

**TABLE OF CONTENTS**

**Connecticut Standard Valuation Law  
Actuarial Opinion and Memorandum**

Purpose . . . . . 38a-78- 1

Authority . . . . . 38a-78- 2

Applicability and scope . . . . . 38a-78- 3

Definitions . . . . . 38a-78- 4

General requirements. . . . . 38a-78- 5

Repealed . . . . . 38a-78- 6

Statement of actuarial opinion based on an asset adequacy analysis. . 38a-78- 7

Repealed . . . . . 38a-78- 8

Description of an actuarial memorandum including an asset adequacy  
analysis and a regulatory asset adequacy issues summary. . . . . 38a-78- 9

Repealed . . . . . 38a-78-10

**Connecticut Standard Valuation Law  
Actuarial Opinion and Memorandum**

**Sec. 38a-78-1. Purpose**

The purpose of sections 38a-78-1 to 38a-78-9, inclusive, of the Regulations of Connecticut State Agencies is to prescribe:

(a) requirements for statements of actuarial opinion that are to be submitted in accordance with subsection (b) of section 38a-78 of the Standard Valuation Law, and for memoranda in support thereof;

(b) rules applicable to the appointment of an appointed actuary; and

(c) guidance as to the meaning of “adequacy of reserves”.

(Effective September 28, 1993; amended December 23, 2008)

**Sec. 38a-78-2. Authority**

This regulation is promulgated pursuant to the authority vested in the insurance commissioner of the State of Connecticut under sections 38a-78 (b), 38a-(8)(c) and 38a-614(9) of the Connecticut General Statutes.

(Effective September 28, 1993; amended December 23, 2008)

**Sec. 38a-78-3. Applicability and scope**

Sections 38a-78-1 to 38a-78-9, inclusive, of the Regulations of Connecticut State Agencies shall apply to all life insurance companies and fraternal benefit societies doing business in this state and to all life insurance companies and fraternal benefit societies which are authorized to reinsure life insurance, annuities or accident and health insurance business in this state. Sections 38a-78-1 to 38a-78-9, inclusive, of the Regulations of Connecticut State Agencies shall be applied in a manner which allows the appointed actuary to utilize his or her professional judgment in performing the asset adequacy analysis and developing the actuarial opinion and supporting memoranda, consistent with relevant actuarial standards of practice. However, the commissioner shall have the authority to specify specific methods of actuarial analysis and actuarial assumptions when, in the commissioner’s judgment, these specifications are necessary for an acceptable opinion to be rendered relevant to the adequacy of reserves and related items. Sections 38a-78-1 to 38a-78-9, inclusive, of the Regulations of Connecticut State Agencies shall be applicable to all annual statements filed with the commissioner for the year 2009 and thereafter. A statement of opinion on the adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with section 38a-78-7 of the Regulations of Connecticut State Agencies, and a memorandum in support thereof in accordance with section 38a-78-9 of the Regulations of Connecticut State Agencies, shall be required each year.

(Effective September 28, 1993; amended December 23, 2008)

**Sec. 38a-78-4. Definitions**

As used in sections 38a-78-1 to 38a-78-9, inclusive of the Regulations of Connecticut State Agencies:

(a) “Actuarial Opinion” means the opinion of an appointed actuary regarding the adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with Section 38a-78-7 of these regulations and with applicable Actuarial Standards of Practice.

(b) “Actuarial Standards Board” means the board established by the American Academy of Actuaries to develop and promulgate standards of actuarial practice.

(c) "Annual Statement" means that statement required by Section 38a-53 of the Connecticut General Statutes to be filed by the company with the commissioner annually.

(d) "Appointed Actuary" means any individual who is appointed or retained in accordance with the requirements set forth in subsection (c) of section 38a-78-5 of the Regulations of Connecticut State Agencies to provide the actuarial opinion and supporting memorandum as required by subsection (b) of section 38a-78 of the Standard Valuation Law.

(e) "Asset Adequacy Analysis" means an analysis that meets the standards and other requirements referred to in subsection (d) of section 38a-78-5 of the Regulations of Connecticut State Agencies.

(f) "Commissioner" means the insurance commissioner of the State of Connecticut.

