

**Department of Banking, Insurance, Securities & Health Care Administration**

**Vermont Insurance Division**

**REGULATION I-2010-02**

**Life and Health Actuarial Opinion & Memorandum Regulation**

**Section 1. Purpose**

The purposes of this regulation are to prescribe:

- A. Requirements for statements of actuarial opinion which are to be submitted in accordance with 8 V.S.A. §3561, §3577, subchapter 4 of Chapter 103 and Chapter 121 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.”

**Section 2. Authority**

This regulation is issued pursuant to the authority vested in the Commissioner of the Department of Banking, Insurance, Securities and Health Care Administration of the State of Vermont under 8 V.S.A. §15, §3561, §3577 and subchapter 4 of Chapter 103 (Standard Valuation Law).

**Section 3. Scope**

This regulation 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.

This regulation shall be applied in a manner that allows the appointed actuary to utilize his or her professional judgment in performing the asset 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 relative to the adequacy of reserves and related items.

This regulation shall be applicable to all annual statements filed with the office of the commissioner after the effective date of this regulation. A statement of opinion on the

adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with Section 6 of this regulation, and a memorandum in support thereof in accordance with Section 7 of this regulation, shall be required each year.

#### **Section 4. Definitions**

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 6 of this regulation 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 8 V.S.A. 3561 or 8 V.S.A. 4494 to be filed by the company with the office of the commissioner annually.

D. "Appointed Actuary" means any individual who is appointed or retained in accordance with the requirements set forth in Section 5C of this regulation to provide the actuarial opinion and supporting memorandum as required by 8 V.S.A. §3577.

E. "Asset Adequacy Analysis" means an analysis that meets the standards and other requirements referred to in Section 5D of this regulation.

F. "Commissioner" means the Commissioner of Banking, Insurance, Securities and Health Care Administration.

G. "Company" means a life insurance company, fraternal benefit society or reinsurer subject to the provisions of this regulation.

H. "Qualified Actuary" means any individual who meets the requirements set forth in Section 5B of this regulation.

#### **Section 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 6 of this regulation;

(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 meets the requirements of 8 V.S.A. 3577(h) and has not been disqualified under 8 V.S.A. 3577(j).

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 the person meets the requirements set forth in Subsection 5B. 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 Subsection 5B. 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.

D. Standards for Asset Adequacy Analysis. The asset adequacy analysis required by this regulation:

(1) Shall conform to the Standards of Practice as promulgated from time to time by the Actuarial Standards Board and on any additional standards under this regulation, which standards are to form the basis of the statement of actuarial opinion in accordance with this regulation; 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 8 V.S.A. Chapter 3, subchapter 4, Standard Valuation Law, and Chapter 121, on fraternal benefit societies, 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 of Exhibits 8, 9 and 10, and claim liabilities in Exhibit 11, Part I in the annual statement required in 8 V.S.A. 3561 and equivalent items in the separate account statement or statements and successor exhibits to these exhibits.

(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 8 V.S.A. Chapter

103, subchapter 4 and Chapter 121, the company shall establish such additional reserve.

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

## **Section 6. Statement of Actuarial Opinion Based on 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 (see Subsection 6B(1));

(2) A scope paragraph identifying the subjects on which an 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, (see Subsection 6B(2)) and identifying the reserves and related actuarial items covered by the opinion which have not been so analyzed;

(3) A reliance paragraph describing those areas, if any, where the appointed actuary has deferred to other experts in developing data, procedures or assumptions, (e.g., anticipated cash flows from currently owned assets, including variation in cash flows according to economic scenarios (see Subsection 6B (3)), supported by a statement of each such expert in the form prescribed by Subsection 6E; and

(4) An opinion paragraph expressing the appointed actuary's opinion with respect to the adequacy of the supporting assets to mature the liabilities (see Subsection 6B(6)).

(5) One or more additional paragraphs will be needed 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 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 which form the basis for the actuarial opinion.

## B. Recommended Language

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

(1) The opening paragraph should generally indicate the appointed actuary's relationship to the company and his or her qualifications to sign the opinion.

For a company actuary, the opening paragraph of the actuarial opinion should read as follows:

I, [name], am [title] of [insurance company name] 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 insurance companies.

