



# AMERICAN ACADEMY *of* ACTUARIES

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## **Valuation Law Manual of the American Academy of Actuaries' Valuation and Law Manual Team**

### **Presented to the National Association of Insurance Commissioners' Life and Health Actuarial Task Force**

**San Francisco, CA – June 2007**

The American Academy of Actuaries is a national organization formed in 1965 to bring together, in a single entity, actuaries of all specializations within the United States. A major purpose of the Academy is to act as a public information organization for the profession. Academy committees, task forces and work groups regularly prepare testimony and provide information to Congress and senior federal policy-makers, comment on proposed federal and state regulations, and work closely with the National Association of Insurance Commissioners and state officials on issues related to insurance, pensions and other forms of risk financing. The Academy establishes qualification standards for the actuarial profession in the United States and supports two independent boards. The Actuarial Standards Board promulgates standards of practice for the profession, and the Actuarial Board for Counseling and Discipline helps to ensure high standards of professional conduct are met. The Academy also supports the Joint Committee for the Code of Professional Conduct, which develops standards of conduct for the U.S. actuarial profession.

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DRAFT  
VALUATION MANUAL

## TABLE OF CONTENTS

ITEM	PAGE
<b>Introduction</b>	
Background	
Description Of Manual	
Operative Date of the Valuation Manual	
Process For Updating Manual	
<b>SECTION 1: Principles-Based Overview</b>	
Concept	
Common Elements	
Implementation	
<b>SECTION 2: Authority and Applicability</b>	
Authority and Scope	
Business Issued Prior to Operative Date of Manual	
Business Issued On or After Operative Date of Manual	
<b>SECTION 3: Requirements by Type of Product</b>	
I. Life	
a. Individual	
b. Group	
II. Annuity	
a. Fixed	
b. Variable	
III. Deposit-type Contracts	
a. Synthetic GICs	
IV. Health	
V. Credit Life & Disability	
<b>SECTION 4: Reporting Requirements</b>	
I. Actuarial Opinion & Memorandum Requirements	
II. Principles-Based Reporting Requirements	
<b>SECTION 5: Annual Principles-Based Review Requirements</b>	
<b>SECTION 6: Experience Reporting Requirements</b>	
<b>SECTION 7: Appendices</b>	
Appendix A -Reserve Guidance	
Appendix B - Experience Reporting	

## INTRODUCTION

### **BACKGROUND**

As insurance products have increased in their complexity, and as companies have developed new and innovative product designs that change their risk profile, the need to develop a new valuation methodology to address these changes has led to the development of principles-based valuation requirements. The need has also arisen to develop a valuation standard that enhances uniformity among the principles-based valuation requirements across states and insurance departments, and defines a process to facilitate future changes in valuation requirements on a more timely and efficient basis.

The goals of the National Association of Insurance Commissioners (NAIC) in developing this Valuation Manual are:

1. To consolidate into one document all of the minimum reserve requirements for life, annuity and health products pursuant to the NAIC Standard Valuation Law (SVL), including those products subject to principles-based valuation requirements and those not subject to principles-based valuation requirements.
2. To promote uniformity among states' valuation requirements, most importantly with regard to those products that are subject to principles-based valuation requirements.
3. To provide for an efficient, consistent, and timely process to update valuation requirements as the need arises.
4. To mandate and facilitate the specific reporting requirements of experience data.
5. To specify the content and format of an annual independent actuarial review.
6. To enhance industry compliance with the MM/DD/200X revisions to the SVL, as adopted in various states.

## **DESCRIPTION OF MANUAL**

This Valuation Manual (“Manual”) contains the minimum reserve requirements for fulfilling the Standard Valuation Law.

The Valuation Manual contains an Introduction and seven sections. The first section is the *Principles-based Overview*, which describes the concepts underlying a principles-based valuation, the elements common to all principles-based valuations, and the process required to implement a principles-based valuation.

The second section addresses *Authority and Applicability* including a description of the reserve requirements that apply to the inforce business as of the operative date of the Manual, and those requirements that apply to business issued on or after the operative date of the Manual.

The third section provides reserve requirements by type of product. As reserve standards are developed for various products or categories of products, those standards will be incorporated into this section. The applicability of the reserve standards to particular products will be clarified in the appropriate subsection. For example, the reserve standards that apply to a credit life insurance product will be identified in the subsection addressing life insurance reserve requirements.

The fourth section provides reporting requirements which include actuarial opinion and memorandum requirements and principles-based reporting requirements.

The fifth section enumerates requirements for an annual independent PBA review.

The sixth section provides experience reporting requirements.

The seventh section contains appendices which include guidance for reserves and experience reporting forms and instructions. Guidance contained in Appendix A should be interpreted as general statements of reserving principles and not specific detailed instructions.

**OPERATIVE DATE OF VALUATION MANUAL (To be determined after NAIC Executive Committee adopts rules regarding procedures for model law development)**

The requirements in this manual become operative on January 1 following the date that:

1. The valuation manual or a change to the valuation manual is adopted by at least seventy-five percent (75%) of the NAIC Executive and Plenary members; and
2. at least 39 states have adopted changes to the Standard Valuation Law which enable such states to follow the requirements of the Valuation Manual without further adoption of law and such states have adopted any necessary regulations or other requirements in order to follow the requirements in the Valuation Manual.

**PROCESS FOR UPDATING MANUAL**

The Life & Health Actuarial Task Force (LHATF) is responsible for developing changes to the Valuation Manual for NAIC adoption. Any changes must conform to guidelines developed by the NAIC to support joint use by the Accounting Practices and Procedures Manual and the Valuation Manual. Such guidelines will require the development of an issues paper to be submitted to the Statutory Accounting Principles Working Group for their review and input on the proposed Valuation Manual changes. This issues paper will also include an analysis of the impact of these changes on reserves, the consumer, and the industry including any different impact based on size of company.

The SAPWG must approve the Valuation Manual changes as being in conformance with these guidelines and LHATF must approve the Valuation Manual changes. The Valuation Manual changes must then be adopted by the A, B, and E Committees prior to NAIC adoption by Executive and Plenary.

## **SECTION 1 - PRINCIPLES-BASED PREAMBLE**

### **CONCEPT**

A principles-based valuation is a reserve valuation that models current and future risk, using methods and assumptions that involve actuarial judgment, in order to more appropriately reflect risks specific to the company and the insurance policies and contracts being valued. This is in contrast to previous valuation approaches that have used prescribed assumptions and methods that are the same for all companies. A principles-based valuation typically involves a projection of a contract's cash flows as a basis for quantifying the financial risk of future losses. This projection could be a single scenario, or it could involve multiple scenarios with some of the valuation assumptions being modeled stochastically.

### **COMMON ELEMENTS**

A principles-based reserve valuation must:

(DRAFTING NOTE: These principles are under review by the Consistency Work Group of the American Academy of Actuaries)

1. Capture all of the benefits and guarantees associated with the contracts and their identifiable, quantifiable and material risks, including the 'tail risk' and the funding of the risks.
2. Utilize risk analysis and risk management techniques to quantify the risks and is guided by the evolving practice and expanding knowledge in the measurement and management of risk. This may include, to the extent required by an appropriate assessment of the underlying risks, stochastic models or other means of analysis that properly reflect the risks of the underlying contracts.
3. Incorporate assumptions, risk analysis methods and models and management techniques that are consistent with those utilized within the company's overall risk assessment process. Risk and risk factors explicitly or implicitly included in the company's risk assessment and evaluation processes will be included in the risk analysis and cash flow models used in the PBA. Examples of company risk assessment processes include economic valuations, internal capital allocation models, experience analysis, asset adequacy testing, GAAP valuation and pricing.
4. Permits the use of company experience, based on the availability of relevant company experience and its degree of credibility, to establish assumptions for risks over which the company has some degree of control or influence.

5. Provides for the use of assumptions, set on a prudent estimate basis, that contain an appropriate level of conservatism when viewed in the aggregate and that, together with the methods utilized, recognize the solvency objective of statutory reporting.
6. Reflect risks and risk factors in the calculation of reserves and capital that may be different from one another and may change over time as products and risk measurement techniques evolve, both in a general sense and within the company's risk management processes.

The aforementioned statements should be applied in a manner consistent with the Standard Valuation Law, state statutory requirements and company risk measurement practices then in effect as well as the reserve requirements specified in this Valuation Manual.

### **IMPLEMENTATION**

For all policies or contracts issued on and after the operative date of the Manual and for those in force policies or contracts specifically identified in this Manual, the minimum reserves requirements are specified in this Manual.

Since Principles-based reserve valuations will be calculated based on assumptions and methods that involve actuarial judgment, companies should review valuation assumptions and methods on at least an annual basis, and make adjustments as appropriate in order to hold adequate statutory reserves. The Manual addresses this in three ways:

1. The Manual provides for the periodic reporting and analysis of company experience to support current and future assumption setting for both company and regulatory use. Experience reporting requirements are provided in Section 6.
2. The Manual specifies the requirements for an independent annual actuarial review of such assumptions and methods for certain products as described in Section 5.
3. The Manual establishes the required information and documentation to be provided by the company that enables the Commissioner to monitor and assess compliance with the Standard Valuation Law and the minimum reserve requirements in this Manual, as described in Section 4.



## **SECTION 2 – AUTHORITY AND APPLICABILITY**

### **AUTHORITY & SCOPE**

The Valuation Manual sets forth the minimum reserve and related requirements pursuant to the Standard Valuation Law. The reserve requirements in this Valuation Manual shall satisfy the minimum valuation requirements of the Standard Valuation Law. The requirements in the Valuation Manual shall be the requirements of the state for purposes of minimum reserves and related requirements under the Standard Valuation Law.

The scope of requirements in the Valuation Manual is pursuant to the authorization in the Standard Valuation Law and includes all life, annuity, deposit-type contracts and health insurance business.

### **BUSINESS IN-FORCE ON EFFECTIVE DATE OF MANUAL:**

Except as otherwise specified in Section 3, minimum reserve requirements for business inforce on the operative date of the Valuation Manual shall be the adopting state requirements as of that date. Other requirements for business-in-force on the initial operative date of the Valuation Manual shall be those as provided by this Valuation Manual.

### **BUSINESS ISSUED ON OR AFTER OPERATIVE DATE OF MANUAL**

Business issued on or after the operative date of the Valuation Manual or operative date of changes to the Valuation Manual shall comply with the requirements of this Manual following the process described below:

(The description of the approach and timing to phase-in certain products and/or exclude certain products from the principles-based reserve requirements is under development).

### **SECTION 3 - REQUIREMENTS BY TYPE OF PRODUCT**

#### **I. LIFE**

a. Individual

(Drafting Note: See LRWG requirements provided for this June 2007 LHATF meeting. These requirements are not attached to this document.)

b. Group

(Drafting Note: To be provided.)

#### **II. ANNUITY**

a. Variable Annuity Products (AG VACARVM)

(Drafting Note: See VACARVM requirements provided for this June 2007 LHATF meeting. These requirements are not attached to this document.)

Drafting Note: Per this section AG VACARVM reserve requirements for variable annuities are applicable for issues on and after the effective date of the Valuation Manual. It is intended that AG VACARVM reserve requirements are applicable for inforce business as of the effective date of the Valuation Manual. This could happen either pursuant to prior adoption by states and Section 2, or if states are not able to implement AG VACARVM prior to the operative date of the Valuation Manual, then the Manual could specifically require AG VACARVM for inforce business.

b. Non-Variable Annuity Products

(Drafting Note: These requirements will be provided at the September 2007 LHATF meeting. These requirements are not attached to this document.)

#### **III. Deposit-type Contracts**

a. Synthetic GICs

(Drafting Note: Equivalent of NAIC requirements are to be provided here. These requirements are not attached to this document)

#### **IV. HEALTH**

(Drafting Note: The NAIC health reserves requirements are provided here. See attachment labeled "Attachment 1 – Section 3 (IV) Health")

#### **V. CREDIT LIFE & DISABILITY**

(Drafting Note: Will provide equivalent of current NAIC requirements. These requirements are not attached to this document.)

## **SECTION 4 – REPORTING REQUIREMENTS**

- I. Actuarial Opinion & Memorandum Requirements  
(Drafting Note: The equivalent of the NAIC AOMR requirements are provided here. See attachment labeled, “Attachment 2 - Section 4 (I) AOMR”)
  
- II. Principles-Based Reporting Requirements  
(Drafting Note: These requirements are being provided separately to LHATF at the June 2007. These requirements are also provided here. See attachment labeled, “Attachment 3 - Section 4(II) PBR Reporting”)

## **SECTION 5 – ANNUAL PRINCIPLES-BASED REVIEW REQUIREMENTS**

(Drafting Note: Proposed requirements are those provided for this June 2007 LHATF meeting. These proposed requirements are also provided in this document. See attachment labeled, “Attachment 4 - Section 5, Annual PBA Review”.)

## **SECTION 6 – EXPERIENCE REPORTING REQUIREMENTS**

(Drafting Note: These requirements are provided in this document. See attachment labeled, “Attachment 5 - Section 6, Experience Reporting”)

## **SECTION 7 – APPENDICES**

### **APPENDIX A**

This appendix contains guidance in support of Valuation Manual requirements:

Guidance to support reserve requirements for Health Insurance, Section 3, IV, of the Valuation Manual.

(Drafting Note: See the current Health Reserve Guidance Manual. This guidance is not provided in this document.)

### **APPENDIX B**

This appendix contains instructions and reporting formats to support Section 6, Experience Reporting Requirements, of the Valuation Manual.

(Drafting Note: These requirements are provided in this document. See attachment labeled, “Attachment 6 - Appendix B: Experience Reporting.”)

### **APPENDIX SA**

This appendix contains information for NAIC consideration relating to a Statistical Agent. (Drafting Note: This guidance is not provided in this document.)

# ATTACHMENT 1

Section 3 (IV) - HEALTH

## **Health Insurance Reserves Minimum Reserve Requirements**

These requirements apply to all individual and group health and accident and sickness insurance, including single premium credit disability insurance. Other credit insurance is not subject to these requirements.

### **I. Definitions**

1. "Annual claim cost" is the net annual cost per unit of benefit before the addition of expenses, including claim settlement expenses, and a margin for profit or contingencies. For example, the annual claim cost for a \$100 monthly disability benefit, for a maximum disability benefit period of one year, with an elimination period of one week, with respect to a male at age 35, in a certain occupation might be \$12, while the gross premium for this benefit might be \$18. The additional \$6 would cover expenses and profit or contingencies.
2. "Claims accrued" is that portion of claims incurred on or prior to the valuation date that result in liability of the insurer for the payment of benefits for medical services that have been rendered on or prior to the valuation date, and for the payment of benefits for days of hospitalization and days of disability that have occurred on or prior to the valuation date, that the insurer has not paid as of the valuation date, but for which it is liable and will have to pay after the valuation date. This liability is sometimes referred to as a liability for "accrued" benefits. A claim reserve, which represents an estimate of this accrued claim liability, must be established. SSAP #55 defines this as a Claim Liability and not a Claim Reserve.
3. "Claims reported" are considered as a reported claim for annual statement purposes when an insurer has been informed that a claim has been incurred, if the date reported is on or prior to the valuation date.
4. "Claims unaccrued" represent that portion of claims incurred on or prior to the valuation date which result in liability of the insurer for the payment of benefits for medical services expected to be rendered after the valuation date, and for benefits expected to be payable for days of hospitalization and days of disability occurring after the valuation date. This liability is sometimes referred to as a liability for unaccrued benefits. A claim reserve, which represents an estimate of the unaccrued claim payments expected to be made (which may or may not be discounted with interest), must be established. SSAP #54 defines this as a Claim Reserve differentiated from the Claim Liability in paragraph 2 above.
5. "Date of disablement" is the earliest date the insured is considered disabled under the definition of disability in the contract, based on a doctor's evaluation or other evidence. Normally this date will coincide with the start of any elimination period.
6. "Elimination period" is a specified number of days, weeks, or months starting at the beginning of each period of loss, during which no benefits are payable.
7. "Gross premium" is the amount of premium charged by the insurer. It includes the net premium (based on claim-cost) for the risk, together with any loading for expenses, profit or contingencies.

8. "Group insurance" includes blanket insurance and franchise insurance and any other forms of group insurance.
9. "Level premium" is a premium calculated to remain unchanged throughout either the lifetime of the policy or for some shorter projected period of years. The premium need not be guaranteed; in which case, although it is calculated to remain level, it may be changed if any of the assumptions on which it was based are revised at a later time. Generally, the annual claim costs are expected to increase each year and the insurer, instead of charging premiums that correspondingly increase each year, charges a premium calculated to remain level for a period of years or for the lifetime of the contract. In this case the benefit portion of the premium is more than needed to provide for the cost of benefits during the earlier years of the policy and less than the actual cost in the later years. The building of a prospective contract reserve is a natural result of level premiums.
10. "Long-term care insurance" is any insurance policy or rider advertised, marketed, offered or designed to provide coverage for not less than twelve (12) consecutive months for each covered person on an expense incurred, indemnity, prepaid or other basis; for one or more necessary or medically necessary diagnostic, preventive, therapeutic, rehabilitative, maintenance or personal care services, provided in a setting other than an acute care unit of a hospital. Such term also includes a policy or rider which provides for payment of benefits based upon cognitive impairment or the loss of functional capacity. Insurers; fraternal benefit societies; nonprofit health, hospital, and medical service corporations; prepaid health plans; health maintenance organizations or any similar organization, to the extent they are otherwise authorized to issue life or health insurance, may issue long-term care insurance. Long-term care insurance does not include any insurance policy which is offered primarily to provide basic Medicare supplement coverage, basic hospital expense coverage, basic medical-surgical expense coverage, hospital confinement indemnity coverage, major medical expense coverage, disability income or related asset-protection coverage, accident only coverage, specified disease or specified accident coverage, or limited benefit health coverage.
11. "Modal Premium" refers to the premium paid on a contract based on a premium term which could be annual, semi-annual, quarterly, monthly, or weekly. Thus if the annual premium is \$100 and if, instead, monthly premiums of \$9 are paid then the modal premium is \$9.
12. Normally the terminal reserve is a positive value. However, if the values of the benefits are decreasing with advancing age or duration it could be a negative value, called a "negative reserve."
13. "Preliminary Term Reserve Method" is a method of valuation whereby the valuation net premium for each year falling within the preliminary term period is exactly sufficient to cover the expected incurred claims of that year, so that the terminal reserves will be zero at the end of the year. As of the end of the preliminary term period, a new constant valuation net premium (or stream of changing valuation premiums) becomes applicable such that the present value of all such premiums is equal to the present value of all expected claims incurred after the end of the preliminary term period.