(g) "Company" means a life insurance company, fraternal benefit society or reinsurer subject to the provisions of these regulations.

(h) "NAIC" means the National Association of Insurance Commissioners.

(i) "Qualified Actuary" means any individual who meets the requirements set forth in subsection (b) of section 38a-78-5 of the Regulations of Connecticut State Agencies.

(j) "Standard Valuation Law" means sections 38a-77 and 38a-78 of the Connecticut General Statutes.

(Effective September 28, 1993; amended December 23, 2008)

### Sec. 38a-78-5. General requirements

(a) **Submission of Statement of Actuarial Opinion.** (1) There is to be included on or attached to page 1 of the annual statement for each year beginning with the year in which this regulation becomes effective the statement of an appointed actuary, entitled "Statement of Actuarial Opinion," setting forth an opinion relating to reserves and related actuarial items held in support of policies and contracts, in accordance with section 38a-78-7 of the Regulations of Connecticut State Agencies.

In the case of a statement of actuarial opinion required to be submitted by a foreign or alien company, the commissioner may accept the statement of actuarial opinion filed by such company with the insurance supervisory regulator of another state if the commissioner determines that such opinion reasonably meets the requirements applicable to a company domiciled in this state.

(2) Upon written request by the company, the commissioner may grant an extension of the date for submission of the statement of actuarial opinion.

(b) **Qualified Actuary.** A "qualified actuary" is an individual who:

(1) is a member in good standing of the American Academy of Actuaries;

(2) is qualified to sign statements of actuarial opinion for life and health insurance company annual statements in accordance with the American Academy of Actuaries qualification standards for actuaries signing such statements;

(3) is familiar with the valuation requirements applicable to life and health insurance companies;

(4) has not been found by the commissioner (or if so found has subsequently been reinstated as a qualified actuary), following appropriate notice and hearing to have:

(A) violated any provision of, or any obligation imposed by, the insurance law or other law in the course of his or her dealings as a qualified actuary;

(B) been found guilty of fraudulent or dishonest practices;

(C) demonstrated his or her incompetency, lack of cooperation, or untrustworthiness to act as a qualified actuary;

(D) submitted to the commissioner during the past five years, pursuant to this regulation, an actuarial opinion or memorandum that the commissioner rejected because it did not meet the provisions of this regulation including standards set by the Actuarial Standards Board; or

(E) resigned or been removed as an appointed actuary within the past five years as a result of acts or omissions indicated in any adverse report on examination or as a result of failure to adhere to generally acceptable actuarial standards; and

(5) has not failed to notify the commissioner of any action taken by any insurance commissioner of any other state similar to that under subdivision (4) of this subsection.

(c) **Appointed Actuary.** An "appointed actuary" is a qualified actuary who is appointed or retained to prepare the Statement of Actuarial Opinion required by this regulation, either directly by or by the authority of the board of directors through an executive officer of the company other than the qualified actuary. The company shall give the commissioner timely written notice of the name, title (and, in the case of a consulting actuary, the name of the firm) and manner of appointment or retention of each person appointed or retained by the company as an appointed actuary and shall state in such notice that such person meets the requirements set forth in subdivision (b) of this section. Once notice is furnished, no further notice is required with respect to this person, provided that the company shall give the commissioner timely written notice in the event the actuary ceases to be appointed or retained as an appointed actuary or to meet the requirements set forth in subdivision (b) of this section. If any person appointed or retained as an appointed actuary replaces a previously appointed actuary, the notice shall so state and give the reasons for replacement. An actuary nominated to replace an appointed actuary should consult the previous appointed actuary to determine whether reason exists to decline the appointment. If reason exists to decline the appointment, the source of conflict should be resolved, or the appointment declined.

(d) **Standards for Asset Adequacy Analysis.** The asset adequacy analysis required by this Regulation of the Connecticut State Agencies:

(1) shall conform to the standards of practice as promulgated from time to time by the Actuarial Standards Board and to any additional standards under this Regulation of Connecticut State Agencies, which standards are to form the basis of the statement of actuarial opinion in accordance with section 38a-78-7 of the Regulations of Connecticut State Agencies; and

(2) shall be based on methods of analysis as are deemed appropriate for such purposes by the Actuarial Standards Board.

