

11 NCAC 11F .0307**ACTUARIAL MEMORANDUM WITH ASSET ADEQUACY ANALYSIS**

(a) General:

- (1) In accordance with G.S. 58-58-50(i) and (j), the appointed actuary shall prepare a memorandum to the company describing the analysis done in support of his or her opinion regarding the reserves under an opinion prescribed by Rule .0306 of this Section. The memorandum shall be made available for examination by the Commissioner upon request and shall be returned to the company after the examination and shall not be subject to automatic filing with the Commissioner.
- (2) In preparing the memorandum, the appointed actuary may rely on, and include as a part of his or her own memorandum, memoranda prepared and signed by other actuaries who are qualified within the meaning of Rule .0303(b) of this Section, with respect to the areas covered in such memoranda, and so state in their memoranda.
- (3) If the Commissioner requests a memorandum and no such memorandum exists or if the Commissioner finds that the analysis described in the memorandum fails to meet the standards of the Board or the standards and requirements of this Section, the Commissioner shall 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 shall be paid by the company but shall be directed and controlled by the Commissioner.
- (4) The reviewing actuary shall have the same status as an examiner for purposes of obtaining data from the company and the work papers and documentation of the reviewing actuary shall be retained by the Commissioner; provided, however, that any information provided by the company to the reviewing actuary and included in the work papers shall be considered as material provided by the company to the Commissioner and shall be kept confidential to the same extent as is prescribed by law with respect to other material provided by the company to the Commissioner under G.S. 58-58-50(j). The reviewing actuary shall not be an employee of a consulting firm involved with the preparation of any prior memorandum or opinion for the company under this Section for any one of the current year or the preceding three years.
- (5) In accordance with G.S. 58-58-50(j), the appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in Paragraph (c) of this Rule. The regulatory asset adequacy issues summary shall 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 shall be kept confidential to the same extent and under the same conditions as the actuarial memorandum.

(b) When an actuarial opinion under Rule .0306 of this Section is provided, the memorandum shall demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in Rule .0303(d) of this Section and any additional standards under this Section. It shall specify:

- (1) For reserves:
 - (A) Product descriptions, including market description, underwriting, and other aspects of a risk profile, and the specific risks the appointed actuary deems to be significant;
 - (B) Source of liability in force;
 - (C) Reserve method and basis;
 - (D) Investment reserves;
 - (E) Reinsurance arrangements;
 - (F) 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;
 - (G) Documentation of assumptions to test reserves for the following:
 - (i) Lapse rates (both base and excess);
 - (ii) Interest crediting rate strategy;
 - (iii) Mortality;
 - (iv) Policyholder dividend strategy;
 - (v) Competitor or market interest rate;
 - (vi) Annuitization rates;
 - (vii) Commissions and expenses; and
 - (viii) Morbidity.

- The documentation of assumptions shall be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions.
- (2) For assets:
- (A) Portfolio descriptions, including a risk profile disclosing the quality, distribution, and types of assets;
 - (B) Investment and disinvestment assumptions;
 - (C) Source of asset data;
 - (D) Asset valuation bases; and
 - (E) Documentation of assumptions made for:
 - (i) Default costs;
 - (ii) Bond call function;
 - (iii) Mortgage prepayment function;
 - (iv) Determining market value for assets sold due to disinvestment strategy; and
 - (v) Determining yield on assets acquired through the investment strategy.
- The documentation of the assumptions shall be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions.
- (3) For the analysis basis:
- (A) Methodology;
 - (B) Rationale for inclusion or exclusion of different blocks of business and how pertinent risks were analyzed;
 - (C) Rationale for degree of rigor in analyzing different blocks of business (including in the rationale the level of "materiality" that was used in determining how rigorously to analyze different blocks of business);
 - (D) Criteria for determining asset adequacy (including 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
 - (E) Effect of federal income taxes, reinsurance, and other actuarially or financially relevant factors.
- (4) Summary of any changes in methods, procedures, or assumptions from the prior year's asset adequacy analysis which the appointed actuary considers to be material.
- (5) Summary of results.
- (6) Conclusions.
- (c) The regulatory asset adequacy issues summary shall 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 any tests in the aggregate, the actuary shall describe those tests and the amount of additional reserve as of the valuation date that, if held, would eliminate the negative aggregate surplus values. Ending surplus values shall 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 considered by the appointed actuary to be 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 considered by the appointed actuary to be 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 concern to the appointed actuary, such as the effect 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 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.
- (d) The regulatory asset adequacy issues summary shall contain the name of the company for which the regulatory asset adequacy issues summary is being supplied, and shall be signed and dated by the appointed actuary rendering the actuarial opinion.
- (e) The memorandum shall 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."
- (f) 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); these 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 shall 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 shall be disclosed in the memorandum.
- (g) The appointed actuary shall retain on file, for at least seven years, all documentation necessary to determine the procedures followed, the analyses performed, the bases for the assumptions, and the results obtained.

History Note: Authority G.S. 58-2-40; 58-58-50(i); 58-58-50(j);

Eff. December 1, 1994;

Amended Eff. March 1, 2010; August 1, 2004;

Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.