14. "Present value of amounts not yet due on claims" is the reserve for "claims unaccrued" (see definition) discounted at interest.
15. "Rating block" means a grouping of contracts determined by the valuation actuary based on common characteristics, such as a policy form or forms having similar benefit designs.
16. The term "reserve" is used to include all accrued or unaccrued benefit liabilities including an incurred claim liability or a contract liability relating to future periods of coverage.
17. "Terminal reserve" is the reserve at the end of a contract year and is defined as the present value of expected incurred claims after that contract year minus the present value of future valuation net premiums.
18. "Unearned premium reserve" values that portion of the premium paid or due to the insurer which is applicable to the period of coverage extending beyond the valuation date. Thus if an annual premium of \$120 was paid on November 1, \$20 would be earned as of December 31 and the remaining \$100 would be unearned. The unearned premium reserve could be on a gross basis as in this example or on a valuation net premium basis.
19. "Valuation net modal premium" is the modal fraction of the valuation net annual premium that corresponds to the gross modal premium in effect on any contract to which contract reserves apply. Thus if the mode of payment in effect is quarterly, the valuation net modal premium is the quarterly equivalent of the valuation net annual premium.

## **II. Claim Reserves**

1. A company shall hold claim reserves for all incurred but unpaid claims on all health insurance policies, which is measured as the present value of future benefits or amounts not yet due as of the valuation date that are expected to arise under claims which have been incurred as of the valuation date and shall hold appropriate claim expense reserves for the estimated expense of settlement of all incurred but unpaid claims.
2. A company shall test all claim reserves for prior valuation years for adequacy and reasonableness using claim runoff schedules in accordance with the statutory financial statement including consideration of any residual unpaid liability.
3. The maximum interest rate for claim reserves disability income insurance is as specified in Exhibit 1.
4. The minimum morbidity assumptions for disability income insurance are as specified in Exhibit 1, except that at the option of the insurer:
  - a. For claims incurred from January 1, 2001 through December 31, 2006 with duration from date of disablement of less than two years, a company may use its own morbidity experience, if such experience is credible; or may use other morbidity assumptions, if such assumptions are expected to place a sound value on the liabilities.

- b. For individual disability income claims incurred on or after January 1, 2007, assumptions regarding claim termination rates for the period less than two years from the date of disablement may be based on the insurer's experience, if such experience is considered credible, or upon other assumptions designed to place a sound value on the liabilities.
  - c. For group disability income claims incurred from January 1, 2001 through December 31, 2006 with a duration from date of disablement of more than two (2) years but less than five (5) years, reserves may be based on the insurer's experience if such experience is considered credible and for which the insurer maintains underwriting and claim administration control.
  - d. For group disability income claims incurred on or after January 1, 2007
    - i. Assumptions regarding claim termination rates for the period less than two (2) years from the date of disablement may be based on the insurer's experience, if experience is considered credible, or upon other assumptions designed to place a sound value on the liabilities;
    - ii. Assumptions regarding claim termination rates for the period two (2) or more years but less than five (5) years from date of disablement may be based on the insurer's experience on business if the experience is credible and for which the insurer maintains underwriting and claim administration control.
  - e. With respect to (c) and (d) above, for experience to be considered credible for purposes of these requirements, the company should be able to provide claim termination patterns over no more than six (6) years reflecting at least 5,000 claims terminations during the third through fifth claims durations on reasonably similar applicable policy forms. A plan of modification to the reserve basis must be in writing and must include:
    - i. An analysis of the credibility of the experience;
    - ii. A description of how all of the insurer's experience is proposed to be used in setting reserves;
    - iii. A description and quantification of the margins to be included; and
    - iv. A summary of the financial impact that the proposed plan of modification would have had on the insurer's last filed annual statement.
5. For disability income contracts with an elimination period, the duration of disablement must be measured as dating from the time that benefits would have begun to accrue had there been no elimination period.
6. The maximum interest rate for claim reserves for insurance other than disability income is as specified in Exhibit 1.



7. The morbidity assumptions or assumptions for other contingencies for insurance other than disability income must be based on the insurer's experience, if such experience is credible, or upon other assumptions designed to place a sound value on the liabilities.
8. A generally accepted actuarial reserving method or other reasonable method or a combination of methods may be used to estimate all claim liabilities. The methods used for estimating liabilities generally may be aggregate methods, or various reserve items may be separately valued. Approximations based on groupings and averages may also be employed. Adequacy of the claim reserves, however, must be determined in the aggregate.
9. For claim reserves to reflect "sound values" and/or reasonable margins, reserve tables based on credible experience should be adjusted regularly to maintain reasonable margins.
10. Claim reserves for survivor income benefits contained in group long-term disability contracts must be established based on the design of the survivor income benefits including the minimum period of disability before the spouse of a disabled person becomes eligible for a survivor income benefit and the amount of the benefit. A company may approximate the sum of the reserves for the basic disability benefit and the reserve for the survivor income benefit by computing the reserve for the basic disability at an interest rate less than the maximum interest rate if
  - a. the insurer performs rigorous testing of the approximation; and
  - b. testing indicates that basic disability reserves calculated at a 3.5% valuation interest rate adequately approximate the sum of basic disability reserves and survivor income benefits assuming:
    - i. a 12-month disability requirement;
    - ii. a maximum survivor income benefit duration of 24 months;
    - iii. a survivor income benefit of .667 of the disability income; and
    - iv. a valuation interest rate of 5.5%.

### **III. Premium Reserves**

1. Except as provided in 2. below, unearned premium reserves are required for all contracts with respect to the period of coverage for which premiums, other than premiums paid in advance, have been paid beyond the date of valuation.
2. Single premium credit disability insurance individual policies and group certificates are excluded from unearned premium reserve requirements of this section.
3. If premiums due and unpaid are carried as an asset, such premiums must be treated as premiums in force, subject to unearned premium reserve determination. The value of unpaid commissions, premium taxes, and the cost of collection associated with due and unpaid premiums must be carried as an offsetting liability.

4. The gross premiums paid in advance for a period of coverage commencing after the next premium due date which follows the date of valuation may be appropriately discounted to the valuation date and must be held as a separate liability.
5. The minimum unearned premium reserve with respect to any contract is the pro rata unearned modal premium that applies to the premium period beyond the valuation date, with such premium determined on the basis of:
  - a. The valuation net modal premium on the contract reserve basis applying to the contract; or
  - b. The gross modal premium for the contract if no contract reserve applies.
6. In no event may the sum of the unearned premium and contract reserves for all contracts of the insurer subject to contract reserve requirements be less than the gross modal unearned premium reserve on all such contracts, as of the date of valuation. Such reserve must never be less than the expected claims for the period beyond the valuation date represented by such unearned premium reserve, to the extent not provided for elsewhere.
7. The insurer may employ suitable approximations and estimates; including, but not limited to groupings, averages and aggregate estimation; in computing premium reserves. Such approximations or estimates must be tested periodically to determine their continuing adequacy and reliability.

#### **IV. Contract Reserves**

1. Contract reserves are required for all unmatured contractual obligations of a company arising out of the provisions of an individual or group health insurance contract. Unless otherwise specified below, contract reserves are required for individual and group contracts with constant or level premiums, and all individual and group contracts with respect to which, due to the gross premium pricing structure at issue, the value of the future benefits at any time exceeds the value of any appropriate future valuation net premiums at that time. This evaluation may be applied on a rating block basis if the total premiums for the block were developed to support the total risk assumed and expected expenses for the block each year, and a qualified actuary certifies the premium development. The actuary should state in the certification that premiums for the rating block were developed such that each year's premium was intended to cover that year's costs without any pre-funding. If the premium is also intended to recover costs for any prior years, the actuary should also disclose the reasons for and magnitude of such recovery. The values specified in this paragraph must be determined on the basis specified in Sections IV.6 - IV.12 below.
2. If premium rates are determined for a block such that each year's premium is intended to cover that year's cost, the rating block approach above results in no contract reserves, unless required by Section VI. If premium rates for a block are designed to prefund future years' costs, contract reserves are required.

3. Contracts not requiring a contract reserve are contracts that cannot be continued after one year from issue and contracts already in force on January 1, 2001 for which no contract reserve was required by the insurer's domiciliary state.
4. The contract reserve is in addition to claim reserves and premium reserves.
5. The methods and procedures for determining contract reserves must be consistent with those for claim reserves for any contract, or else appropriate adjustment must be made when necessary to assure provision for the aggregate liability. The definition of the date of incurral must be the same in both determinations.
6. The total contract reserve established shall incorporate provisions for moderately adverse deviations.
7. The minimum morbidity assumptions are as specified in Exhibit 1 subject to the following:
  - a. Contracts for which morbidity assumptions are not specified in Exhibit 1 must be valued using morbidity tables established for reserve purposes by a qualified actuary and the morbidity tables must contain a pattern of incurred claims cost that reflects the underlying morbidity and must not be constructed for the primary purpose of minimizing reserves.
  - b. Valuation net premiums used under each contract must have a structure consistent with the gross premium structure at issue of the contract as this relates to advancing age of insured, contract duration and period for which gross premiums have been calculated. If the gross premiums for a policy form do not vary by age, the valuation net premiums will nonetheless vary based on age at issue for each contract, since at issue the present value of valuation net premiums for a contract must equal the present value of tabular claim costs.
  - c. In determining the morbidity assumptions, the actuary shall use assumptions that represent the best estimate of anticipated future experience, but shall not incorporate any expectation of future morbidity improvement. Morbidity improvement is a change, in the combined effect of claim frequency and the present value of future expected claim payments given that a claim has occurred, from the current morbidity tables or experience that will result in a reduction to reserves. This provision is not intended to restrict the ability of the actuary to reflect the morbidity impact for a specific known event that has occurred and can be evaluated and quantified.
  - d. If the morbidity assumptions specified in Exhibit 1 are on an aggregate basis, the morbidity assumptions specified in Exhibit 1 may be adjusted to reflect the effect of insurer underwriting by policy duration. The adjustments must be appropriate to the insurer's underwriting.

- e. Effective January 1, 2007, when determining the morbidity assumptions, the actuary shall use assumptions that represent the best estimate of anticipated future experience, but shall not incorporate any expectation of future morbidity improvement. Morbidity improvement is a change, in the combined effect of claim frequency and the present value of future expected claim payments given that a claim has occurred, from the current morbidity tables or experience that will result in a reduction to reserves. It is not the intent of this provision to restrict the ability of the actuary to reflect the morbidity impact for a specific known event that has occurred and that is able to be evaluated and quantified.
  - f. Business in force prior to January 1, 2007 may be permitted to retain the original reserve basis, which may not meet the provisions of (e) above.
8. The maximum interest rate is specified in Exhibit 1.
9. Termination rates are the specified mortality tables in Exhibit 1, except as follows:
- a. Under contracts for which premium rates are not guaranteed, and where the effects of insurer underwriting are specifically used by policy duration in the valuation morbidity standard or for return of premium or other deferred cash benefits, total termination rates may be used at ages and durations where these exceed specified mortality table rates, but not in excess of the lesser of eighty percent of the total termination rate used in the calculation of the gross premiums or eight percent.
  - b. For long-term care individual policies or group certificates issued within the period January 1, 2001 to December 31, 2006, the contract reserve may be established on a basis of separate mortality as specified in Exhibit 1, and terminations other than mortality that do not exceed:
    - i. For policy year one, the lesser of eighty percent (80%) of the voluntary lapse rate used in the calculation of gross premiums and eight percent (6%);
    - ii. For policy years two (2) through four (4), the lesser of eighty percent (80%) of the voluntary lapse rate used in the calculation of gross premiums and four percent (4%); and
    - iii. For policy years five (5) and later, the lower of one hundred percent (100%) of the voluntary lapse rate used in the calculation of gross premiums, and three percent (3%) for employer group insurance or 2% for all other.
10. For long-term care individual policies or group certificates issued on or after January 1, 2007, the contract reserve shall be established on the basis of:
- a. Mortality (as specified in Exhibit 1); and
  - b. Terminations other than mortality, where the terminations are not to exceed:

- i. For policy year one, the lesser of eighty percent (80%) of the voluntary lapse rate used in the calculation of gross premiums and six percent (6%);
  - ii. For policy years two (2) through four (4), the lesser of eighty percent (80%) of the voluntary lapse rate used in the calculation of gross premiums and four percent (4%);
  - iii. For policy years five (5) and later, the lesser of one hundred percent (100%) of the voluntary lapse rate used in the calculation of gross premiums and two percent (2%), except certificates under policies issued to one or more employers or labor organizations, or to a trust or to the trustees of a fund established by one or more employers or labor organizations, or a combination thereof, for employees or former employees or a combination thereof, or for members or former members or a combination thereof, of a labor organization where the 2% shall be three percent (3%).
11. The reserve method is applied only in relation to the date of issue of a contract and is
  - a. For insurance other than long-term care and return of premium or other deferred cash benefits, the two-year full preliminary term method in which the terminal reserve is zero at the end of the first and second contract anniversaries;
  - b. For long-term care insurance, is the one-year full preliminary term method in which the terminal reserve is zero at the end of the first contract anniversary;
  - c. For return of premium or other deferred cash benefits, the one year preliminary term method if the benefits are provided at any time before the twentieth anniversary or the two year preliminary term method if the benefits are only provided on or after the twentieth anniversary.
12. Reserve adjustments introduced after issue, as a result of rate increases, revisions in assumptions (e.g., projected inflation rates) or for other reasons must be applied immediately as of the effective date of adoption of the adjusted basis.
13. Negative reserves on any benefit may be offset against positive reserves for other benefits in the same contract, but the total contract reserve with respect to all benefits combined may not be less than zero.
14. For long term care insurance the contract reserve on a policy basis must not be less than the net single premium for the nonforfeiture benefits at the appropriate policy duration, where the net single premium is computed according to the above specifications.
15. If the contract reserves are not less in the aggregate than the reserve determined using the above specified methods and assumptions, an insurer may in determining a sound value of its liabilities under the contracts

- a. In place of the above specified assumptions use any reasonable assumptions as to interest rates, termination and/or mortality rates, and rates of morbidity or other contingency; or
  - b. In place of the above specified methods use other methods including, but not limited to the following: the net level premium method; the one-year full preliminary term method; prospective valuation on the basis of actual gross premiums with reasonable allowance for future expenses; the use of approximations such as those involving age groupings, groupings of several years of issue, average amounts of indemnity, grouping of similar contract forms; the computation of the reserve for one contract benefit as a percentage of, or by other relation to, the aggregate contract reserves exclusive of the benefit or benefits so valued; and the use of a composite annual claim cost for all or any combination of the benefits included in the contracts valued.
16. Annually, an appropriate review an insurer shall conduct a review of prospective contract liabilities on contracts valued by tabular reserves, to determine the continuing adequacy and reasonableness of the tabular reserves giving consideration to future gross premiums. The insurer shall make appropriate increments to such tabular reserves if such tests indicate that the basis of such reserves is no longer adequate subject, however, to the minimum standards in Sections IV.6 - IV.12 above.
17. In the event a company has a contract or a group of related similar contracts, for which future gross premiums will be restricted by contract, insurance department regulations, or for other reasons, such that the future gross premiums reduced by expenses for administration, commissions, and taxes will be insufficient to cover future claims, the company shall establish contract reserves for such shortfall in the aggregate.

#### **V. Reinsurance**

Increases to, or credits against reserves carried, arising because of reinsurance assumed or reinsurance ceded, must be determined in a manner consistent with these minimum reserve standards and with all applicable provisions of the reinsurance contracts which affect the insurer's liabilities.

#### **VI. Health Insurance Reserve Adequacy and Additional Reserves**

1. Adequacy of an insurer's health insurance reserves is to be determined on the aggregate of claim reserves, premium reserves and contract reserves. However, appropriate reserves must be determined for each of these three categories of reserves separately.
2. When an insurer determines that adequacy of its health insurance reserves requires reserves in excess of the minimum standards specified herein, the insurer shall hold such increased reserves and the increased reserves are the minimum reserves for that insurer.

3. With respect to any block of contracts, or with respect to an insurer's health business as a whole, a prospective gross premium valuation is the ultimate test of reserve adequacy as of a given valuation date. Such a gross premium valuation will take into account, for contracts in force, in a claims status, or in a continuation of benefits status on the valuation date, the present value as of the valuation date of: all expected benefits unpaid, all expected expenses unpaid, and all unearned or expected premiums, adjusted for future premium increases reasonably expected to be put into effect.
4. A gross premium valuation is to be performed whenever a significant doubt exists as to reserve adequacy with respect to any major block of contracts, or with respect to the insurer's health business as a whole. In the event inadequacy is found to exist, the insurer shall recognize the loss immediately and restore the reserves to adequacy. An insurer shall hold adequate reserves (inclusive of claim, premium and contract reserves, if any) with respect to all contracts, regardless of whether contract reserves are required for such contracts under these standards.
5. Whenever minimum reserves, as defined in these standards, exceed reserve requirements as determined by a prospective gross premium valuation, such minimum reserves remain the minimum requirement under these standards.
6. A company shall hold reserves for experience rated contracts such that
  - a. The method used to estimate the reserves is reasonable based on the company's procedures and is consistent among reporting periods; and
  - b. The assumptions used are consistent with the assumptions made in determining other reserves.

## Exhibit 1

### Morbidity

#### I. Minimum morbidity standards for valuation of specified individual contract health insurance benefits are as follows:

1. For Disability Income Benefits Due to Accident or Sickness:
  - a. Contract Reserves:
    - i. The 1985 Commissioners Individual Disability Tables A (85CIDA); or
    - ii. The 1985 Commissioners Individual Disability Tables B (85CIDB).

Each insurer shall elect, with respect to all individual contracts issued in any one statement year, whether it will use Tables A or Tables B as the minimum standard.