For a consulting actuary, the opening paragraph should contain a sentence such as:

I, [name], a member of the American Academy of Actuaries, am associated with the firm of [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 should include a statement 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, 20[ ]. Tabulated below are those reserves and related actuarial items which have been subjected to asset adequacy analysis.

**Asset Adequacy Tested Amounts-Reserves and Liabilities**

<b>Statement Item</b>	<b>Formula Reserves (1)</b>	<b>Additional Actuarial Reserves (a)(2)</b>	<b>Analysis Method (b)</b>	<b>Other Amounts (3)</b>	<b>Total Amount (1)+(2)+(3) (4)</b>
<b>Exhibit 5</b>					
Life Insurance					
Annuities					
Supplementary Contracts with Life Contingencies					
Accidental Death Benefit					
Disability—Active Lives					
Disability—Disabled Lives					
Miscellaneous Reserves					
Total-Line 9999999, Col. 2 (Statement of Liabilities, Surplus and Other Funds-Line 1)					
<b>Exhibit 6</b>					
Active Life Reserve					
Claim Reserve					
Total-Line 16, Col. 1 (Statement of Liabilities, Surplus					

**Asset Adequacy Tested Amounts-Reserves and Liabilities**

<b>Statement Item</b>	<b>Formula Reserves (1)</b>	<b>Additional Actuarial Reserves (a)(2)</b>	<b>Analysis Method (b)</b>	<b>Other Amounts (3)</b>	<b>Total Amount (1)+(2)+(3) (4)</b>
and Other Funds-Line 2)					
<b>Exhibit 7</b>					
Premium and Other Deposit Funds-Line 14, Col. 6					
Dividend Accumulations or Refunds-Line 14, Col. 5					
Supplemental Contracts-Line 14, Col. 4					
Annuities Certain-Line 14, Col. 3					
Guaranteed Interest Contracts-Line 14, Col. 2					
Total-Line 14, Col. 1 (Statement of Liabilities, Surplus and Other Funds-Line 3)					
<b>Exhibit 8 Part 1</b>					
Life-Line 4.4, Col. 1 less sum of Cols. 9, 10 and 11 (Statement of Liabilities, Surplus and Other Funds-Line 4.1)					
Health-Line 4.4, Sum of Cols. 9, 10 and 11 (Statement of Liabilities, Surplus and Other Funds-Line 4.2)					

<b>Asset Adequacy Tested Amounts-Reserves and Liabilities</b>					
<b>Statement Item</b>	<b>Formula Reserves (1)</b>	<b>Additional Actuarial Reserves (a)(2)</b>	<b>Analysis Method (b)</b>	<b>Other Amounts (3)</b>	<b>Total Amount (1)+(2)+(3) (4)</b>
<b>Separate Accounts</b> (Separate Accounts Annual Statement, Page 3, Lines 1 and 2)					
<b>TOTAL RESERVES</b>					

IMR (Statement of Liabilities, Surplus and Other Funds, Line 9.4)	
Separate Accounts IMR (Separate Accounts Annual Statement, Page 3, Line 3)	
AVR (Statement of Liabilities, Surplus and Other Funds, Line 24.1)	(c)
Net Deferred and Uncollected Premium (Statement of Assets, Lines 13.1 and 13.2)	

Notes:

(a) *The additional actuarial reserves are the reserves established under Paragraphs (2) of Section 5E.*

(b) *The appointed actuary should indicate the method of analysis, determined in accordance with the standards for asset adequacy analysis referred to in Section 5D of this regulation, by means of symbols which should 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 should include a statement such as the following:

“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] and, as certified in the attached statement. I have reviewed the information relied upon for reasonableness.”

A statement of reliance on other experts should be accompanied by a statement by each of such experts of the form prescribed by Section 6E.

(4) If the appointed actuary has examined the underlying asset and liability records, the reliance paragraph should also include the following:

“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 listings and summaries of policies in force and/or asset records prepared by the company or a third party, the reliance paragraph should include a sentence such as:

“ In forming my opinion on [specify types of reserves], I have relied upon listings and summaries [of policies and contracts, of asset records] prepared by [name and title of company officer certifying in-force records] as certified in the attached statement. 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 such review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary.”

Such a section must be accompanied by a statement by each person relied upon of the form prescribed by Section 8E.