(e) **Liabilities to be Covered.** (1) Under authority of subsection (b) of section 38a-78 of the Standard Valuation Law, the statement of actuarial opinion shall apply to all in force business on the statement date whether directly issued or assumed regardless of when or where issued, e.g., reserves in the life, accident and health statement Exhibits 5, 6 and 7, and claim liabilities in Exhibit 8, Part 1 and equivalent items in the separate account statement or health statement.

(2) If the appointed actuary determines as the result of asset adequacy analysis that a reserve should be held in addition to the aggregate reserve held by the company and calculated in accordance with methods set forth in subsections (g), (h), (j), (k) and (l) of section 38a-78 of the Standard Valuation Law, the company shall establish such additional reserve.

(3) Additional reserves established under subdivision (2) of subsection (e) of this section and deemed not necessary in subsequent years may be released. Any amounts released must be disclosed in the actuarial opinion for the applicable year. The release of such reserves shall not be deemed an adoption of a lower standard of valuation.

(Effective September 28, 1993; amended December 23, 2008)

**Sec. 38a-78-6.**

Repealed, December 23, 2008.

**Sec. 38a-78-7. Statement of actuarial opinion based on an asset adequacy analysis**

(a) **General Description.** The statement of actuarial opinion submitted in accordance with this section shall consist of (1) a paragraph identifying the appointed actuary and his or her qualifications consistent with the requirements of subdivision (1) of subsection (b) of this section; (2) a scope paragraph identifying the subjects on which the opinion is to be expressed and describing the scope of the appointed actuary's work, including a tabulation delineating the reserves and related actuarial items that have been analyzed for asset adequacy and the method of analysis in accordance with subdivision (2) of subsection (b) of this section and identifying the reserves and related actuarial items covered by the opinion that may not have been so analyzed; (3) a reliance paragraph, in accordance with subdivision (3) of subsection (b) of this section, describing those areas, if any, where the appointed actuary has deferred to other experts in developing data, procedures, or assumptions such as anticipated cash flows from currently owned assets, including variation in cash flows according to economic scenarios, supported by a statement of each such expert in the form prescribed by subsection (e) of this section; (4) an opinion paragraph, in accordance with subdivision (6) of subsection (b) of this section, expressing the appointed actuary's opinion with respect to the adequacy of the supporting assets to mature the liabilities; (5) one or more additional paragraphs in individual company cases as follows; (A) if the appointed actuary considers it necessary to state a qualification of his or her opinion; (B) if the appointed actuary must disclose an inconsistency in the method of analysis or basis of asset allocation used at the prior opinion date with that used for this opinion; (C) if the appointed actuary must disclose whether additional reserves as of the prior opinion date are released as of this opinion date, and the extent of the release; (D) if the appointed actuary chooses to add a paragraph briefly describing the assumptions that form the basis for the actuarial opinion.

(b) **Recommended Language.** The following language provided is that which in typical circumstances would be included in a statement of actuarial opinion in accordance with this section. The language may be modified as needed to meet the circumstances of a particular case, but the appointed actuary shall use language which clearly expresses his professional judgment. However, in any event the opinion shall retain all pertinent aspects of the language provided in this Section.

(1) The opening paragraph shall indicate the appointed actuary's relationship to the company and his qualifications to sign the opinion. For a company actuary, the opening paragraph of the actuarial opinion shall include a statement such as:

"I, (name of actuary), am (title) of (name of company) and a member of the American Academy of Actuaries. I was appointed by, or by the authority of, the Board of Directors of said insurer to render this opinion as stated in the letter to the commissioner dated (insert date). I meet the Academy qualification standards

for rendering the opinion and am familiar with the valuation requirements applicable to life and health companies.”

For a consulting actuary, the opening paragraph of the actuarial opinion shall contain a sentence such as:

“I, (name and title of actuary), a member of the American Academy of Actuaries, am associated with the firm of (insert name of consulting firm). I have been appointed by, or by the authority of, the Board of Directors of (name of company) to render this opinion as stated in the letter to the commissioner dated (insert date). I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies.”

(2) The scope paragraph shall contain a sentence such as the following: “I have examined the actuarial assumptions and actuarial methods used in determining reserves and related actuarial items listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials, as of December 31, ( ).”