- b. Claim Reserves:
  - i. For claims incurred on or after January 1, 2002:  
The 1985 Commissioners Individual Disability Table A (85CIDA) with claim termination rates multiplied by the following adjustment factors:

Duration	Adjustment Factor	Adjusted Termination Rates*
Week 1	0.366	0.04831
2	0.366	0.04172
3	0.366	0.04063
4	0.366	0.04355
5	0.365	0.04088
6	0.365	0.04271
7	0.365	0.04380
8	0.365	0.04344
9	0.370	0.04292
10	0.370	0.04107
11	0.370	0.03848
12	0.370	0.03478
13	0.370	0.03034
Month 4	0.391	0.08758
5	0.371	0.07346
6	0.435	0.07531
7	0.500	0.07245
8	0.564	0.06655
9	0.613	0.05520
10	0.663	0.04705
11	0.712	0.04486
12	0.756	0.04309



<b>Duration</b>	<b>Adjustment Factor</b>	<b>Adjusted Termination Rates*</b>
13	0.800	0.04080
14	0.844	0.03882
15	0.888	0.03730
16	0.932	0.03448
17	0.976	0.03026
18	1.020	0.02856
19	1.049	0.02518
20	1.078	0.02264
21	1.107	0.02104
22	1.136	0.01932
23	1.165	0.01865
24	1.195	0.01792
Year 3	1.369	0.16839
4	1.204	0.10114
5	1.199	0.07434
6 and later	1.000	**

\*The adjusted termination rates derived from the application of the adjustment factors to the DTS Valuation Table termination rates shown in exhibits 3a, 3b, 3c, 4, and 5 (*Transactions of the Society of Actuaries* (TSA) XXXVII, pp. 457-463) is displayed. The adjustment factors for age, elimination period, class, sex, and cause displayed in exhibits 3a, 3b, 3c, and 4 should be applied to the adjusted termination rates shown in this table.

\*\*Applicable DTS Valuation Table duration rate from exhibits 3c and 4 (TSA XXXVII, pp. 462-463).

The 85CIDA table so adjusted for the computation of claim reserves shall be known as 85CIDC (The 1985 Commissioners Individual Disability Table C).

- ii. For claims incurred prior to January 1, 2002:  
Each insurer may elect which of the following to use as the minimum standard for claims incurred prior to January 1, 2002:
  - a. The minimum morbidity standard in effect for contract reserves on currently issued contracts, as of the date the claim is incurred, or
  - b. The standard as defined in Item (i), applied to all open claims.

Once an insurer elects to calculate reserves for all open claims on the standard defined in a, all future valuations must be on that standard.

2. For Hospital Benefits, Surgical Benefits and Maternity Benefits (scheduled benefits or fixed time period benefits only):
  - a. Contract Reserves:  
The 1974 Medical Expense Tables, Table A, Transactions of the Society of Actuaries, Volume XXX, pg. 63. Refer to the paper (in the same volume, pg. 9) to which this table is appended, including its discussions, for methods of adjustment for benefits not directly valued in Table A: "Development of the 1974 Medical Expense Benefits," Houghton and Wolf.
  - b. Claim Reserves: No specific standard.
3. Cancer Expense Benefits (Scheduled benefits or fixed time period benefits only).
  - a. Contract Reserves: The 1985 NAIC Cancer Claim Cost Tables.
  - b. Claim Reserves: No specific standard.
4. Accidental Death Benefits.
  - a. Contract Reserves: The 1959 Accidental Death Benefits Table.
  - b. Claim Reserves: Actual amount incurred.
5. Single Premium Credit Disability.
  - a. Contract Reserves:  
For contracts issued on or after January 1, 2002:
    - i. For plans having less than a thirty-day elimination period, the 1985 Commissioners Individual Disability Table A (85CIDA) with claim incidence rates increased by twelve percent (12%).
    - ii. For plans having a thirty-day and greater elimination period, the 85CIDA for a fourteen-day elimination period with the adjustment in Item (i).

For contracts issued prior to January 1, 2002, each insurer may elect either i or ii below to use as the minimum standard. Once an insurer elects to calculate reserves for all contracts on the standard in ii., all future valuations must be on that basis.

- i. The minimum morbidity standard in effect for contract reserves on currently issued contracts, as of the date the contract was issued, or
- ii. The standard as defined in a., applied to all contracts.

Other Individual Benefits.

Contract Reserves: For all other individual contract benefits, morbidity assumptions are to be determined as provided in the reserve standards.

Claim Reserves: For all benefits other than disability, claim reserves are to be determined as provided in the standards.

## **II. Minimum morbidity standards for valuation of specified group contract health insurance benefits are as follows:**

1. Disability Income Benefits Due to Accident or Sickness.
  - a. Contract Reserves: The 1987 Commissioners Group Disability Income Table (87CGDT).
  - b. Claim Reserves: The 1987 Commissioners Group Disability Income Table (87CGDT);
2. Single Premium Credit Disability
  - a. Contract Reserves for contracts issued on or after January 1, 2002:
    - i. For plans having less than a thirty-day elimination period, the 1985 Commissioners Individual Disability Table A (85CIDA) with claim incidence rates increased by twelve percent (12%).
    - ii. For plans having a thirty-day and greater elimination period, the 85CIDA for a fourteen-day elimination period with the adjustment in item (i).
  - b. For contracts issued prior to January 1, 2002, each insurer may elect either i. or ii. below to use as the minimum standard. Once an insurer elects to calculate reserves for all contracts on the standard defined in i., all future valuations must be on that basis.
    - i. The minimum morbidity standard in effect for contract reserves on currently issued contracts, as of the date the contract was issued, or
    - ii. The standard as defined in a., applied to all contracts.
3. Other Group Benefits.
  - a. Contract Reserves: For all other group contract benefits, morbidity assumptions are to be determined as provided in the reserve standards.
  - b. Claim Reserves: For all benefits other than disability, claim reserves are to be determined as provided in the standards.

## **III. Interest**

For contract reserves the maximum interest rate is the maximum rate allowed by the Standard Valuation Law in the valuation of whole life insurance issued on the same date as the health insurance contract.

#### **IV. Mortality**

1. Unless 3 or 4 below applies, the mortality basis used for all policies except long-term care individual policies and group certificates issued before January 1, 2001 shall be according to a table (but without use of selection factors) allowed by law for the valuation of whole life insurance issued on the same date as the health insurance contract.
2. For long-term care insurance individual policies or group certificates issued from January 1, 2001 through December 31, 2006 the mortality basis used shall be the 1983 Group Annuity Mortality Table without projection. For long-term care insurance individual policies or group certificates issued on or after January 1, 2007 the mortality basis used shall be the 1994 Group Annuity Mortality Static Table.
3. Other mortality tables adopted by the NAIC and promulgated by the commissioner may be used in the calculation of the minimum reserves if appropriate for the type of benefits and if approved by the commissioner. The request for approval shall include the proposed mortality table and the reason that the standard specified in 1 above is inappropriate.
4. For single premium credit insurance using the 85 CIDA table, no separate mortality shall be assumed.

**Exhibit 2**  
**Reserves for Waiver of Premium (Supplementary explanatory material)**

Determination of waiver of premium reserves involves several special considerations. First, the disability valuation tables promulgated by the NAIC are based on exposures that include contracts on premium waiver as in-force contracts. Therefore, contract reserves based on these tables are NOT reserves on “active lives”, but rather reserves on contracts “in force.” This is true for the 1964 CDT and for both the 1985 CIDA and CIDB tables. Accordingly, tabular reserves using any of these tables should value reserves on the following basis:

1. Claim reserves should include reserves for premiums expected to be waived, valuing as a minimum the valuation net premium being waived.
2. Premium reserves should include contracts on premium waiver as in-force contracts, valuing as a minimum the unearned modal valuation net premium being waived.
3. Contract reserves should include recognition of the waiver of premium benefit in addition to other contract benefits provided for, valuing as a minimum the valuation net premium to be waived.

If an insurer is, instead, valuing reserves on an active life table, or if a specific valuation table is not being used but the insurer’s gross premiums are calculated on a basis that includes in the projected exposure only those contracts for which premiums are being paid, then it may not be necessary to provide specifically for waiver of premium reserves. Any insurer using such a true “active life” basis should carefully consider whether or not additional liability should be recognized on account of premiums waived during periods of disability or during claim continuation.

# ATTACHMENT 2

Section 3(I) AOMR

## **ACTUARIAL OPINION AND MEMORANDUM REQUIREMENTS**

The following provisions contain the requirements for statements of actuarial opinion and for supporting actuarial memoranda in accordance with Section 3 of the Standard Valuation Law, and are collectively referred to as AOM requirements.

The AOM requirements 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, a state commissioner has the authority to specify methods of actuarial analysis and actuarial assumptions when, in the commissioner's judgment, these specifications are necessary for the actuary to render an acceptable opinion relative to the adequacy of reserves and related items.

These AOM requirements are applicable to all annual statements filed after the operative date of the Valuation Manual. A statement of actuarial opinion on the adequacy of the reserves and related actuarial items based on an asset adequacy analysis and a supporting actuarial memorandum is required each year.

### **I. Definitions**

1. "Actuarial Opinion" means the opinion of an appointed actuary regarding the adequacy of reserves and related actuarial items based on an asset adequacy analysis.
2. "Actuarial Standards Board" means the board established by the American Academy of Actuaries to develop and promulgate standards of actuarial practice.
3. "Annual statement" means the statutory financial statements a company must file with a state insurance commissioner as required under state insurance law.
4. "Appointed actuary" means an individual who is appointed or retained in accordance with the requirements set forth in Section II.3 to provide the actuarial opinion and supporting memorandum in accordance with Section 3 of the Standard Valuation Law.
5. "Asset adequacy analysis" means an analysis that meets the standards and other requirements referred to in Section III of these AOM requirements.
6. "Commissioner" means the Insurance Commissioner of a state in which a company transacts business.
7. "Company" means a life insurance company, fraternal benefit society or reinsurer subject to these AOM requirements.

8. “Qualified actuary” means an individual who meets the requirements set forth in Section II.2 of these AOM requirements.

## **II. Submission of Statement of Actuarial Opinion**

1. 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 V must be included on or attached to Page 1 of the annual statement for each year. A company may request in writing and, if approved by the Commissioner, obtain an extension of the date for submission of the statement of actuarial opinion.
2. A “qualified actuary” is an individual who:
  - a. Is a member of the American Academy of Actuaries;
  - b. 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;
  - c. Is familiar with the valuation requirements applicable to life and health insurance companies;
  - d. Has not been found by a state commissioner (or if so found, has subsequently been reinstated as a qualified actuary), following appropriate notice and hearing to have:
    - i. 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;
    - ii. Been found guilty of fraudulent or dishonest practices;
    - iii. Demonstrated incompetence, lack of cooperation, or untrustworthiness to act as a qualified actuary;
    - iv. Submitted to a commissioner during the past five (5) years an actuarial opinion or memorandum pursuant to these AOM requirements that the commissioner has rejected because it did not meet the requirements including standards set by the Actuarial Standards Board; or
    - v. Resigned or been removed as an actuary within the past five (5) 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
  - e. Has not failed to notify a commissioner of any action taken by a commissioner of any other state similar to that under d. above.
3. An “appointed actuary” is a qualified actuary who is appointed or retained to prepare the Statement of Actuarial Opinion under these AOM requirements, 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 each 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 the notice that the person meets the requirements set forth in Section II.2. Once notice is furnished, no further notice is



required with respect to this person, provided that the company shall give each commissioner timely written notice in the event the actuary ceases to be appointed or retained as an appointed actuary or to meet the requirements of a qualified actuary. 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.

### **III. Standards for Asset Adequacy Analysis**

1. The asset adequacy analysis must conform to the Standards of Practice as promulgated from time to time by the Actuarial Standards Board and to any additional standards under these AOM requirements, which standards are to form the basis of the statement of actuarial opinion in accordance with these AOM requirements; and
2. Must be based on methods of analysis as are deemed appropriate for such purposes by the Actuarial Standards Board.

### **IV. Liabilities to be Covered**

1. The statement of actuarial opinion must apply to all in force business on the annual statement date, whether directly issued or assumed, regardless of when or where issued.
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 the requirements set forth in the Valuation Manual, the company shall establish the additional reserve.
3. Additional reserves established under Section IV.2 above 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.

### **V. Statement of Actuarial Opinion Based On an Asset Adequacy Analysis**

1. The statement of actuarial opinion shall consist of:
  - a. A paragraph identifying the appointed actuary and his or her qualifications (see Section V.3);
  - b. 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 Section V.4) and identifying the reserves and related actuarial items covered by the opinion that have not been so analyzed;
  - c. 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 Section V.5), supported by a statement of each such expert in the form prescribed by Section V.11; and

- d. An opinion paragraph expressing the appointed actuary's opinion with respect to the adequacy of the supporting assets to mature the liabilities (see Section V.8).
- e. One or more additional paragraphs will be needed in individual company cases as follows:

If the appointed actuary considers it necessary to state a qualification of his or her opinion;

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;

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;

If the appointed actuary chooses to add a paragraph briefly describing the assumptions that form the basis for the actuarial opinion.

- 2. The language in Sections V.3 - V.8 is 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 that 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.
- 3. 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 include a statement such as:

“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 include a statement 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.”

4. The scope paragraph should include a statement such as:

“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.

<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 Amount (3)</b>	<b>Total Amount (1)+(2)+(3) (4)</b>
<b>Exhibit 8</b>					
A Life Insurance					
B Annuities					
C Supplementary Contracts Involving Life Contingencies					
D Accidental Death Benefit					
E Disability—Active					
F Disability—Disabled					
G Miscellaneous					
Total (Exhibit 8 Item 1, Page 3)					
<b>Exhibit 9</b>					
A Active Life Reserve					
B Claim Reserve					
Total (Exhibit 9 Item 2, Page 3)					

<b>Exhibit 10</b>					
Premium and Other Deposit Funds (Column 5, Line 14)					
Guaranteed Interest Contracts (Column 2, Line 14)					
Other (Column 6, Line 14)					
Supplemental Contracts and Annuities Certain (Column 3, Line 14)					
Dividend Accumulations or Refunds (Column 4, Line 14)					
Total Exhibit 10 (Column 1, Line 14)					
<b>Exhibit 11 Part 1</b>					
1 Life (Page 3, Line 4.1)					
2 Health (Page 3, Line 4.2)					
Total Exhibit 11, Part 1					
Separate Accounts (Page 3 of the Annual Statement of the Separate Accounts, Lines 1, 2, 3.1, 3.2, 3.3)					
<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 are the reserves established under Section III.2.

(b) The appointed actuary should indicate the method of analysis, determined in accordance with the standards for asset adequacy analysis referred to in Section II of these AOM requirements, by means of symbols that should be defined in footnotes to the table.

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

5. 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:

“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 opinion”], 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 the experts in the form prescribed by Section V.11.

6. If the appointed actuary has examined the underlying asset and liability records, the reliance paragraph should 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.”

7. If the appointed actuary has not examined the underlying records, but has relied upon data (e.g., listings and summaries of policies in force or asset records) prepared by the company, the reliance paragraph should 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 [list applicable exhibits and schedules] 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 Section V.11.

8. The opinion paragraph should 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 Law and regulation 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 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. (At the discretion of the commissioner, this language may be omitted for an

opinion filed on behalf of a company doing business only in this state and in no other state.)

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: (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

---

Telephone Number of Appointed Actuary

---

Date”

9. 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 V.



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 should follow the "scope" paragraph and precede the "opinion" paragraph.

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 should so indicate the persons the 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.

10. If allowed by the commissioner, the opining actuary may use one of the following as an alternative to the requirements of Section V.8(c):
  - 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, 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 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 allows this alternative, a formal written list of products (add to the table in Item (ii) below) for which the required comparison must be provided will be published by the commissioner. 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) 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.

The commissioner shall keep the comparison provided by the company confidential to the same extent and under the same conditions as the actuarial memorandum.

11. Notwithstanding the above, a 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.

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

1. 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 a commissioner upon 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 a 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 II.2, with respect to the areas covered in such memoranda, and so state in their memoranda.
3. If a commissioner requests a memorandum and no such memorandum exists or if a commissioner finds that the analysis described in the memorandum fails to meet the standards of the Actuarial Standards Board or the AOM requirements, 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 these AOM requirements. 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 these AOM requirements for any one of the current year or the preceding three (3) years.
5. The appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in Section V.7. The regulatory asset adequacy issues summary will 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. A commissioner shall keep the regulatory asset adequacy issues summary confidential to the same extent and under the same conditions as the actuarial memorandum.
6. When an actuarial opinion is provided, the memorandum shall demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in Section III and any additional standards specified in these AOM requirements. It shall specify:
  - a. For reserves:

- i. Product descriptions including market description, underwriting and other aspects of a risk profile and the specific risks the appointed actuary deems significant;
  - ii. Source of liability in force;
  - iii. Reserve method and basis;
  - iv. Investment reserves;
  - v. Reinsurance arrangements;
  - vi. 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;
  - vii. Documentation of assumptions to test reserves for lapse rates (both base and excess), interest crediting rate strategy, mortality, policyholder dividend strategy, competitor or market interest rate, annuitization rates, commissions and expenses, and 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.
- b. For assets:
- i. Portfolio descriptions, including a risk profile disclosing the quality, distribution and types of assets;
  - ii. Investment and disinvestment assumptions;
  - iii. Source of asset data;
  - iv. Asset valuation bases; and
  - v. Documentation of assumptions made for default costs, bond call function, mortgage prepayment function, determining market value for assets sold due to disinvestment strategy, and 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.
- c. For the analysis basis:
- i. Methodology;

- ii. Rationale for inclusion or exclusion of different blocks of business and how pertinent risks were analyzed;
  - iii. 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);
  - iv. 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
  - v. Whether the impact of federal income taxes was considered and the method of treating reinsurance in the asset adequacy analysis;
  - vi. Summary of material changes in methods, procedures, or assumptions from prior year’s asset adequacy analysis;
- d. Summary of results; and
  - e. Conclusions.

7. 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 inforce 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 inforce;
- 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.
8. 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.
9. 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.”
10. 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; 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.
11. 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.
12. 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.

