider in the analysis the effect of at least the following interest rate scenarios:

A. level with no deviation;

B. uniformly increasing over ten years at one-half percent per year and then level;

C. uniformly increasing at one percent per year over five years and then uniformly decreasing at one percent per year to the original level at the end of ten years and then level;

D. an immediate increase of three percent and then level;

E. uniformly decreasing over ten years at one-half percent per year and then level;

F. uniformly decreasing at one percent per year over five years and then uniformly increasing at one percent per year to the original level at the end of ten years and then level; and

G. an immediate decrease of three percent and then level.

For these and other scenarios which may be used, projected interest rates for a five-year treasury note need not be reduced beyond the point where such five-year treasury note yield would be at 50 percent of its initial level.

The beginning interest rates may be based on interest rates for new investments as of the valuation date similar to recent investments allocated to support the product being tested or be based on an outside index, such as treasury yields, of assets of the appropriate length on a date close to the valuation date. Whatever method is used to determine the beginning yield curve and associated interest rates should be specifically defined. The beginning yield curve and associated interest rates should be consistent for all interest rate scenarios.

Subp. 7. **Documentation.** The appointed actuary shall retain on file, for at least seven years, sufficient documentation so that it will be possible to determine the procedures followed, the analyses performed, the bases for assumptions, and the results obtained.

Statutory Authority: *MS s 45.023; 61A.25*

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