(6) The opinion paragraph should include the following:

“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 which 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 law and regulation of the state of Vermont 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);

(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 such assets, and the considerations anticipated to be received and retained under such policies and contracts, make adequate provision, 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 change(s) 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: (Describe 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

#### C. Assumptions for New Issues

The adoption for new issues or new claims or other new liabilities of an actuarial assumption which 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 6.

#### 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 reason(s) for such opinion.

This statement should follow the scope paragraph and precede the opinion paragraph.

#### E. Reliance on Data Furnished by Other Persons

If the appointed actuary relies on the certification of others on matters concerning the accuracy and completeness of any data underlying the actuarial opinion, e.g. the listings and summaries of policies in force and/or asset oriented information, the actuarial opinion should so indicate the persons the actuary is relying upon and a precise identification of the items subject to reliance. In addition, there shall be attached to the opinion the statement of a company officer or accounting firm who prepared such underlying data similar to the following:

I [name of officer], [title], of [name of company or accounting firm], hereby affirm that the listings and summaries of policies and contracts in force as of December 31, 19[ ], and other liabilities prepared for and submitted to [name of appointed actuary] were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.

Signature of the Officer of the Company or Accounting Firm

Address of the Officer of the Company or Accounting Firm

Telephone Number of the Officer of the Company or Accounting Firm

and/or

I, [name of officer], [title] of [name of company, accounting firm, or security analyst], hereby affirm that the listings, summaries and analyses relating to data prepared for and submitted to [name of appointed actuary] in support of the asset-oriented aspects of the opinion were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.

Signature of the Officer of the Company, Accounting Firm or the Security Analyst  
Address of the Officer of the Company, Accounting Firm or the Security Analyst  
Telephone Number of the Officer of the Company, Accounting Firm or the Security Analyst

F. Alternate Option

- (1) The Standard Valuation Law gives the commissioner broad authority to accept the valuation of a foreign insurer when that valuation meets the requirements applicable to a company domiciled in this state in the aggregate. As an alternative to the requirements of Subsection B(6)(c), 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 [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. 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 [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 have been met.” If the commissioner chooses to allow this alternative, 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 file a request to do so, along with justification for its use, no later than April 30 of the year of the opinion 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 [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 in Item (ii) below) for which the required comparison shall 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 desires 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 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 be at least:

(1) Product Type	(2) Death Benefit or Account Value	(3) Reserve 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 is to be kept confidential to the same extent and under the same conditions as the actuarial memorandum.

(2) Notwithstanding the above, 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 this state. If a company is unable to provide the opinion within sixty (60) days of the request or such other period of time determined by the commissioner after consultation with the company, the commissioner may contract an independent actuary at the company's expense to prepare and file the opinion.

## **Section 7. Description of Actuarial Memorandum Including an Asset Adequacy Analysis and Regulatory Asset Adequacy Issues Summary**

### **A. General**

(1) In accordance with 8 V.S.A. §3577 and §4494 the appointed actuary shall prepare a memorandum to the company describing the analysis done in support of his or her opinion regarding the reserves. 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 Section 5B of this regulation, 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 regulation, 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 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 pursuant to the statute governing this regulation.

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 this regulation for any one of the current year or the preceding three (3) years.

(5) In accordance with 8 V.S.A. §§ 3577 and 4494, the appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in Subsection C. Companies domiciled in Vermont shall submit the regulatory asset adequacy issues summary no later than March 15 of the year following the year for which a statement of actuarial opinion based on asset adequacy is required. Companies domiciled outside Vermont are not required to submit the regulatory asset adequacy issues summary annually, however, the summary shall be made available for examination by the Commissioner upon request. The regulatory asset adequacy issues summary is to 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 analysis is provided, the memorandum shall demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in Section 5D of this regulation 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;
- (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 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 functions;
- (iii) Mortgage prepayment function;
- (iv) Determining market value for assets sold due to disinvestments 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) 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 and criteria for determining adequacy (include 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 (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
- (e) Effect of federal income taxes, method of treating reinsurance, and other relevant factors.

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

(5) Summary of Results; and

(6) Conclusion(s).

### 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 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 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) Comments 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 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.
- (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 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.”

#### E. Use of Assets Supporting the Interest Maintenance Reserve and the Asset Valuation Reserve

An appropriate allocation of assets in the amount of the Interest Maintenance Reserve (IMR), whether positive or negative, must 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 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.

#### F. Documentation

The appointed actuary shall retain on file, for at least seven (7) 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.