# ATTACHMENT 3

## Section 4(II) PBR Reporting



# AMERICAN ACADEMY *of* ACTUARIES

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## **Reporting and Documentation Requirements for Principles-Based Reserves from the American Academy of Actuaries' Subgroup 1 of the Valuation Law and Manual Team**

**Presented to the National Association of Insurance Commissioners'  
Life and Health Actuarial Task Force**

**San Francisco, CA – June 2007**

The American Academy of Actuaries is a national organization formed in 1965 to bring together, in a single entity, actuaries of all specializations within the United States. A major purpose of the Academy is to act as a public information organization for the profession. Academy committees, task forces and work groups regularly prepare testimony and provide information to Congress and senior federal policy-makers, comment on proposed federal and state regulations, and work closely with the National Association of Insurance Commissioners and state officials on issues related to insurance, pensions and other forms of risk financing. The Academy establishes qualification standards for the actuarial profession in the United States and supports two independent boards. The Actuarial Standards Board promulgates standards of practice for the profession, and the Actuarial Board for Counseling and Discipline helps to ensure high standards of professional conduct are met. The Academy also supports the Joint Committee for the Code of Professional Conduct, which develops standards of conduct for the U.S. actuarial profession.

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## SECTION [TBD]: REPORTING AND DOCUMENTATION REQUIREMENTS FOR PBA RESERVES

### Table of Contents

Subsection 1	Purpose
Subsection 2	Definitions
Subsection 3	Documentation and Disclosure Requirements – All Products
Subsection 4	Additional Documentation and Disclosure Requirements – Life Products
Subsection 5	Additional Documentation and Disclosure Requirements – Annuity Products

### Subsection 1. Purpose

This section provides documentation and disclosure requirements for valuations performed under a principles-based approach (PBA) under section [insert appropriate section] of the Standard Valuation Law. Documentation and disclosure regarding valuations for other supplemental benefits and riders not directly identified in the scope are to be consistent with the requirements defined by this section.

**Drafting Note:** The majority of the material in this section was originally contained within the section of the Valuation Manual that defines the PBA reserve calculation requirements for life products. It has been carved out and put in its own section of the Valuation Manual to clarify/distinguish requirements for calculating reserves from documentation requirements that are not a direct component of the reserve calculation. However, further work is needed to link these documentation requirements to the appropriate reserve calculation requirement that gave rise to these documentation requirements.

### Subsection 2. Definitions

Definitions used in this section, other than those specified below, are as specified in section [insert applicable section] of the Valuation Manual.

“PBR Valuation Actuary” is defined as the qualified actuary responsible for the content of the PBR Actuarial Report documenting methods and assumptions supporting a principles-based approach reserves.

### Subsection 3. Documentation and Disclosure Requirements – All Products

This subsection describes the documentation and disclosure requirements that are applicable to all product types valued using a principle-based approach. Subsequent sections contain documentation and disclosure requirements that are unique to specific product types.

- A. Each year, the PBR Valuation Actuary shall prepare a PBR Certification and a PBR Actuarial Report for all contracts subject to a principles-based approach for reserves. The PBR Actuarial Report documents all material decisions made, and information used, to support the PBR Certification. The company may decide to have one PBR Valuation Actuary who prepares one PBR Certification and one PBR Actuarial Report, or several PBR Valuation Actuaries for different products or different product lines. If the company chooses to have multiple PBR Valuation Actuaries, each shall sign a PBR Certification and prepare a PBR Actuarial Report for their respective product area, and the company shall ensure that all PBR Certifications and all PBR Actuarial Reports are submitted together along with a summarizing report.

**Drafting Note:** The certification section may be moved to a different section of the Valuation Manual that includes the AOMR requirements that address both AOMR opinions and PBR certifications.

1. The PBR Certification shall include the following items, with recommended language:

**Drafting Note:** the recommended language may be modified as needed to meet the circumstances of a particular company.

- a. An opening paragraph identifying the PBR Valuation Actuary and his or her qualifications. This opening paragraph should generally indicate the PBR Valuation Actuary’s relationship to the company and his or

her qualifications to sign the PBR Certification. The opening paragraph of the PBR Certification should include a statement such as:

“I [name], am [position] of [insurance company name] am a member of the American Academy of Actuaries. I believe I meet the qualification standards of the American Academy of Actuaries to render this Certification regarding the principles-based approach reserves, and am familiar with the valuation requirements applicable to such reserves.”

For a consulting actuary, the opening paragraph of the PBR Certification should include a statement such as:

“I [name], am a member of the American Academy of Actuaries, am associated with the firm of [name of consulting firm]. I have been engaged by the [name of company] to render this PBR Certification. I believe I meet the qualification standards of the American Academy of Actuaries to render this Certification regarding the principles-based approach reserves, and am familiar with the valuation requirements applicable to such reserves.”

**Drafting note:** we could specify that if the PBR Valuation Actuary is not the appointed actuary, then the PBR Valuation Actuary is appointed or engaged by the appointed actuary.

- b. A description of the policies and/or contracts subject to these principles-based approach reserve requirements. This description should include a statement such as:

“I have examined the actuarial methods and actuarial assumptions used in determining the principles-based approach reserves listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials as of December 31, 20[ ]. Summarized below are those reserves and related actuarial items which have been calculated using principles-based approach reserving methods and assumptions.”

<b>Principles-Based Approach Reserves</b>				
<b>Annual Statement Location</b>	<b>Direct Reserve (1)</b>	<b>Assumed Reserve (2)</b>	<b>Ceded Reserve (3)</b>	<b>Net Reserve (1)+(2)-(3)</b>
<b>Exhibit 5</b>				
A. Life Insurance				
B. Annuities				
C. Supplementary Contracts Involving Life Contingencies				
D. Accidental Death Benefit				
E. Disability – Active				
F. Disability – Disabled				
G. Miscellaneous				
Total Exhibit 5				
<b>Exhibit 6</b>				
A. Active Life Reserve				
B. Claim Reserve				
Total Exhibit 6				
<b>TOTAL PRINCIPLES-BASED APPROACH RESERVES</b>				

- c. A reliance paragraph describing those areas, if any, where the PBR Valuation Actuary is relying on other experts in developing data, procedures, or assumptions, supported by a reliance statement of each such expert. If the PBA Valuation Actuary has relied on other experts to develop certain portions of the work supporting principles-based approach reserves, the reliance paragraph should include a statement such as:

“I have relied on [name], [title] for [e.g., Stochastic Reserve calculations for the \_\_\_\_ product line] 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 the experts in the form prescribed by section [insert applicable section].

- d. A paragraph expressing the PBR Valuation Actuary’s certification that the methods and prudent estimate assumptions supporting principles based-approach reserves are reasonable and appropriate and that resulting reserve amounts are calculated in a manner this is consistent with the principle-based approach requirements. The PBR Certification should include a statement such as:

“I certify that the reserves and related actuarial values concerning the principles-based approach reserves identified above:

- (1) Are computed in accordance with presently accepted actuarial standards as promulgated by the Actuarial Standards Board;
- (2) When actuarial judgment is involved, are based on actuarial assumptions which are reasonable and appropriate;
- (3) Meet the requirements of a PBA valuation specified in [insert applicable section] of the Valuation Manual.”

---

Signature of PBA Valuation Actuary

2. The PBR Actuarial Report shall include:

- a. A description of the policies subject to the principles-based valuation requirements;
- b. The amount of Starting Assets supporting the policies subject to these requirements, a description of the assets used, and the method and rationale for determining the amount of Starting Assets, selecting the assets used, and apportioning the assets between the policies subject to PBA valuation requirements and those policies not subject to PBA valuation requirements;
- c. A summary of the valuation assumptions used and a description of the method used to determine valuation assumptions and margins, as described in Subsection 3(B), 3(C), 3(D), 3(E), and 3(F);
- d. Any material changes in the method used to determine assumption margins from the prior year’s calculation, and the rationale for the change;
- e. A description of the Cash Flow Model used and the approach used to validate the model calculations;
- f. A summary of any reinsurance treaties on the policies subject to these requirements and the approach used to model reinsurance cash flows;
- g. A description of the methods used to generate stochastic interest rates, equity performance, and separate account fund performance, and the results of calibration if applicable;

- h. A description of the approach used to model risk management strategies (e.g., hedging), and other derivative programs;
  - i. Results of applicable sensitivity tests;
  - j. A list of key risk and experience reporting elements that the company will be tracking to monitor changes in experience and to update assumptions, as experience emerges, the frequency of that tracking and a documentation of past management actions taken because of that tracking;
  - k. The length of the projection period and the rationale for choosing the length of the projection period;
  - l. If the principles-based approach reserve calculations are performed as of a date other than the Valuation Date, disclosure of the results of such adjustment and the methodology used to determine the adjustment is required;
  - m. A description of any material considerations considered necessary to understand the development of assumptions even if such considerations are not explicitly mentioned in this section. The documentation should be explicit when material judgments were required and such judgments had to be made without supporting historical experience; and
  - n. Disclosure of additional items for specific products described in Subsections 4 and 5.
3. The PBR Valuation Actuary shall provide the PBR Actuarial Report to the company, the PBA Review Actuary and, upon request, to the commissioner.

**Drafting Note:** The timing of when the report is provided will be determined by the NAIC.

4. The PBR Actuarial Report and any other material provided by the PBR Valuation Actuary to the PBA Review Actuary or the commissioner in connection therewith shall be kept confidential by the PBA Review Actuary and the commissioner and shall not be made public. The PBR Actuarial Report or other material may otherwise be released by the commissioner (a) with the written consent of the company, or (b) to the Actuarial Board for Counseling and Discipline upon request stating that the report of other material is required for the purpose of professional disciplinary proceeding and setting forth procedures satisfactory to the commissioner for preserving the confidentiality of the PBR Actuarial Report or other material.

**Drafting Note:** Record retention requirements are needed if not included in the law.

#### B. Documentation Requirements for Mortality Assumptions

- 1. Experience Mortality:
  - a. Summarize any mortality studies used to support mortality assumptions, quantify the exposures and corresponding deaths, describe the important characteristics of the exposures and comment on unusual data points or trends;
  - b. Document the age of the experience data used to determine expected mortality curves and comment on the relevance of the data;
  - c. Describe how the expected mortality curves compare to recent historical experience and comment on any differences;
  - d. The company shall provide an actual to expected analysis at least once every three years;
  - e. Explain how the curve reflects the wearing off of underwriting over time (if applicable);

- f. Discuss any assumptions made on mortality improvements, the support for such assumptions and how such assumptions adjusted the modeled mortality;
- g. Identification and quantification of any changes in mortality assumptions from the prior year;
- h. If the study was done on a block of business that was similar to the block of business being valued, identify the differences between the block of business on which the data was gathered and the block of business being valued. Describe how these differences were reflected in the mortality used in modeling.
- i. If experience mortality rates for a business segment are being determined using data consistent with the business segment, but is not based on the actual experience directly applicable to the business segment (whether or not the business segment is from the company), the company shall document any similarities or differences between the two business segments (e.g., type of underwriting, marketing channel, average policy size, etc.). Additionally, the company shall document the following:
  - i. Source of data including a detailed explanation of the appropriateness of the data, the underlying source of data, including how the mortality rates were developed, graduated and smoothed.
  - ii. The number of deaths and death claim amounts by major grouping no broader than those allowed for direct company data and including: age, gender, risk class, policy duration and other relevant information.
- j. Actual experience data may be determined by individual risk class or aggregated for multiple risk classes. Once a method is chosen the company may change the methodology (or parameters used in the methodology) for aggregating experience, but must disclose the rationale and the impact on reserve levels of such change;
- k. Any other relevant important information concerning the mortality assumption.

2. Assumption Margins:

- a. Description of approach used to determine appropriate assumption Margins;
- b. Provide a summary of the assumption Margins used'
- c. Provide results of sensitivity tests.

3. Additional Adjustments to Mortality Curves:

- a. Explain the rationale for any adjustment;
- b. Document, describe and summarize any studies used to support the adjustment;
- c. Document the mathematics used to adjust the mortality;
- d. Provide any other relevant important information concerning any adjustments to the experience mortality for changes in the mortality assumption.

C. Documentation Requirements for Policyholder Behavior Assumptions

The PBR Actuarial Report shall disclose/document the following items with respect to policyholder behavior assumptions:

- 1. Policyholder behavior assumptions used, such as premium persistency, lapse and withdrawal, and any changes in these assumptions since the last valuation;

2. A description of the process used to establish the Prudent Estimate assumptions for policyholder behavior, and any change in process since the last valuation;
3. If the company determines that a previously defined set of policyholder behavior assumptions is still appropriate, a description of the experience and analysis that led to that conclusion;
4. A description of the framework for assigning assumptions to policies in the reserve calculation, and any changes in the framework since the last valuation. This description should indicate how the company concluded that the framework provides an appropriate level of granularity.
5. A description of the sources of data used to develop Prudent Estimate assumptions including recent historical company experience and relevant industry data, if any. This description should include commentary on the reasonableness and appropriateness of the data that were used;
6. Description of approach used to determine appropriate assumption Margins,
7. The company shall provide an actual to expected analysis at least once every three years.

#### D. Documentation Requirements for Expense Assumptions

The PBR Actuarial Report shall disclose/document the rationale and support for the expense assumptions and shall include the following items:

1. The methodology used to allocate expenses to the policies subject to these requirements;
2. The methodology used to apply the allocated expenses within the Cash Flow Model;
3. Description of approach used to determine appropriate assumption Margins.

#### E. Documentation Requirements for Asset Assumptions

The PBR Actuarial Report shall disclose/document the rationale and support for the asset assumptions and shall include at least the following items:

1. The asset investment strategy used to project future asset purchases in the model, and certification from an investment officer that it is consistent with the company's current investment strategy;
2. Reinvestment and disinvestment assumptions;
3. Asset default cost assumptions, with particular attention to the following required items:
  - a. Description of the development of Anticipated Experience Assumptions and the rationale for the manner in which company historical experience was reflected;
  - b. Rationale for the choice of experience period for all supporting company, industry, and broad market data sources used. Include the rationale for any change in method of determining such periods;
  - c. Rationale for the Margins chosen for the various asset classes, including any situations where lower quality assets do not have higher Margins (when expressed as a percentage of the credit exposure on the corresponding assets) than higher quality assets of similar maturities.
4. Investment expense assumptions;
5. Bond call function;

6. Mortgage prepayment function;
  7. Determining market value for assets sold due to disinvestment strategy;
  8. Grouping of any general account equity investments for modeling;
  9. Grouping of any separate account funds and subaccounts for modeling;
  10. Exposure to foreign currency fluctuations.
- F. Documentation Requirements for Non-Guaranteed Elements, Reinsurance Agreements and Revenue Sharing Assumptions.
1. The company shall document the rationale for any source of net revenue sharing income used in the projections.
  2. The company shall document that the modeling of revenue sharing agreements complies with PBA valuation requirements, and document the rationale for any source of net revenue sharing income used in the projections.

**Drafting Note:** It is anticipated that additional disclosure and documentation requirements will be incorporated in these requirements for these items.

#### **Subsection 4. Additional Documentation and Disclosure Requirements – Life Products**

This subsection describes the additional documentation and disclosure requirements that are applicable only to life product types valued using a principles-based approach reserves.

A. The PBR Actuarial Report shall include:

1. A comparison of the Deterministic Reserve to the Stochastic Reserve, including the distribution of the Scenario Reserves;
2. A summary and description of the Model Segments used in the Cash Flow Model;
3. A summary of the impact of Assumption Margins:
  - a. Impact of each Margin.

The company shall determine and disclose in the PBR Actuarial Report an estimate of the impact of each Margin on the Deterministic Reserve for the following risk factors: mortality, policyholder behavior, expense and asset return assumptions. This shall be determined for each Asset Segment by subtracting (i) from (ii):

- i.* The sum of the Seriatim Reserves for all policies, but with the Seriatim Reserves calculated based on the Anticipated Experience Assumption for the risk factor and Prudent Estimate Assumptions for all other risk factors.
- ii.* The sum the Seriatim Reserves as reported.

- b. Impact of Aggregate Margin.

The company shall determine and disclose in the Actuarial Report an estimate of the aggregate impact of all Margins on the Deterministic Reserve for each Asset Segment. This shall be determined for each Asset Segment by subtracting (i) from (ii):

- i. The sum of the Seriatim Reserves for all policies, but with the Seriatim Reserves calculated based on Anticipated Experience Assumptions for all risk factors prior to the addition of any Margins.
      - ii. The sum of the Seriatim Reserves for all policies as reported.
    - c. Since the company does not determine an Anticipated Experience Assumption or a Prudent Estimate Assumption for assumptions that are prescribed (e.g., interest rates movements, equity performance, and net spreads on reinvestment assets), the prescribed assumption shall be deemed to be the Prudent Estimate Assumption, and the equivalent of an Anticipated Experience Assumption for these risk factors will be prescribed for the purpose of determining the impact of assumption Margins, and found in [insert applicable section] of the Valuation Manual.
- 4. Demonstration to support the Stochastic Modeling Exclusion:
  - a. A complete demonstration supporting the exclusion must be provided in the PBR Actuarial Report in the initial exclusion year and at least once every three (3) calendar years subsequent to the initial exclusion;
  - b. Documentation as to whether changing conditions over the current and two (2) subsequent calendar years would be likely to change the conclusion to exclude the group of policies from the stochastic modeling requirement.
- 5. Description of any material risks that are not fully reflected in the Cash Flow Model used to calculate the Stochastic Reserve, and a description of how provision was made for such risks in the Stochastic Reserve. Such disclosure should include at least the following:
  - a. A description of each element of the Cash Flow Model for which this provision has been made in the Stochastic Reserve (e.g., Risk Factors, policy benefits, asset classes, investment strategies, risk mitigation strategies, etc.);
  - b. A description of the approach used by the company to provide for these risks in the Stochastic Reserve outside the Cash Flow Model, and a summary of the rationale for selecting this approach, and the key assumptions underlying the approach;
  - c. If there is more than one model element included in this provision, the documentation shall clarify whether a separate provision was determined for each element, or collectively for groups of two or more elements. The documentation shall explain the methodology, supporting rationale and key assumptions for how separate provisions were combined.
- 6. The company shall disclose the estimated impact of aggregation, that is, the degree of risk offsets reflected in the Reported Reserve due to aggregating groups of policies when performing the Stochastic Reserve calculation.
  - a. The impact of aggregation on the Reported Reserve shall be determined by:
    - i. Subdividing the total block of policies subject to these requirements into subgroups that reflect similar risk characteristics that will likely create risk offsets when aggregated together;
    - ii. Determining the Reported Reserve for each subgroup of policies; and
    - iii. Summing the Reported Reserves for each subgroup of policies, and subtracting the actual Reported Reserve for all policies.
  - b. Examples of risk characteristic that the company may consider when selecting the number of subgroups include:



- i.* Separate account vs. general account policies;
  - ii.* Flexible premium vs. fixed premium policies;
  - iii.* Policies with cash values vs. policies with little or no cash values.
- c. The company shall disclose in the PBR Actuarial Report the impact of aggregation at least once every three (3) years, and in the current year regardless of the three (3) year requirement if the company has made a material change in its risk profile, such as buying or selling a block of business, or entering into (or canceling) a reinsurance arrangement covering the policies subject to these requirements.
  - d. The company can use reasonable approximations when performing this demonstration, but must fully disclose the nature of the approximations used and the rationale for why the approximations are appropriate.
  - e. The company can use a date that precedes the valuation date to perform this demonstration, but shall certify that the use of such date will not produce a material change in the results if the results were based on the valuation date.