Tabulated below are those reserves and related actuarial items that shall be subjected to asset adequacy analysis.

<b>Asset Adequacy Tested Amounts – Reserves and Liabilities</b>					
Statement Item	Formula Reserves (1)	Additional Actuarial Reserves (a) (2)	Analysis Methods (b)	Other Amount (3)	Total Amount (1)+(2)+(3) (4)
Exhibit 5					
Life Insurance					
Annuities					
Supplementary Contracts with Line Contingencies					
Accidental Death Benefits					
Disability – Active Lives					
Disability – Disabled Lives					
Miscellaneous Reserves					
Total Exhibit 5 (Line 1, Page 3)					
Exhibit 6					
Active Life Reserve					
Claim Reserve					
Total Exhibit 6 (Line 2, Page 3)					
Exhibit 7					
Premium and Other Deposit Funds (Column 6, Line 14)					
Guaranteed Interest Contracts (Column 2, Line 14)					

Annuities Certain (Column 3, Line 14)					
Supplemental Contracts (Column 4, Line 14)					
Dividend Accumulations or Refunds (Column 5, Line 14)					
Total Exhibit 7 (Line 3, Page 3)					
Exhibit 8 Part 1 1 Life (Line 4.1, Page 3)					
2 Health (Line 4.2, Page 3)					
Total Exhibit 8 Part 1					
Separate Accounts (Page 3 of the Annual Statement of the Separate Accounts, Lines 1 and 2)					
<b>TOTAL RESERVES</b>					

IMR (General Account, Page _____ Line _____)	
(Separate Accounts, Page _____ Line _____)	
AVR (Page _____ Line _____)	(c)
Net Deferred and Uncollected Premium	

Notes:

(a) The additional actuarial reserves established under subdivision (2) of subsection (e) of section 38a-78-5 of the Regulations of the Connecticut State Agencies.

(b) The appointed actuary shall indicate the method of analysis, determined in accordance with the standards for asset adequacy analysis referred to in subsection (d) of section 38a-78-5 of the Regulations of Connecticut State Agencies, by means of symbols that shall be defined in footnotes to the table.

(c) Allocated amount of Asset Valuation Reserve (AVR).

(3) If the appointed actuary has relied on other experts to develop certain portions of the analysis, the reliance paragraph shall include a statement such as:

“I have relied on (name), (title) for (e.g., “anticipated cash flows from currently owned assets, including variations in cash flows according to economic scenarios” or “certain critical aspects of the analysis performed in conjunction with forming my own opinion”), as certified in the attached statement. I have reviewed the information relied upon for reasonableness.”

A statement of reliance on other experts shall be accompanied by a statement by each of the experts in the form prescribed by subsection (e) of this section.

(4) If the appointed actuary has examined the underlying asset and liability records, the reliance paragraph shall include a statement such as:

“My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic asset and liability records and such tests of the actuarial calculations as I considered necessary. I also reconciled the underlying basic asset and liability records to (exhibits and schedules listed as applicable) of the company’s current annual statement.”

(5) If the appointed actuary has not examined the underlying records, but has relied upon data such as listings and summaries of policies in force or asset records, prepared by the company, the reliance paragraph shall include a statement such as:

“In forming my opinion on (specify types of reserves) I relied upon data prepared by (name and title of company officer certifying in force records or other data) as certified in the attached statements. I evaluated that data for reasonableness and consistency. I also reconciled that data to (exhibits and schedules to be listed as applicable) of the company’s current annual statement. In other respects, my examination included review of the actuarial assumptions and actuarial methods used and tests of the calculations I considered necessary.”

The section shall be accompanied by a statement by each person relied upon in the form prescribed by subsection (e) of this section.

(6) The opinion paragraph shall include a statement such as:

“In my opinion the reserves and related actuarial values concerning the statement items identified above:

(A) are computed in accordance with presently accepted actuarial standards consistently applied and are fairly stated, in accordance with sound actuarial principles;

(B) are based on actuarial assumptions that produce reserves at least as great as those called for in any contract provision as to reserve basis and method, and are in accordance with all other contract provisions;

(C) meet the requirements of the insurance laws of the state of (state of domicile) and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed;

(D) are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding year-end (with any exceptions noted below); and

(E) include provision for all actuarial reserves and related statement items which ought to be established.