**B. Additional Documentation Requirements for Mortality Assumptions**

**1. Credibility Analysis:**

- a. Identify the credibility methodology used;
- b. Discuss the appropriateness of the credibility procedure used;
- c. Describe how partial credibility was applied to subcategories;
- d. Discuss the result of the credibility analysis used to adjust experience mortality curves;
- e. The company may separate the credibility adjusted mortality rates by risk class by developing separate mortality rates for each risk class. In doing so, the company must disclose the underwriting differentials used by class and must conserve the total number of deaths in the aggregate.
- e. To the extent the company has changed the credibility methodology (or procedures and values for determining partial credibility) from the prior valuation date, the company must disclose the rationale for the change and quantify the impact on the Reported Reserve of the change.

**2. Additional Adjustments to Mortality Curves:**

- a. If the company reflects the effects of risk selection and underwriting practices not reflected in the underlying experience, but supported by relevant published medical and clinical studies, the company may only reflect the effectiveness of such risk selection and the anticipated incremental benefits over prior risk selection techniques. The company shall disclose the rationale and support for the adjustment.
- b. The company may not use a study unless the company has reviewed the underlying techniques used to develop the study and concluded that the study is appropriate for use. The company shall disclose the rationale used to reach this conclusion.

**3. Valuation Mortality Table:**

- a. Provide the rationale and results of the analysis used in the selection of the mortality table(s);
- b. Provide a comparison of the mortality rates of the Prudent Estimate mortality assumption with the selected Commissioner's Standard Mortality Table.

C. Additional Documentation Requirements for Policyholder Behavior Assumptions.

The PBR Actuarial Report shall disclose/document the following items with respect to policyholder behavior assumptions:

1. A description and rationale of the assumptions used, and the results of sensitivity tests that underlie the Prudent Estimate premium payment assumptions. Sensitivity tests must include, but are not limited to, the following premium payment assumptions:
  - a. Minimum premium scenario. At any point in the Policy's lifetime, the policy provisions define a future stream of future minimum premium payments that will keep the Policy in force until Policy expiry. This pattern of premium payments may depend on the policy design, and could be level or annually increasing or a combination of the two. When the minimum premium is greater than zero, it is reasonable to assume that some policyholders fail to pay the minimum premium, especially when the minimum premium for the current year is greater than the premium actually paid in the prior year. If the minimum premium is increasing substantially compared to the prior year premium, it is reasonable to assume a "shock lapse," for example, where the minimum premium has been zero for a period of years and the next minimum premium is substantial. These non-payment lapse assumptions should be consistent with lapse experience on policies where no nonforfeiture option is available. The company shall estimate the impact on the Reported Reserve of assuming that all policyholders pay the minimum premium required by the policy terms to keep the Policy in force each year.
  - b. No further premium payment scenario. The company shall estimate the impact on the Reported Reserve of assuming that no policyholders will pay premiums after the projection start date. In this scenario it is reasonable to assume that some policyholders will withdraw their funds at the projection start date while other policies will lapse or terminate without value according to the terms of their contracts.
  - c. Pre-payment of premiums – Single premium scenario. The company shall estimate the impact on the Reported Reserve of assuming that all policyholders will pay all future premiums on the projection start date, to the extent that such pre-payments are permitted under the terms of the policies or by the company's current practices. In this scenario no non-payment lapses would be assumed. However, if the value of the cash surrender value is roughly equivalent to the value of the future death benefits (assuming no further premiums), then it would be reasonable to assume some policyholders will elect to surrender their policies. If the cash surrender value is substantially less than the value of the death benefits, as may be the case with policies with secondary guarantees, it would be reasonable to assume that few or none would surrender their policies.
  - d. Pre-payment of premiums – Level premium scenario. Some flexible premium policies may permit the policyholder to pay a level premium that is guaranteed to keep the Policy in force until the policyholder's death. This premium could be stipulated in the contract or derived from the terms of the contract. The company shall estimate the impact on the Reported Reserve of assuming that all policyholders pay level premiums from the projection start date forward in an amount sufficient to keep the contract in force from the projection start date until the insured's death (or as long as possible under the terms of the contract). In this scenario no non-payment lapses would be assumed. However, surrenders and withdrawals might occur as described in scenario (c).
2. A description of the Scenario-dependent mechanism, if any, for varying withdrawal assumptions.
3. A description of the Scenario-dependent mechanism, if any, for varying premium assumptions.
4. A description of changes in premium payment assumptions and withdrawal assumptions related to the treatment of non-guaranteed elements in the reserve calculations.
5. An explanation of how assumptions were set beyond the point where fully credible relevant experience was available.

D. Additional Documentation Requirements for Asset Assumptions.

1. Net Asset Earned Rates. For each Model Segment, a summary of the path of Net Asset Earned Rates calculated for the Deterministic Reserve.
2. Embedded Spread on Starting Assets. For fixed income investments included in the Starting Assets, the company shall estimate and disclose in the PBR Actuarial Report the following values for each Asset Segment:
  - a. The approximate market value and the method used to determine such approximate market value of such investments on the Valuation Date;
  - b. The statutory value of such investments on the Valuation Date;
  - c. The gross level “option-adjusted” spread (in basis points) over the Treasury yield curve at the Valuation Date implied in the approximate market values of such investments on that date. Further guidance on acceptable methods to compute this spread shall be published by the NAIC;
  - d. The projected average estimated annual default costs (including how they were derived) expressed as a percent of the approximate average annual market value of such investments. Further guidance on acceptable methods to compute this spread shall be published by the NAIC;
  - e. The net level “option-adjusted” spread over the Treasury yield curve at the Valuation Date (Subparagraph (c) minus Subparagraph (d)); and
  - f. The aggregate weighted average life and the method used to determine such aggregate weighted average life of such investments at the Valuation Date.

**Drafting Note:** This disclosure is intended to provide regulators and the PBA Review Actuary a tool to assess from a capital market perspective the level of asset risk embedded in a company’s principles-based valuation compared to that of other companies or compared to the current market risk associated with typical asset classes found in insurance company portfolios. It is anticipated that market spread benchmarks for various asset classes and quality rating levels will be developed or recommended to provide context to regulators and the PBA Review Actuary when assessing an individual company’s disclosures. It is important to recognize that asset spreads reflect all sources of risk, not just defaults. Further, the existence of these disclosure metrics does not indicate an intent that long-term estimates of default costs should fluctuate significantly from period to period based on movements in market values.

3. As a test of the consistency between the discount rates and the investment process being modeled, the company shall perform the following calculation:
  - a. For a selected Scenario and Asset Segment, set the starting asset amount exactly equal to the Scenario Reserve for that Asset Segment (which is likely to be different than the starting asset amount used to determine the Scenario Reserve);
  - b. Project the accumulated assets to the end of the projection year that gave rise to the greatest present value of accumulated deficiencies using the same model and assumptions used to calculate the Scenario Reserve;
  - c. Discount the value in Paragraph (3)(b) to the valuation date using the path of discount rates used to calculate the Scenario Reserve; and
  - d. Provide an explanation if the amount in Paragraph (3)(c) is materially different than zero.

**Drafting Note:** The NAIC will determine the frequency of the test and the Scenario to be used.

4. Derivative Program Documentation and Certification.

- a. The company shall provide documentation for the company's Derivative Programs that affect Asset Segments subject to these requirements, starting with a list that identifies and summarizes the purpose of each Derivative Program, that clarifies whether it involves the future purchase or sale of Derivative Instruments, and if so whether it is a Clearly Defined Hedging Strategy, and whether it is a static or dynamic strategy.
- b. For each dynamic Clearly Defined Hedging Strategy, the company shall document the extent to which the Derivative Program and its associated Risk Factors are fully incorporated into the Cash Flow Model and the extent to which the Cash Flow Model is supplemented by the adjustment to stochastic reserves calculations.
- c. In addition, the company shall provide a certification and maintain documentation supporting such certification that each Derivative Program modeled as a Clearly Defined Hedging Strategy meets the requirements of a Clearly Defined Hedging Strategy. The certification shall include a statement to the effect that the implementation of the Derivative Program in the stochastic Cash Flow Model does not include knowledge of events that occur after any action dictated by the Derivative Program (i.e., the model cannot use information about the future that would not be known in actual practice). While clearly defined hedging strategies may change over time, any change in a Clearly Defined Hedging Strategy shall be documented and include an effective date of the change in strategy.
- d. A financial officer of the company (e.g., Chief Financial Officer, Treasurer or Chief Investment Officer) or a person designated by such financial officer who has direct or indirect supervisory authority over the actual trading of Derivative Instruments shall certify that each Derivative Program that involves anticipated future Derivative Instrument transactions is being used by the company in a manner consistent with the company's documentation of the program, and that each Derivative Program that is modeled as a Clearly Defined Hedging Strategy meets the requirements of a Clearly Defined Hedging Strategy.

#### **Subsection 5. Additional Documentation and Disclosure Requirements – Annuity Products**

This subsection describes the additional documentation and disclosure requirements that are applicable only to annuity product types valued using a principles-based approach.

**Drafting Note:** It is expected that the Annuity Reserve Working Group will contribute reporting requirements unique to annuity products for inclusion in this subsection.

# ATTACHMENT 4

## Section 5

### Annual PBA Review

## **SECTION 5: PRINCIPLES-BASED VALUATION REVIEW OPINION REQUIREMENTS**

### **Table of Contents**

- Subsection 1. Purpose
- Subsection 2. Scope
- Subsection 3. Definitions
- Subsection 4. General Requirements for Filing
- Subsection 5. Designation and Qualification of PBA Review Actuary
- Subsection 6. PBA Review Opinion
- Subsection 7. PBA Report and Documentation

### **Subsection 1. Purpose**

- A. The purpose of this section is to prescribe:
  - (1) Requirements for a review opinion of a valuation performed under a principles-based approach (PBA) per the Standard Valuation Law and applicable regulations; and
  - (2) Requirements applicable to the appointment of the PBA Review Actuary.
- B. Such a review opinion is intended to provide Company management, the Company's board of directors, the Commissioner, and the Company's auditors with a confidential, independent review of the subjective elements of a principles-based valuation.

### **Subsection 2. Scope**

These requirements apply to all valuations performed under a principles-based approach pursuant to section [Insert appropriate section] of the Standard Valuation Law. Such a review opinion shall result from an independent evaluation of the actuarial judgment in the PBA valuation. The review does not apply to the asset adequacy analysis performed for the PBA valuation in conjunction with the Actuarial Opinion and Memorandum Regulation.

These requirements shall be applicable to all annual statements filed with the office of the Commissioner.

### **Subsection 3. Definitions**

- A. "Actuarial Standards of Practice" means standards of actuarial practice promulgated by the Actuarial Standards Board.
- B. "Annual Statement" means that statement required by state insurance law to be filed by the Company with the office of the Commissioner annually.
- C. "Appointed Actuary" means an individual who is appointed or retained in accordance with the requirements set forth in the Actuarial Opinion and Memorandum Regulation to

- provide the actuarial opinion and supporting memorandum as required by the Standard Valuation Law.
- D. “Commissioner” means the commissioner, superintendent or director of insurance.
  - E. “Company” means a life insurance company, fraternal benefit society or reinsurer subject to the provisions of these requirements.
  - F. “Documentation” means the records kept by the PBA Review Actuary of the procedures followed, the analyses performed, the information obtained, and the conclusions reached pertinent to the PBA Review Opinion and PBA Review Report.
  - G. "PBA Certification and Actuarial Report" means the certification and supporting information prepared by the Company as required by [insert applicable section] of the Valuation Manual to demonstrate compliance with PBA reserve valuation requirements.
  - H. “PBA Review Actuary” means an independent, qualified actuary who is retained by the board of directors of the Company or its designee to prepare the PBA Review Opinion as required by these requirements.
  - I. “PBA Review Opinion” means an independent evaluation, by the PBA Review Actuary, of the actuarial judgment employed with respect to valuations performed under a principles-based approach per the Standard Valuation Law and applicable regulation.
  - J. “PBA Review Report” means the information prepared by the PBA Review Actuary as defined by these requirements to support the PBA Review Opinion.

#### **Subsection 4. General Requirements for Filing**

- A. Company shall file within thirty (30) days following the later of the filing date of an Annual Statement or the due date for the filing of an Annual Statement, a single PBA Review Opinion that covers all PBA valuations in the Company to the Commissioner where the Company is licensed. This opinion shall be kept confidential.
- B. Upon written request by the Company, the Commissioner from the domiciliary state may grant an extension of the date for submission of the PBA Review Opinion as required by paragraph A. above.
- C. The PBA Review Opinion will cover valuations performed under a principles-based approach per the Standard Valuation Law and shall identify specifically, by list, the reserves by product type and amount to which the PBA Review Opinion applies in such a way that they can be associated with the reserves reported in the Company’s Annual Statement filing.
- D. The PBA Review Actuary shall prepare a PBA Review Report to support the PBA Review Opinion , which shall be kept confidential and made available upon request of the Commissioner(s).

- E. The PBA Review Actuary shall maintain Documentation, which shall be kept confidential and made available upon request to the Commissioner(s).
- F. The PBA Review Actuary will immediately notify the domiciliary Commissioner, with a copy to the Company, if, during the course of the analysis and review done in order to prepare the PBA Review Opinion, the PBA Review Actuary identifies a material issue with a valuation performed under a principles-based approach that is unlikely to be satisfactorily resolved with the Company before the filing date of the Annual Statement. Such notification will specify the nature of the problem and the differences that gave rise to the issue.

**Drafting Note:** If the PBA Review Opinion identifies a material issue that was not satisfactorily resolved before the Company filed the annual statement, the domiciliary Commissioner will need to decide whether or not to require the Company to revise the level of reserves and refile the annual statement. The NAIC may want to determine what procedures need to be followed in this situation.

- G. The PBA Review Opinion, PBA Review Report and supporting Documentation shall have the same confidentiality, as prescribed in the Standard Valuation Law section [insert applicable section], that applies to the actuarial memorandum.

#### **Subsection 5. Designation and Qualification of PBA Review Actuary**

- A. The Company shall file with the domiciliary Commissioner a written notice no less than six (6) months before the latest date on which the PBA Review Opinion is to be filed of the name, title, and the firm of the actuary retained and terms of the engagement as the PBA Review Actuary as set forth in these requirements. Once notice is furnished, no further notice regarding designation is required unless there is a change in the designation.
- B. The Company shall obtain a letter from the PBA Review Actuary accepting the assignment and file a copy with the domiciliary Commissioner . Such letter will indicate whether the PBA Review Actuary is independent and qualified.
- C. If any actuary retained as a PBA Review Actuary replaces a previously retained actuary, the notice shall so state and give the reasons for replacement.
- D. The domiciliary Commissioner has the right, within thirty (30) days of receipt of such notice of designation or replacement, to reject the Company's choice for PBA Review Actuary if, in the opinion of the Commissioner, one of the requirements that the actuary be qualified and independent has not been satisfied.
- E. The Company shall have an engagement agreement with the PBA Review Actuary specifying the terms and conditions of the engagement.
- F. The PBA Review Actuary must be qualified to perform the review. The PBA Review Actuary must satisfy the qualification requirements for Appointed Actuary as specified in the Actuarial Opinion and Memorandum Regulation and by the American Academy of Actuaries, including being a member of the American Academy of Actuaries (MAAA).



- G. The PBA Review Actuary shall be independent of the Company for which he or she is reviewing work. In general, the PBA Review Actuary cannot function in the role of Company management, cannot participate in the work being reviewed, and cannot serve in an advocacy role for the Company. In addition, the PBA Review Actuary:
- (1) Shall not have been employed by the Company or an affiliate of the Company in the three (3) years preceding the date of valuation;
  - (2) Shall not be an employee of the same consulting firm or audit firm as the Company's Appointed Actuary;
  - (3) Shall not have any material financial interests as a shareholder or other financial interests other than as a policyholder, beneficiary, or insured;
  - (4) Shall not provide a PBA Review Opinion for the Company for more than five (5) consecutive years. After completion of a five (5) year-term, the PBA Review Actuary may not be reappointed, by the Company, for any of the following five (5) consecutive years. However, a firm may continue in that capacity with a new PBA Review Actuary; and
  - (5) Shall have no unresolved conflict-of-interest as described in the Code of Professional Conduct adopted by the American Academy of Actuaries.
- H. The domiciliary Commissioner shall have the authority to waive any requirement for designation, retention, or replacement of a PBA Review Actuary.

#### **Subsection 6. PBA Review Opinion**

- A. General Description. The PBA Review Opinion submitted in accordance with this Subsection shall consist of:
- (1) A paragraph identifying the PBA Review Actuary and his or her qualifications (see Subsection 5);
  - (2) A scope paragraph identifying the subjects on which an opinion is to be expressed and describing the scope of the PBA Review Actuary's work, including a tabulation delineating the reserves and related actuarial items which have been examined;
  - (3) A reliance paragraph describing those areas, if any, where the PBA Review Actuary has relied on other experts in reviewing data, procedures or assumptions;
  - (4) An opinion paragraph expressing the PBA Review Actuary's opinion with respect to the subjective judgment expressed in the PBA valuation regarding the principles-based approach reserves identified;
  - (5) One or more additional paragraphs may be needed in individual Company cases to further qualify the review, including but not limited to:

- (a) If the PBA Review Actuary considers it necessary to state a qualification of his or her opinion;
- (b) If the PBA Review Actuary chooses to add a paragraph briefly describing any special circumstances which form the basis for the PBA Review Opinion.

B. Recommended Language. The following paragraphs are to be included in the PBA Review Opinion. The language may be modified as needed to meet the circumstances of a particular case, but the PBA Review Actuary shall use language that clearly expresses his or her professional judgment. However, the opinion shall retain all substantive aspects of the language provided in this Subsection.

- (1) The opening paragraph shall generally indicate the PBA Review Actuary's Company affiliation and his or her qualifications to sign the opinion. The opening paragraph shall include a statement such as:

"I, [name], a member of the American Academy of Actuaries (Academy), am associated with the firm of [name of firm]. I have been retained 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 regulatory requirements and any Actuarial Standards of Practice applicable to the PBA valuation."

- (2) The scope paragraph shall include a statement in substance as follows:

"I have examined the actuarial risk analyses, actuarial assumptions, methods, modeling and compliance used in determining PBA 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, [insert year]. Tabulated below are those PBA reserves and related actuarial items that have been subject to this review."

[A tabulation of the reserves included in the valuation performed under a principles-based approach and upon which the opinion is being expressed shall be included here.]

"Such examination included: an evaluation of the material risks covered by the reserves; the reserve methods used; the reasonableness of models employed; the supportability of the reserve assumptions and margins; and application of all relevant laws, regulations, and Actuarial Standards of Practice."

- (3) The opinion paragraph shall include a statement in substance as follows:

"I have reviewed the reserves and related actuarial items calculated in accordance with a valuation performed under a principles-based approach, listed above, as shown in the Annual Statement of [name of the Company], as prepared by its

Appointed Actuary for filing with the Commissioner, as of December 31, [year] and in my opinion:

- (a) All quantifiable material risks are considered;
- (b) The methods used are appropriate;
- (c) The models used are reasonable for the purpose;
- (d) The assumptions used are supportable;
- (e) The margins in the reserves are supportable; and
- (f) The requirements of a PBA reserve valuation as defined by [insert applicable sections] of the Valuation Manual and applicable Actuarial Standards of Practice have been satisfied.

**[Drafting note:** It is intended that the required opinion language and scope of review define a process that is of value to regulators and the state review process. These requirements may need to be defined more precisely or be expanded to include additional considerations as determined by the group overseeing the Valuation Manual enhancements and the regulatory review process. For example, the scope of the opinion may be limited to only those elements in the PBA valuation that involve actuarial judgment.]

“The actuarial methods, considerations and analyses used in forming my opinion conform to the appropriate Actuarial 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.

The impact of unanticipated events subsequent to the date of this opinion is beyond the scope of this opinion. This opinion addresses the reasonable application of actuarial judgment in the calculation of reserves as prescribed in a valuation performed under a principles-based approach. It is not an opinion that such reserves are adequate to meet all future liability obligations of the Company.”

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Name of PBA Review Actuary

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Signature of PBA Review Actuary

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Company of PBA Review Actuary

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Address of PBA Review Actuary

---

Telephone Number of PBA Review Actuary

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Date

- C. Adverse Opinions. If the PBA Review Actuary is unable to form an opinion, he or she shall refuse to issue a PBA Review Opinion. If the PBA Review Actuary's opinion is adverse or qualified, then he or she shall issue an adverse or qualified PBA Review Opinion explicitly stating the reasons for such an opinion. This statement shall follow the scope paragraph and precede the opinion paragraph.
- D. Reliance on Information Furnished by Other Persons. If the PBA Review Actuary relies on other reviewers for a portion of the PBA Review Opinion, he or she shall include a statement such as the following:

"I have relied on the [e.g., stochastic process and modeling; or annuity or long-term care valuation] from [name], [title], [Company] in conjunction with forming my opinion. I have reviewed the information relied upon for reasonableness."

In addition, the persons on whom the PBA Review Actuary relies must provide a statement that identifies the items on which the person is providing information that the PBA Review Actuary is relying upon. This reliance statement shall include the name, signature, title, Company, address and telephone number of the person rendering the reliance, as well as the date on which it is signed.

#### **Subsection 7. PBA Review Report and Documentation**

- A. Any Company required to file a PBA Review Opinion pursuant to these requirements shall require the PBA Review Actuary to make available for review by Commissioners, the PBA Review Report and all Documentation prepared in the conduct of the PBA review, and any communications related to the PBA review between the PBA reviewer and the Company. The Company shall require that the PBA Review Actuary retain the PBA Review Report, Documentation and communications until the insurance department has filed a report on examination covering the period of the PBA valuation but no longer than seven (7) years from the date of the corresponding PBA Review Opinion.
- B. The PBA Review Actuary shall prepare a PBA Review Report to be filed with the Company's board of directors. The PBA Review Report shall cover the following:
- (1) Description of the extent of the work done by the PBA Review Actuary:
    - (a) A description of the scope and limitations of the review;
    - (b) A description of the extent to which the PBA Review Actuary had access to the relevant data, information, reports, staff, contractors, and Appointed Actuary and other valuation actuaries;

- (c) A description of the extent of reliance on documentation furnished by the Company; and
    - (d) A description of procedures and approaches used for the PBA review.
  - (2) Discussion of how the PBA Review Actuary reached his or her conclusions.
  - (3) Disclosure of findings, concerns and recommendations.
  - (4) Assessment that the Appointed Actuary has followed all relevant requirements pursuant to the Valuation Manual , and Actuarial Standards of Practice as appropriate.
  - (5) Assessment of the quality and sufficiency of the PBA Actuarial Report.
  - (6) Description of any remaining differences of opinion between the PBA Review Actuary and the Appointed Actuary.
  - (7) The PBA Review Report shall include name, signature, address, telephone number, company of the PBA Review Actuary and date of the report.
- C. The Documentation provides the trail to support the formation of the PBA Review Opinion and the PBA Review Report. Documentation may include such things as PBA review planning, work programs, analyses, memoranda, letters of confirmation and representation, abstracts of Company documents and schedules or commentaries prepared or obtained by the PBA Review Actuary in the course of his or her review of the PBA valuation of the Company.
- D. The PBA Review Report, Documentation, and any communications related to the PBA review may be retained, on a confidential basis, by the Commissioner.

# ATTACHMENT 5

## Section 6

### Experience Reporting

ITEM	PAGE
<b>SECTION 6: Experience Reporting Requirements</b>	
I. Overview	
a. Purpose of Experience Reporting Requirements	
b. Needs for Experience Data	
c. Financial vs. Experience Data	
d. Principles Based Reserving and the Need for Aggregate Data	
e. The Statutory Foundation for Experience Reporting	
II. Company Experience Reporting Requirements	
a. Scope	
b. Life	
c. Annuity	
d. Health	
e. Reinsurance	
III. Roles and Responsibilities	
a. Statistical Plans and the Role of Statistical Agents	
b. Role and Responsibility of the NAIC Working Group or Task Force	
c. Role of Actuarial Professional Organizations	
IV. Data Quality for Insurers and Statistical Agents	
a. Intentionally Inaccurate Coding is Prohibited	
b. Edit Exceptions by Statistical Agents Must be Studied for Systematic Errors	
c. Other Data Quality Standards and Requirements	
d. Completeness	
e. Validity Checks	
f. Confidentiality of Experience Data	
g. Access to Experience Data and Statistical Reports	
h. Ownership and Maintenance	
i. Reports to the State from the Statistical Agent	
j. Failure to Meet Standards	
k. Granting of Exceptions	
V. Reports Available from Statistical Agents	
a. Introduction	
b. Design of Reports	
c. Basic Report Designs	
d. Reporting Bases	
e. Supplemental Reports	

f. Annual Statistical Compilations	
g. Reports to Actuarial Professional Organizations	



## **6. Experience Reporting Requirements**

### **I. Overview**

#### a. Purpose of the Experience Reporting Requirements

The Experience Reporting Requirements address the collection, compilation and reporting of insurance experience information as prescribed by statutes and regulations. They include consideration of the experience reporting process, the roles of the relevant parties, the intended use of and access to the data, the cost of compliance and who bears responsibility for such costs, as well as confidentiality and privacy considerations.

#### b. Value of Experience Data Collection

##### (i) Regulator Value Includes:

- (1) Monitor companies' experience to assure that they will continue to meet statutory requirements for solvency;
- (2) Perform a "reasonableness check" on the appropriateness of principles-based assumptions documented in the Actuarial Report on Principles-based reserves methods and assumptions;
- (3) Perform a "reasonableness check" on documentation supporting premium rates for certain products (such as long term care); and
- (4) Establish an independent threshold by which the quality of a company's experience data may be evaluated.

Life and health insurers are required by law and regulation to comply with regulatory responsibilities and prepare statistical and financial reports for state insurance departments.

##### (ii) External Stakeholder Value - Principles-Based reserving will require development of assumptions based on company experience, industry experience, or a credibility adjusted blend of the two. The experience reporting requirements will facilitate development of such assumptions and serve the following purposes:

- (1) Provide a rich database for inter-company studies of experience in mortality, policyholder behavior, expense, and other relevant experience;
- (2) Allow PBA reviewing actuaries and other interested parties to perform a "reasonableness check" on the appropriateness of principles-based assumptions disclosed by domiciled companies in the Actuarial Report documenting principles-based reserves methods and assumptions;

- (3) Provide companies with industry average data to blend with company data for credibility-adjusted principles-based assumptions. Such industry data will also be utilized by companies in situations where little or no company experience data exists; and
- (4) Provide professional actuarial organizations with data to consider whether to develop or update standard valuation tables which can be used to be utilized for statutory reserving purposes.

c. Financial Versus Experience Data

The requirements outlined in this Experience Reporting Section of the Valuation Handbook pertain to the collection of experience data. Requirements for the reporting of the financial data to be entered into the company's statutory statement are defined elsewhere.

d. Principles-Based Reserving and the Need for Aggregate Data

Principles-based reserving requires reliable data to use policy-experience-based assumptions and benefits for comparable policies. As with all forms of experience data analysis, larger and more consistent statistical samples have a greater probability of producing accurate predictions than smaller ones. To improve statistical credibility, it is necessary that insurers' experience data be combined into aggregate databases. To produce more reliable analyses of historic experience and predictions of future costs, both insurers and regulators must commonly look to pooled data.

To carry out this collection and pooling, insurers and regulators can rely on statistical agents. Statistical agents can be examined by state regulators. Pursuant to state requirements insurers shall provide, if required, their policy experience elements and insurance payout experience to the statistical agent. These statistical organizations then combine similar information from many reporting companies and give the aggregate information to the states.

Section 11(I) of the Standard Valuation Law (SVL) states the following:

A company shall file experience as prescribed in the valuation manual in the form of statistical reports showing mortality, morbidity, policyholder behavior, expense experience, and other data for purposes of determining industry experience and trends, subject to the following:

- (1) A company's statistical report is confidential by law and privileged, shall not be subject to [insert open records, freedom of information, sunshine or other appropriate phrase], shall not be subject to subpoena, and shall not be subject to discovery or admissible in evidence in any private civil action. However, the commissioner is authorized to use the documents, materials or other information in the furtherance of any regulatory or legal action brought as a part of the

commissioner's official duties.

- (2) Neither the commissioner nor any person who received documents, materials or other information while acting under the authority of the commissioner shall be permitted or required to testify in any private civil action concerning any confidential documents, materials or information filed under this section.

To assist relevant parties with these experience reporting requirements, the following guidance is provided with respect to the experience reporting process, roles of the relevant parties, intended use of and access to the data, cost of compliance and responsibilities for such costs, and confidentiality and privacy considerations.

The statutes and regulations requiring data reporting generally apply to all licensed life and health companies. These companies must file statistics with state insurance departments, either through a statistical agent, the NAIC, or directly to the department.

The Experience Reporting Requirements are intended to assist state regulators with the implementation of principles-based reserving under the revised Standard Valuation Law. This initial version will contain sections that will not be initially operational, such as the section of Appendix E dealing with health insurance. Furthermore, revisions to the Experience Reporting Requirements will occur to reflect knowledge acquired from its initial implementation.

## **II. Company Experience Reporting Requirements**

### **a. Scope**

The Standard Valuation Law provides authority for this Valuation Manual to set experience reporting requirements with respect to business and companies within the scope of the Standard Valuation Law. These requirements will specify the business and the companies for which experience is to be reported for a calendar year.

*Drafting Note: Subgroup 3 seeks input from LHATF regarding the type of business and companies for which experience is to be reported for the calendar year after the operative date of the Valuation Manual. This input will play a key role in the development of the experience reporting requirements.*

### **b. Calendar Year 20XX Experience To Be Reported**

#### **1. Life Business**

- i) Companies are required to report experience for their life insurance business pursuant to the life instructions contained in Appendix B. These instructions contain simplified reporting for certain companies based on their life insurance premium volume in calendar year 20XX

- ii) Companies Exempted: Companies doing business in only their state of domicile may be exempted from these experience reporting requirements if allowed by the domiciliary Commissioner.
- iii) Business Exempted: Business exempted from the life experience reporting requirements for calendar year 20XX include the following:
  - Credit Life Insurance

*(Drafting Note: We seek input from LHATF regarding additional lines of business or types of companies to be exempted)*

2. Annuity Business

Experience reporting for annuity business is not prescribed for calendar year 20XX.

*(Drafting Note: These requirements are not developed at this time.)*

3. Health Business

Experience reporting for health business is not prescribed for calendar year 20XX.

*(Drafting Note: These requirements are not developed at this time.)*

4. Reinsurance:

Reinsurance assumed is excluded to avoid double-counting of the original issuer and by the reinsurer. Experience reporting requirements for policies covered under such reinsurance assumed shall be the responsibility of the ceding company who is the direct writer of such business.

*(Drafting Note: Reinsurance assumed is excluded to avoid double counting by the original issuer and by the reinsurer. )*

An exemption to this requirement is in case of reinsurance assumed which is novated to the assuming company – that is, the assuming company is legally responsible for all benefits and administration of such policies. For such novated policies, the assuming company would be responsible for the experience reporting requirements for such policies.

### **III. Roles and Responsibilities**

a. Statistical Plans and The Role of Statistical Agents

In most situations, designated statistical agents will collect experience data based on statistical plans on behalf of state insurance departments.

Statistical plans are detailed instructions which define the data elements as well as the formats and time frames for company reporting. Statistical plans are included in Appendix B of the Valuation Manual. These statistical plans vary by both experience type (mortality, policyholder behavior and company expense) and by type of life and health products. Statistical plans are included in the Valuation Manual since their contents are unlikely to change and they are ready to be implemented. Factors to be considered in determining whether statistical plans should be used, include: prior use in intercompany studies, review by committees/task forces involved with principles-based

valuation, review by regulators/NAIC/LHATF, and the process of implementing principles-based valuation. Reporting formats for additional data elements will be added as necessary, in subsequent revisions to the Valuation Manual.

Data must conform to common data definitions. Standard definitions provide for stable and reliable databases and are the basis of meaningful aggregated insurance data. This will be accomplished through a uniform set of suggested minimum experience reporting requirements for all insurers.

Based on requirements to be developed statistical agents may design their data collection procedures to ensure that they are able to meet these regulatory requirements. Regulators may have the ability to aggregate the experience of all insurers using a common set of classifications and definitions, or they can request the statistical agents to do this for them.

b. Role and Responsibility of NAIC Task Force or Working Group

The NAIC, perhaps through creation of a Task Force or Working Group, will be responsible for the content and maintenance of the Experience Reporting Requirements. This Task Force or Working Group will monitor the data definitions, quality standards, appendices and reports described in the Experience Reporting Requirements to assure that they take advantage of changes in technology and provide for new regulatory and company needs. As able, the Task Force or Working Group will also provide limited assistance for states and insurers relating to one-time requests for data (“special calls”). Such involvement will customarily involve situations where the state’s interest or situation appears to have substantial applicability or importance to a number of states.

To ensure that the Experience Reporting Requirements will continue to be useful, the NAIC Task Force or Working Group will seek to update it regularly. The Task Force or Working Group should have regular dialogue, feedback and discussion with the broad range of data users (regulators, members of professional actuarial organizations, large and small insurers, and insurance trade organizations).

c. Role of Actuarial Professional Organizations

The professional actuarial organizations (defined here to include the Society of Actuaries (SOA) and the American Academy of Actuaries (Academy)), have historically participated in the review and analysis of life insurance experience studies. Prospectively, these organizations will play a role that is comparable to the role that they have played in the past.

The role(s) of the professional actuarial organizations should include but not be limited to:

- (1) Consult with the statistical agent (as appropriate) in the design and implementation of the experience retrieval process;

- (2) Involvement in the data validation process of data intended to be used by the SOA to develop industry experience tables;
- (3) Assist (if needed) the statistical agent to help secure data submissions from key companies;
- (4) Analysis of data provided by the statistical agent and any summarized data produced by the statistical agent;
- (5) Creation of initial experience tables and any revised tables;
- (6) Work with the NAIC (if needed) in their development and evaluation of requests for proposal for services related to the reporting of experience requirement;
- (7) Creation of statutory valuation tables as appropriate and necessary;
- (8) Determine and produce additional industry experience tables that might be suggested by the data collected;
- (9) Work with the NAIC in developing new reporting formats and modifying current experience reporting formats;
- (10) A close working relationship between all parties having an interest in the success of the experience reporting requirement will increase the value of the coordinated effort, improve the speed and efficiency of the process, and increase the value of the experience reporting deliverables.

#### **IV. Data Quality for Insurers and Statistical Agents**

The Experience Reporting Requirements includes two intertwined sets of requirements – one for insurers and one for statistical agents. Statistical procedures used by the statistical agents cannot easily control for errors associated with underwriting. If an underwriter misjudges the proper classification for an insured, then the “statistical system” has little chance of detecting the error unless the classification is somehow implausible.

These requirements only refer to data required by the Experience Reporting Requirements.