The reserves and related items, when considered in light of the assets held by the company with respect to such reserves and related actuarial items including, but not limited to, the investment earnings on the assets, and the considerations anticipated to be received and retained under the policies and contracts, make adequate provisions, according to presently accepted actuarial standards of practice, for the anticipated cash flows required by the contractual obligations and related expenses of the company.

The actuarial methods, considerations and analyses used in forming my opinion conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis of this statement of opinion.

(This opinion is updated annually as required by statute. To the best of my knowledge, there have been no material changes from the applicable date of the annual statement to the date of the rendering of this opinion which should be considered in reviewing this opinion.) or (The following material changes which occurred between the date of the statement for which this opinion is applicable and the date of this opinion should be considered in reviewing this opinion: (insert description of the change or changes).

Note: Choose one of the above two paragraphs, whichever is applicable.

The impact of unanticipated events subsequent to the date of this opinion is beyond the scope of this opinion. The analysis of asset adequacy portion of this opinion should be viewed recognizing that the company’s future experience may not follow all the assumptions used in the analysis.

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Signature of Appointed Actuary

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Address of Appointed Actuary

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Telephone Number of Appointed Actuary

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Date''

(c) **Assumptions for New Issues.** The adoption for new issues or new claims or other new liabilities of an actuarial assumption that differs from a corresponding assumption used for prior new issues or new claims or other new liabilities is not a change in actuarial assumptions within the meaning of this section.

(d) **Adverse Opinions.** If the appointed actuary is unable to form an opinion, then he or she shall refuse to issue a statement of actuarial opinion. If the appointed actuary's opinion is adverse or qualified, then he or she shall issue an adverse or qualified actuarial opinion explicitly stating the reasons for the opinion. This statement shall follow the scope paragraph and precede the opinion paragraph.

(e) **Reliance on Information Furnished by Other Persons.** If the appointed actuary relies on the certification of others on matters concerning the accuracy or completeness of any data underlying the actuarial opinion, or the appropriateness of any other information used by the appointed actuary in forming the actuarial opinion, the actuarial opinion shall so indicate the persons the appointed actuary is relying upon and a precise identification of the items subject to reliance. In addition, the persons on whom the appointed actuary relies shall provide a certification that precisely identifies the items on which the person is providing information and a statement as to the accuracy, completeness or reasonableness, as applicable, of the items. This certification shall include the signature, title, company, address and telephone number of the person rendering the certification, as well as the date on which it is signed.

(f) **Alternate Opinion.** (1) As an alternative to the requirements of subparagraph (C) of subdivision (6) of subsection (b) of this section, the commissioner may make one or more of the following additional approaches available to the opining actuary: (A) A statement that the reserves "meet the requirements of the insurance laws and regulations of (the state of domicile) and the formal written standards and conditions of this state for filing an opinion based on the law of the state of domicile." If the commissioner chooses to allow this alternative, a formal written list of standards and conditions shall be made available to all insurers. If a company chooses to use this alternative, the standards and conditions in effect on July 1 of a calendar year shall apply to statements for that calendar year, and they shall remain in effect until they are revised or revoked. If no list is available, this alternative is not available; (B) A statement that the reserves "meet the requirements of the insurance laws and regulations of (the state of domicile) and I have verified that the company's request to file an opinion based on the law of the state of domicile has been approved and that any conditions required by the commissioner for approval of that request has been met." If the commissioner chooses to allow this alternative, a formal written statement of such allowance shall be issued no later than March 31 of the year it

is first effective. It shall remain valid until rescinded or modified by the commissioner. The rescission or modifications shall be issued no later than March 31 of the year they are first effective. Subsequent to that statement being issued, if a company chooses to use this alternative, the company shall annually file a request to do so, along with justification for its use, no later than April 30 of the year in which the opinion is to be filed. The request shall be deemed approved on October 1 of that year if the commissioner has not denied the request by that date; (C) A statement that the reserves “meet the requirements of the insurance laws and regulations of (the state of domicile) and I have submitted the required comparison as specified by this state.” (i) If the commissioner chooses to allow this alternative, a formal written list of products, to be added to the table set forth in subparagraph C(ii) of this subdivision, for which the required comparison is to be provided, will be published. If a company chooses to use this alternative, the list in effect on July 1 of a calendar year shall apply to statements for that calendar year, and it shall remain in effect until it is revised or revoked. If no list is available, this alternative is not available. (ii) If a company chooses to use this alternative, the appointed actuary shall provide a comparison of the gross nationwide reserves held to the gross nationwide reserves that would be held under the NAIC codification standards. Gross nationwide reserves are the total reserves calculated for the total company in force business directly sold and assumed, indifferent to the state in which the risk resides, without reduction for reinsurance ceded. The information provided shall include, at a minimum:

(1) Product Type	(2) Death Benefit or Account Value	(3) Reserves Held	(4) Codification Reserves	(5) Codification Standard

(iii) The information listed shall include all products identified by either the state of filing or any other states subscribing to this alternative. (iv) If there is no codification standard for the type of product or risk in force or if the codification standard does not directly address the type of product or risk in force, the appointed actuary shall provide detailed disclosure of the specific method and assumptions used in determining the reserves held. (v) The comparison provided by the company shall be kept confidential to the same extent and under the same conditions as the actuarial memorandum.

(2) Notwithstanding subsection (f)(1) of this section, the commissioner may reject an opinion based on the laws and regulations of the state of domicile and require an opinion based on the laws of Connecticut. If a company is unable to provide the opinion within sixty (60) days of such request or such other period of time determined by the commissioner after consultation with the company, the commissioner may contract with an independent actuary at the company’s expense to prepare and file the opinion.

(Effective September 28, 1993; amended December 23, 2008)

**Sec. 38a-78-8.**

Repealed, December 23, 2008.

**Sec. 38a-78-9. Description of an actuarial memorandum including an asset adequacy analysis and a regulatory asset adequacy issues summary**

**(a) General.**

(1) In accordance with subsection (b) of section 38a-78 of the Standard Valuation Law, 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 pursuant to section 38a-78-7 the Regulations of Connecticut State Agencies. The memorandum shall be made available for examination by the commissioner upon his or her request but shall be returned to the company after such examination and shall not be considered a record of the insurance department or 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 subsection (b) of section 38a-78-5 of the Regulations of Connecticut State Agencies 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 Actuarial Standards Board or the standards and requirements of this section, 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 such 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 such reviewing actuary shall be retained by the commissioner; provided, however, that any information provided by the company to such 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 pursuant to section 38a-78 of the general statutes. The reviewing actuary shall not be an employee of a consulting firm involved with the preparation of any prior memorandum or opinion for the insurer pursuant to section 38a-78-5 of the Regulations of the Connecticut State Agencies for any one of the current year or the preceding three years.

(5) In accordance with subsection (b) of section 38a-78 of the Standard Valuation Law, the appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in subsection (c) of this section. 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) Details of the Memorandum Section Documenting Asset Adequacy Analysis.** When an actuarial opinion under section 38a-78-7 of the Regulations of Connecticut State Agencies is provided, the memorandum shall demonstrate that the analysis has been done in accordance with the standards for asset adequacy analysis referred to in subsection (d) of section 38a-78-5 of the Regulations of Connecticut State Agencies and any additional standards under this regulation. 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 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; and
- (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) commission and expenses;
  - (viii) morbidity.

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.

(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 the inclusion/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 the level of materiality that was used in determining how rigorously to analyze different blocks of business;
- (D) criteria for determining asset adequacy, including 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) whether the impact of federal income taxes was considered and the method of treating reinsurance in the asset adequacy analysis.

(4) summary of material changes in methods, procedures, or assumptions from prior year's asset adequacy analysis;

(5) summary of results; and

(6) conclusion.

(c) **Details of the Regulatory Asset Adequacy Issues Summary.** (1) The regulatory asset adequacy issues summary shall include:

(A) 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 shall 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 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 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;

(B) 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;

(C) 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;

(D) comment on any interim results that may be of significant concern to the appointed actuary;

(E) 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

(F) whether the actuary is 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.

(2) 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.

(d) **Conformity to Standards of Practice.** The memorandum shall include the following 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.”

(Effective September 28, 1993; amended December 23, 2008)

**Sec. 38a-78-10.**

Repealed, December 23, 2008.