##### **a. Intentionally Inaccurate Coding is Prohibited**

Data coding and data reporting policies prohibit coding a policy, loss, transaction or other body of data as anything other than what it is known as for data routinely reported to statistical agents. This does not preclude an insurer from booking a transaction with incomplete detail or from reporting such transactions to statistical agents, but there can be nothing that is known to be inaccurate or deceptive in the reporting.

b. Edit Exceptions by Statistical Agents Must Be Studied for Systematic Errors

When the cause of an edit exception is noted to be a condition that could produce systematic errors, the insurer must correct the error and respond in a timely fashion, with priority given to errors that have the largest likelihood to affect a significant amount of data. When an error is found that has affected data reported to a statistical agent, the insurer shall report the nature of the error and the nature of its likely impact to the statistical agent receiving the affected data. Retrospective correction of data subject to systematic errors shall be done when the error affects a significant amount of data that is still being used for reports to the regulator and it is reasonably practical to make the correction through the application of a computer program or a procedure applied to the entire data set without the need to manually examine more than a small number of individual records.

c. Other Data Quality Standards and Requirements Applying to Insurers and Statistical Agents

Statistical agents are required to apply edits and checks to data received from insurers, and insurers are required to respond to the queries presented by statistical agents. More specific insurer and statistical agent requirements are as follows:

(i) Completeness – Control Totals Required

Each submission of data filed by an insurer with a statistical agent shall be balanced against a set of control totals provided by the insurer with the submission. At a minimum, these control totals shall include applicable record counts, claim counts, amounts insured, and claim amounts. Any submission that does not balance (with the exception of differences due to rounding errors for dollar amounts) to the control totals shall be referred to the insurer for review and resolution.

(ii) Validity Checks Required

Validity checks are designed to catch:

1. incomplete coding;
2. codes that are not contained within the set of possible valid codes; or
3. codes that are contained within the set of possible valid codes but are not valid in conjunction with another code.

It is possible that there will be incomplete coding as part of an insurer's internal data processing. It is important, however that the insurer's procedures provide for proper codes to be determined in a timely fashion so that records can be completed.

Where quality does not appear to be significantly compromised, statistical agents may use records with missing or invalid data if the errors do not involve a field relevant to the report. For insurers with a body of data for a state, line and year that fails to meet

these standards, statistical agents shall use their discretion (but should still inform the regulator of key decisions made) regarding the omission of the entire body of data, including records with valid entries. Completeness of reports is desirable, but not at the risk of including a body of data that appears to have an unreasonably high chance of significant errors.

### (iii) Reasonability Checking

Completeness and validity checks are straightforward and almost always, errors detected through these checks are, in fact, errors. However, if an insurer were to attribute all of a varied book of business to a single valid class code, it is quite likely that this data would pass all completeness and validity checks.

Errors of a consistent nature are referred to as “systematic.” Incorrect coding instructions can introduce errors of a consistent nature as input. Programming errors within the data processing system of an insurer can also produce systematic miscoding as the system converts data to the formats required for experience reporting. Most systematic errors will produce data that, when reviewed using tests designed to reveal various types of systematic errors, will appear unreasonable and likely to be in error. In addition, some individual coding errors may produce erroneous results that show up when exposures and losses are compared in a systematic fashion. Such checking often cannot, however, provide a conclusive indication that data with unusual patterns is incorrect.

### (1) Reasonability Checking Required by Statistical Agents

Statistical agents shall undertake reasonability checks that include the comparison of statistical agent aggregate and company experience for class and coverage data elements for the current reporting period to company and aggregate profiles from prior periods or the current period. When reporting instructions are changed, newly reported data elements shall be examined to see that they correlate reasonably with data elements reported under the old instructions. In addition, statistical agents shall compare major data elements to statistical agent aggregates in effect at the time of reporting.

At a minimum, reasonability checks by statistical agents shall include:

- a. When an insurer has reported all or an unusually large percentage of its data under a single or very limited number of categories.
- b. When there are unusual or unlikely reporting patterns in an insurer’s data.
- c. When the amount of claims appear unusually high or low for the corresponding exposures.
- d. When claims exist without corresponding policy values and exposures, or where loss frequencies or amounts appear unreasonable in



comparison to ranges of expectation that recognize statistical fluctuation.

- e. When unusual shifts in the distribution of writings occur from one reporting period to the next.

If an insurer's unusual pattern under test categories a, b or c is verified as accurate (that is, the reason for the apparent anomaly is an unusual mix of business), then it is not necessary that a similar pattern for the same insurer be reconfirmed year after year.

Individual statistical agents shall keep track of their experience with these tests and shall adjust thresholds in successive years to maintain a reasonable balance between the magnitude of errors being found and the cost to insurers.

Results which appear to indicate a significantly higher than average chance that a body of data may contain errors shall be reported to insurers with an explanation of the unusual finding and its possible significance. When the possible or probable errors appear to be of a significant nature, the statistical agent shall indicate to the insurer that this is a "critical indication." "Critical indications" are those that, if not corrected or confirmed, would leave a significant degree of doubt whether the affected data should be used in reports to the regulator. It is intended that statistical agents shall have reasonable flexibility to implement this. Statistical agents may grade the severity of indications or they may simply identify certain indications as critical (or equivalent terminology). While insurers are expected to undertake a reasonable examination of all indications provided to them, they are not required to respond to every indication except for those labeled by the statistical agent as "critical."

Statistical agents shall use their discretion regarding the omission of data from reports owing to the failure of an insurer to respond adequately to unusual reasonability indications. Completeness of reports is desirable, but not at the risk of including data that appears to have an unreasonably high chance of containing significant errors.

## (2) Insurer Responses to Reasonability Queries Required

Insurers shall acknowledge and respond to reasonability queries from statistical agents. This shall include specific responses to all critical indications provided by the statistical agent. Other indications shall be studied for apparent errors as well as for indications of systematic errors. Corrections for substantial errors shall be provided to the statistical agent or, when a correction is not feasible, the extent and nature of the error shall be reported to the statistical agent

*(Drafting note: Consideration should be given as to whether Actuarial Standards of Practice regarding Data Quality would or would not apply to this Section 2.3 and corresponding subsections).*

d. Confidentiality of Experience Data

Nothing in the Experience Reporting Requirements is intended to imply that states either must disclose statistical reports and/or data. Such determinations are made under individual state data reporting, public record and/or trade secret laws. In addition, if data identifies individual policyholders or claimants, it is possible that privacy laws may apply as well.

e. Access to Experience Data and Statistical Reports

- (i) The individual company data collected as the result of the provisions of this valuation manual is the property of the individual company.
- (ii) The statistical agent has the right to access individual company collected data for the purpose of:
  - (1) Creating individual company data summaries and individual company reports;  
and
  - (2) Creating industry data aggregates and industry average reports.
- (iii) Individual company data summaries and individual company reports prepared by the statistical agent according to the provisions of this valuation manual shall only be accessible to the following parties:
  - (1) Company that submitted the data;
  - (2) State Insurance Departments;
  - (3) Company's independent auditor;
  - (4) Company's independent PBA reviewing actuary;
  - (5) Statistical Agent; or
  - (6) By permission of the individual company to employees of the Society of Actuaries.
- (iv) Industry aggregate data and industry average reports prepared by the statistical agent for regulators according to the provisions of this valuation manual shall only be accessible to the following parties:
  - (1) Parties identified in (iii) above;
  - (2) NAIC; or
  - (3) Professional Actuarial Organizations (pursuant to 6. e. iii. above).

(v) Access by the State Insurance Department to experience data is restricted to aggregates reports, studies, or analyses in which individual company information cannot be determined from such reports, studies or analyses, except for the following:

(1) If company specific data is needed in conjunction with a statutory examination or other regulatory examination or review;

(2) In circumstances required per Section 2b(C) of the SVL.

(vi) When data submitted to the insurance department by a statistical agent:

(1) identifies individual insurers;

(2) appears likely to identify individual claimants or insureds;

(3) or is subject to protection from disclosure;

such data shall not be publicly disclosed unless, prior to such disclosure:

(1) The department notifies the statistical agent and any insurer which has asserted the data to be subject to protection from disclosure of the request for disclosure;

(2) The department then provides a thirty (30) day period for any insurer that reported data to the statistical agent to assert that its data are trade secret or are otherwise protected from disclosure. The thirty (30) day period shall run from the time that the statistical agent receives notification from the department;

(3) The department then provides insurers that have asserted their data to be trade secret or otherwise protected from disclosure with the opportunity to support their positions, which shall be governed by the {insert statute reference}; and

(4) After the applicable adjudicative process is complete, there is a final decision that the data are not a trade secret and are not otherwise subject to protection from disclosure.

f. Ownership and Maintenance of Experience Data and Statistical Reports

(i) Data records submitted by Companies to the statistical agent are owned by the Companies submitting such data records.

(ii) Except for reasons of subpoena, court order, or audit of the statistical agent by a regulatory authority within the scope of relevant law or regulation, the statistical agent may not engage in any activities that result in personal information relating to any policyholder or individual, or where such activity results in the disclosure of a company's proprietary information. However, a company may provide a waiver to the statistical agent relative to disclosure of its proprietary information (e.g., mortality ratio by plan of experience). The statistical agent is obligated to satisfy such requests for disclosure if the reason for disclosure is to facilitate inclusion of a company's experience in intercompany studies conducted under auspices of a staff member of the Society of Actuaries. Except as limited by this section, the statistical agent has the right to use validated data to produce aggregate reports which are the property and responsibility of the statistical agent.

(iii) The statistical agent will be responsible for maintaining data, error reports, logs and other intermediate work products, and reports for use in processing, documentation, production and reproduction of reports provided to regulators in accordance with the valuation manual. The statistical agent will be responsible for demonstrating such reproducibility at the request of the NAIC in its audit capacity over the statistical agent.

g. Reports to the State from the Statistical Agent

Each statistical agent shall provide reports which comprise the entire set of companies that report data to the statistical agent:

- (i) A listing of companies whose data is included in the compilations: and
- (ii) A historical report listing those insurers whose data for the statistical agent was excluded from the compilation because it fell outside of the statistical agent's tolerances for missing or invalid data, or because the insurer was unable to reconcile its statistical and financial data within the statistical agent's tolerances, or for any other reason. The report will list such excluded companies by year for the current and the two prior annual reports and will include an indication of the exposures, number of claims, and amount of claims for comparable groups of policies.

*(Drafting Note: This section will be updated as appropriate to include other data elements such as expenses and policyholder behavior for all policies, and morbidity for health insurance related policies.)*

h. Failure to Meet the Standards Contained in this Section

The purpose of the statistical agent reporting requirements contained in this section are to provide information that will identify whether an insurer appears to be providing data of a substandard quality with such frequency as to indicate a general business practice that involves insufficient attention to data quality. A single reporting instance would be actionable only if, upon examination, it was found to indicate a flagrant and conscious disregard for the data quality standards contained in this section.

i. Granting of Exceptions for Individual Statistical Agents

If, using a different set of procedures, a statistical agent can reasonably demonstrate the likelihood of performance that is equal or superior to the set of procedures contained herein, the applicable NAIC Working Group or Task Force may waive or amend requirements contained herein or take other action to assure equivalent or better data quality.

## V. Reports Available From Statistical Agents: Summary

### a. Introduction

Using the data collected under statistical plans, as adopted by the states, the statistical agents produce aggregate reports. Regulators and others use these reports to review insurer experience, consistent with the coverages and classes of insurance.

Data compilations are evaluated according to four distinct, and often competing, standards: quality, completeness, timeliness and cost. In general, quality is a primary goal in developing any statistical data report. The priorities of the other three standards vary according to the purpose of the report.

Regulators may modify or enlarge their requirements for information to accommodate changing needs and environments. However, in most cases, changes to existing data reporting systems will be feasible only to provide information on future transactions. Requirements to submit new information may require that companies change their systems. Also, the statistical agents may need several years before they can generate meaningful data meeting the new requirements with matching claims and insured amounts. The exact time frames for implementing new data requirements and producing reports will vary depending on the type of reports.

This section summarizes, generally, the data that statistical agents must maintain and produce. Subsequent sections provide the specific detailed requirements for reporting on the various lines of insurance.

### b. Design of Reports Linked to Purpose

Fundamental to the design of each report is an evaluation of its purpose and use. The NAIC Task Force or Working Group should specify model reports responding to general regulatory needs. These model reports will serve only the basic informational needs of state regulators. To address a particular issue or problem, a regulator may have to request special reports in addition to these model reports. These requested reports may be for submission of financial-based data where the insurers submit calendar year data (which can be produced with the least delay or for submission of additional experience data compiled on either a calendar or policy year basis as is most appropriate.

### c. Basic Report Designs

The NAIC Task Force or Working Group needs to designate basic types of reports to meet differing needs and time frames. Sections of Appendix E provide more detailed descriptions of these reports for each specific line of insurance. Annual Statistical Compilations are anticipated to be the primary reports.

Annual Statistical Compilations – Annual statistical compilations are aggregate reports that generally match appropriate insurance amounts and claims to evaluate the historic experience for various lines of insurance, detailed by coverage and class. Although termed annual statistical compilations the timing of these reports depends on the specific line of insurance. The annual statistical compilations can be either industry-wide or vary by state of domicile.

In addition to annual statistical compilations, regulators can specify additional reports based on elements in the statistical plans in Appendix B. Regulators can use both annual statistical compilations and additional reports to evaluate principles-based reserves.

The NAIC Task Force or Working Group will specify the reports to be provided to the professional actuarial associations to fulfill their roles as specified in section 3(c), Role of Actuarial Professional Organizations. In general, the reports are expected to include the industry-wide annual statistical compilations. The number and types of reports can vary from year to year. The NAIC Task Force or Working Group will specify the data periodically obtained from the statistical plans to be provided to the SOA to fulfill its role as specified in section 3(c), Role of Actuarial Professional Organizations.

#### d. Annual Statistical Compilations

Annual Statistical Compilations are detailed annual reports that generally match appropriate insurance amounts and claims to evaluate the historic experience of various lines of insurance. Regulators can use Annual Compilations to evaluate principles-based reserves.

##### (i) Time Frames

The timing of annual reports depends upon the basis on which data are compiled, which in turn depends on the line of insurance. Sections of Appendix E discuss specific time frames for annual reports for each line of insurance.

##### (ii) Uses of Annual Statistical Compilations

Regulators can use the annual reports to review the experience for broad categories and for individual coverages. Regulators can compare the policy experience elements and insurance payouts appearing on the reports for different coverages. Annual reports also allow regulators to review long-term trends. Aggregate results may indicate areas warranting additional investigation.

#### e. Supplemental Reports

For specific lines of business and coverages, regulators may request additional reports from statistical agents. Regulators may also request custom reports, which may contain specific data or experience not regularly produced in other reports.

The regulator and the statistical agents must negotiate time schedules for producing supplemental reports. The information in these reports is limited by the amount of data actually available and the manner in which they have been reported.

f. Reports to Actuarial Professional Organizations

The NAIC Task Force or Working Group needs to designate basic types of reports to the Society of Actuaries to meet differing needs and time frames. These reports will be comparable to reports provided to regulators as described in Section 6.V.d above. Annual Statistical Compilations are anticipated to be the primary reports. Other reports may be requested on an as needed basis, and will be referred to as Special Reports.

Annual Statistical Compilations – Annual statistical compilations are aggregate reports that generally match appropriate insurance amounts and claims to evaluate the historic experience for various lines of insurance, detailed by coverage and class. Although termed annual statistical compilations the timing of these reports depends on the specific line of insurance. The annual statistical compilations can be either industry-wide or vary by state of domicile.

In addition to annual statistical compilations, regulators can specify additional reports based on elements in the statistical plans in Appendix E. Regulators can use both annual statistical compilations and additional reports to evaluate principles-based reserves.

Appendix B

# ATTACHMENT 6

Appendix B

Experience Reporting



## Appendix B

ITEM	PAGE
<b>APPENDIX B: Experience Data Reporting Formats</b>	
<b>I. Introduction</b>	
<b>II. Life Insurance</b>	
a. Introduction	
b. Mortality	
1. Statistical Plan for Life Insurance Mortality	
2. Data Call and Time Frame for Life Insurance Mortality	
3. Statistical Report for Life Insurance Mortality	
4. Reduced Reporting for Smaller Companies	
c. Policyholder Behavior	
1. Statistical Plan for Policyholder Behavior	
2. Data Call and Time Frame for Policyholder Behavior	
3. Statistical Report for Policyholder Behavior	
4. Reduced Reporting for Smaller Companies	
d. Expenses	
1. Statistical Plan for Expenses	
2. Data Call and Time Frame for Expenses	
3. Statistical Report for Expenses	
4. Reduced Reporting for Smaller Companies	
<b>III. Annuities</b>	
a. Introduction	
b. Mortality	
1. Statistical Plan for Life Insurance Mortality	
2. Data Call and Time Frame for Life Insurance Mortality	
3. Statistical Report for Life Insurance Mortality	
4. Reduced Reporting for Smaller Companies	
c. Policyholder Behavior	
1. Statistical Plan for Policyholder Behavior	
2. Data Call and Time Frame for Policyholder Behavior	
3. Statistical Report for Policyholder Behavior	
4. Reduced Reporting for Smaller Companies	
d. Expenses	
1. Statistical Plan for Expenses	
2. Data Call and Time Frame for Expenses	
3. Statistical Report for Expenses	
4. Reduced Reporting for Smaller Companies	

## Appendix B

<b>IV. Long Term Care Policies</b>	
a. Introduction	
b. Mortality / Morbidity	
1. Statistical Plan for LTC Mortality / Morbidity	
2. Data Call and Time Frame for LTC Mortality / Morbidity	
3. Statistical Report for LTC Mortality / Morbidity	
4. Reduced Reporting for Smaller Companies	
c. Policyholder Behavior	
1. Statistical Plan for LTC Policyholder Behavior	
2. Data Call and Time Frame for LTC Policyholder Behavior	
3. Statistical Report for LTC Policyholder Behavior	
4. Reduced Reporting for Smaller Companies	
d. Expenses	
1. Statistical Plan for LTC Expenses	
2. Data Call and Time Frame for LTC Expenses	
3. Statistical Report for LTC Expenses	
4. Reduced Reporting for Smaller Companies	
<b>V. Health Policies</b>	
a. Introduction	
b. Mortality / Morbidity	
1. Statistical Plan for Health Mortality / Morbidity	
2. Data Call and Time Frame for Health Mortality / Morbidity	
3. Statistical Report for Health Mortality / Morbidity	
4. Reduced Reporting for Smaller Companies	
c. Policyholder Behavior	
1. Statistical Plan for Health Policyholder Behavior	
2. Data Call / Time Frame for Health Policyholder Behavior	
3. Statistical Report for Health Policyholder Behavior	
4. Reduced Reporting for Smaller Companies	
d. Expenses	
1. Statistical Plan for Health Expenses	
2. Data Call and Time Frame for Health Expenses	
3. Statistical Report for Health Expenses	
4. Reduced Reporting for Smaller Companies	

# Appendix B

## **I. Introduction**

The Experience Reporting Requirements are limited to the experience data available from statistical agents serving the primary life and health insurance industry for the following lines of insurance:

- Life
- Annuity
- Long Term Care
- Health

Statistical plans are included in the Valuation Manual since their contents are unlikely to change and they are ready to be implemented. Factors to be used in determining whether statistical plans are ready to be used include prior use in intercompany studies, review by committees/task forces involved with principles-based valuation, review by regulators/NAIC/LHATF, and the process of implementing principles-based valuation. Reporting formats for additional data elements will be added as necessary, in subsequent revisions to the Valuation Manual.

In the first year that the Valuation Manual is used, the Data Reporting Formats included in this Appendix are in the first year of implementation.

New Data Reporting Formats included in this Valuation Manual by December 31 of YYYY are in their first year of implementation in year YYYY+1.

Revisions to Data Reporting Formats included in this Appendix by December 31 of YYYY have the revised data elements in their first year of implementation in year YYYY+1.

Data shall be reported gross of reinsurance ceded. Reinsurance assumed is exempt from experience reporting requirements and is not to be included.

# Appendix B

## II. Life insurance

### A. Introduction

Individual life insurance is one of the first lines of insurance to be covered under principles-based reserving. There are three sub-sections: mortality, policyholder behavior and expenses. The first of the subsections to be implemented is mortality

### B. Mortality

#### 1. Statistical Plan for Individual Life Insurance Mortality

**(Except for Item 1 changing from Company Code to NAIC Company Code, Item 23 changing from Policy Form Number to Valuation Mortality Table, and simplified wording, this is the format used in 2005 and 2006 Intercompany Data Calls)**

ITEM	COLUMN	L	DATA ELEMENT	DESCRIPTION
1	1-5	5	NAIC Company Code	Your NAIC Company Code
2	6	1	Data Type	All Records must have the same Data Type. Enter appropriate code. 1 = Policy Year Submission 2 = Calendar Year Submission
3	7-26	20	Policy Number	Enter Policy Number. For Policy Numbers with length less than 20, Left justify the number and blank fill the empty columns. Any other unique identifying number can be used instead of Policy Number for privacy reasons.
4	27-30	4	Observation Year	For Policy Year Submission, enter the year that the policy year ends. For Calendar Year Submission, enter the calendar year.
5	31	1	Gender	0 = Unknown or unable to subdivide 1 = Male 2 = Female 3 = Unisex- Unknown or unable to identify 4 = Unisex - Male 5 = Unisex - Female
6	32-39	8	Date of Birth	Enter the numeric date of birth in MMDDYYYY format
7	40	1	Age Basis	0 = Age Nearest Birthday 1 = Age Last Birthday 2 = Calendar 3 = Age Next Birthday
8	41-42	2	Issue Age	Enter the insurance Issue Age

## Appendix B

9	43-44	2	Duration	<p>For Policy Year Submission, enter the policy's duration at the beginning of the policy year.</p> <p>For Calendar Year Submission, For policies issued in the calendar year, set duration equal to 1. For all other policies, enter the policy's duration at the beginning of the calendar year,</p>
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10	45-52	8	Issue Date	<p>Enter the numeric calendar year in MMDDYYYY format For continuations of prior policies, such as term conversions, enter issue date of original policy, if available. If date is unknown, leave blank.</p>
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ITEM	COLUMN	L	DATA ELEMENT	DESCRIPTION
11	53	1	Nonsmoker Risk Class Rank	<p>For nonsmoker policies that could have been issued as one of multiple preferred and standard classes: 0 = Unknown, substandard or smoker risk class 1 = Best preferred class 2 = Next Best preferred class after 1 3 = Next Best preferred class after 2 4 = Next Best preferred class after 3 5 = Next Best preferred class after 4 6 = Next Best preferred class after 5 7 = Next Best preferred class after 6 8 = Next Best preferred class after 7 9 = Next Best preferred class after 8 Note: Standard policies should have Nonsmoker Risk Class Rank equal to Number of Nonsmoker Risk Classes</p>
12	54-62	9	Internal company codes for Nonsmoker Risk Class Rank	<p>If field 53 used, leave blank. For the first year a company submits data, a company may choose to use Internal company codes instead of the codes in field 53. If used, the company Must provide documentation, explanation and algorithm for their use.</p>
13	63	1	Number of Nonsmoker Risk Classes	<p>For nonsmoker policies that could have been issued as one of multiple preferred and standard classes, enter the number of nonsmoker preferred and standard risk classes available at time of issue.</p>
14	64	1	Smoker Risk Class Rank	<p>For smoker policies that could have been issued as one of multiple preferred and standard classes: 0 = Unknown, substandard or nonsmoker risk class 1 = Best preferred class 2 = Next Best preferred class after 1 3 = Next Best preferred class after 2 4 = Next Best preferred class after 3 5 = Next Best preferred class after 4 6 = Next Best preferred class after 5 7 = Next Best preferred class after 6</p>

## Appendix B

8 = Next Best preferred class after 7

9 = Next Best preferred class after 8

Note: Standard policies should have Smoker Risk Class Rank equal to Number of Smoker Risk Classes

15	65-73	9	Internal company codes for Smoker Risk Class Rank	If field 64 used, leave blank. For the first year a company submits data, a company may choose to use internal company codes instead of the codes in field 64. If used, the company must provide documentation, explanation and algorithm for their use.
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16	74	1	Number of Smoker Risk Classes	For smoker policies that could have been issued as one of multiple preferred and standard classes, enter the number of smoker preferred and standard risk classes available at time of issue.
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ITEM	COLUMN	L	DATA ELEMENT	DESCRIPTION
17	75	1	Cause of Termination	0 = Termination type unknown or unable to subdivide 1 = Reduced Paid-Up 2 = Extended Term 3 = Voluntary unable to subdivide among 1, 2, 9, A, B or D 4 = Death (No ADB Paid) 5 = Death (ADB Paid) 6 = Death (Unknown whether ADB Paid) 7 = 1035 Exchange 9 = Term Conversion (Unknown whether Attained Age or Original Age) A = Attained Age Term Conversion B = Original Age Term Conversion C = Coverage expired or contract reached mortality D = Surrendered for full account value E = Lapse due to insufficient cash value F = Lapse due to non-payment of premium Z = Inforce

18	76-83	8	Termination Date	For policies that are still inforce, leave blank. For policies that have terminated, enter the 8 digit calendar date of termination in the format MMDDYYYY.
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19	84	1	Type of Underwriting Requirements	If unable to distinguish between underwritten and not underwritten, use code "Z". For policies not underwritten, use code "9" 0 = Underwritten, but type unknown or unable to subdivide 1 = Medical 2 = Paramedical 3 = Nonmedical (Complete set of medical history questions, using Traditional nonmedical form. 4 = Simplified or limited underwriting (less than a complete nonmedical screening) 5 = Nonmedical and simplified combined (unable to subdivide) 9 = Not Underwritten Z = Underwritten/not underwritten status unknown or unable to subdivide
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## Appendix B

20	85	1	Substandard Issue	<p>If not substandard, leave blank</p> <p>0 = Substandard, but degree unknown or unable to subdivide</p> <p>1 = Slightly substandard (Under 175%)</p> <p>2 = Moderately substandard (175% to 250%)</p> <p>3 = Highly substandard (Over 250%)</p> <p>5 = Flat extra premium over \$5 to \$10</p> <p>6 = Flat extra premium over \$10</p> <p>7 = Slightly substandard with flat extra premium</p> <p>8 = Moderately substandard with flat extra premium</p> <p>9 = Highly substandard with flat extra premium</p> <p>A = Flat extra premium of \$3 or less</p> <p>B = Flat extra premium over \$3 to \$5</p> <p>C = Flat extra premium, amount unknown</p>
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ITEM	COLUMN	L	DATA ELEMENT	DESCRIPTION
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21	86-87	2	Plan	Exclude from contribution: spouse and children under family policies or riders.
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00 = All plans combined or unable to subdivide

**Traditional Whole Life Plans:**

- 10 = Traditional fixed premium fixed benefit permanent plan
- 15 = First to die whole life plan (submit separate records for each life)
- 16 = Second to die whole life plan (submit separate records for each life)
- 30 = Permanent life (traditional) with term
- 50 = Permanent plans 10,15,16,30,40 combined (i.e. unable to separate)
- 60 = Single premium whole life
- 74 = Econolife (permanent life with lower premiums in the early durations)

**TERM INSURANCE PLANS:**

- 20 = Term (traditional level benefit and attained age premium)
- 21 = Term (level death benefit with guaranteed level premium for 5 years)
- 22 = Term (level death benefit with guaranteed level premium for 10 years)
- 23 = Term (level death benefit with guaranteed level premium for 15 years)
- 24 = Term (level death benefit with guaranteed level premium for 20 years)
- 25 = Term (decreasing benefit)
- 26 = Term (level death benefit with guaranteed level premium for period other than 5, 10, 15 or 20 years)
- 40 = Select and ultimate term (premium depends on issue age and duration) (I.E. WHERE
- 55 = Term plans 20,25,40,77 combined(unable to separate these plans)
- 77 = Economatic term

**UNIVERSAL LIFE PLANS:**

- 61 = Single premium universal life
- 70 = Universal life (decreasing risk amount)
- 71 = Universal life (level risk amount)
- 72 = Universal life (unknown whether code 70 or 71)
- 73 = Second to die universal life

**VARIABLE LIFE PLANS:**

## Appendix B

80 = Variable Life  
 81 = Variable universal life (unknown whether code 82 or 83)  
 82 = Variable universal life (level risk amount)  
 83 = Variable universal life (decreasing risk amount)  
 84 = Survivorship variable universal life plan

### NONFORFEITURE

98 = Extended Term  
 99 = Reduced Paid-Up

ITEM	COLUMN	L	DATA ELEMENT	DESCRIPTION
22	88	1	Smoker Status	0 = Unknown 1 = No tobacco usage 2 = Nonsmoker 3 = Cigarette smoker 4 = Tobacco user
23	89-91	3	Valuation Mortality Table	Select the base valuation mortality tables used in annual statement. Variations of the base tables will be determined by data elements of Gender, Age Basis, Smoker Status, and Risk Class fields  1 = American Experience Table 2 = 1906 US Standard Industrial 3 = 1918 US AM (5) 4 = 1941 CSO 5 = 1958 CSO 10 = 1980 CSO 11 = 1980 CSO 80% Male, 20% Female 12 = 1980 CSO 75% Male, 25% Female 13 = 1980 CSO 60% Male, 40% Female 14 = 1980 CSO 50% Male, 50% Female 15 = 1980 CSO 40% Male, 60% Female 16 = 1980 CSO 25% Male, 75% Female 17 = 1980 CSO 20% Male, 80% Female 20 = 2001 CSO 21 = 2001 CSO 80% Male, 20% Female 22 = 2001 CSO 60% Male, 40% Female 23 = 2001 CSO 50% Male, 50% Female 24 = 2001 CSO 40% Male, 60% Female 25 = 2001 CSO 20% Male, 80% Female 30 = 2001 CSO Super Preferred 31 = 2001 CSO Preferred 32 = 2001 CSO Residual Standard
24	92-103	12	Face Amount of Insurance	Face amount of policy to exact dollar. 1. Initial amount is preferred due to measuring the effect of



## Appendix B

underwriting by face amount at issue.

2. Face Amount of Insurance should be on a basis consistent with the Claim Amount, i.e., initial amount or current amount.

25 104-115 12 Claim Amount

Claim amount to exact dollar.

1. Include only amount paid when amount paid is limited due to suicide, exclusion clause, contested claim or compromised claim.
2. Claim amount should be on a basis consistent with the Face Amount of Insurance, i.e., initial amount or current amount.

### 2. Data Call and Time Frame for Life Insurance Mortality

Unless identified as a smaller company in Section 4, “Reduced Reporting for Smaller Companies”, each company is to submit data using the data format in Section 1. Each company is to submit data for all inforce individual life insurance policies issued since 1980 except for policies where the company certifies that both 1) face amount of policies excluded are less than 5% of the face amount of inforce polices issued since 1980, and 2) this requirement presents a hardship due to fields not readily available in their systems/databases.

Ongoing data calls are anticipated to be on an annual basis. An annual data call made in a given year such as 20XX+1 can be complied with on either a calendar year method or a policy year method.

1. A calendar year method includes policies inforce during or issued during year 20XX. In submitted termination experience for calendar year 20XX, companies must include death claims reported after year 20XX but that occurred during calendar year 20XX.
2. A policy year method would report on policies for policy anniversaries ending in 20XX. In submitting termination experience, companies must include experience on terminated policies that terminated prior to 20XX but within the policy year ending in 20XX.

For data calls that occur less frequently than annually, the data call will consist of the data that would have been submitted if the data call had been done on an annual basis. For example, there is no data call in the year 20XX but there is a data call in 20XX+1. Under this example, the 20XX + 1 data call occurred less frequently than annually and would include data that would have been included in the combination of data from both a 20XX annual data call and a 20XX+1 annual data call.

Requirements for Statistical Plans for life insurance mortality required in this Appendix as of the previous year:

- a. Data Call occurs in March.
- b. Each company will supply data for fields readily available in their systems/databases.
- c. For Data Reporting Formats or revised data elements that are in their first year of implementation, each company will provide either the data or determine how to make the data available in their systems/databases.

## Appendix B

- d. For Data Reporting Formats or revised data elements that are in their second or later year of implementation, each company will provide the data.

### Company's data submission to comply with the data call

- a. Either data submissions or notification of when data submission will be made are to be given within three months after the data call.
- b. Data submissions will be given no later than August 31 of the year of the data call.
- c. Corrections of data submissions will be given no later than November 30 of the year of the data call.

### Reporting of industry experience to regulators by a statistical agent

- a. A list of NAIC Company Codes of companies whose data can be used for the aggregate reporting of industry experience will be given to regulators by December 31 of the year of the data call.
- b. Reports of industry average experience will be given to regulators by February 28th of the year following the data call.
- c. If the regulator requires individual company data or reports submitted to the statistical agent, the statistical agent will send such data and/or reports to the individual company to forward to the regulator.

## Appendix B

### 3. Statistical Report for Life Insurance Mortality

Using the data collected for the data format in Section 1, the statistical report given to state regulators will aggregate all companies (not include NAIC Company Code). The statistical report for smaller companies as defined in Section 4, “Reduced Reporting for Smaller Companies” will be discussed in Section 4.

The statistical reports from the data collected under the data format will include the following report.

#### Mortality Statistical Report Statistical Agent Pivot Table Report to State Regulator

Pivot Table Features Omitted (e.g. drop-down arrows)

VALUATION MOR	(All)
OBSERVATION Y	(All)
GENDER	(All)
SMOKER STATUS	(All)
RISK_CLASS_RA	(All)
RISK CLASSES B	(All)
CLASS RANK BY	(All)
ISSUE AGE	(All)

		DURATION									
FACE AMT BAND	Data	1	2	3	4-5	6-10	11-15	16-20	21-25	26+	Total
25,000-49,999	2001 VBT A/E R	99.6%	130.7%	115.7%	118.1%	100.9%	86.9%	83.5%	82.4%	83.8%	87.1%
	ACTUAL DEAT	189	296	309	1,012	4,378	9,521	10,893	4,335	7,972	38,905
50,000-99,999	2001 VBT A/E R	100.5%	100.8%	113.3%	101.5%	88.5%	79.1%	73.2%	71.7%	79.4%	78.7%
	ACTUAL DEAT	332	401	514	1,174	4,963	9,430	13,459	2,403	3,110	35,786
100,000-249,999	2001 VBT A/E R	74.2%	80.2%	88.0%	82.5%	73.0%	71.4%	68.5%	73.3%	81.8%	73.4%
	ACTUAL DEAT	610	880	1,104	2,929	6,594	7,705	6,568	1,478	1,175	29,043
250,000-499,999	2001 VBT A/E R	65.9%	73.6%	78.7%	65.7%	62.2%	64.6%	64.0%	70.8%	76.5%	65.6%
	ACTUAL DEAT	283	371	416	983	1,795	1,415	838	171	81	6,353
500,000-999,999	2001 VBT A/E R	43.9%	64.1%	65.4%	63.2%	63.0%	66.8%	62.5%	70.5%	58.6%	63.0%
	ACTUAL DEAT	108	188	178	486	788	559	253	58	21	2,639
1,000,000-2,499,999	2001 VBT A/E R	49.5%	56.5%	67.2%	71.6%	63.3%	58.3%	62.2%	57.9%	53.3%	62.6%
	ACTUAL DEAT	67	95	99	284	385	221	101	16	7	1,275
2500000+	2001 VBT A/E R	65.6%	69.9%	85.8%	74.0%	72.1%	46.6%	63.5%	98.2%	0.0%	67.8%
	ACTUAL DEAT	13	20	19	44	60	32	21	4	0	213
Total 2001 VBT A/E Ratio by Amt		59.7%	69.2%	77.8%	72.8%	69.4%	69.4%	70.0%	74.1%	79.9%	70.6%
Total ACTUAL DEATHS		1,602	2,251	2,639	6,912	18,963	28,883	32,133	8,465	12,366	114,214

As long as it does not identify individual companies, an additional report will be given to states which contain the business of companies domiciled in that state.

From time to time, it is anticipated that additional reports will be developed based on the data collected in Section 2.

## Appendix B

### 4. Reduced Reporting for Smaller Companies

Identifying Smaller Companies - A smaller company identifier could be \$25 million of ordinary life premium before any offset for reinsurance using page 9, line 20.1 of the statutory annual statement - the ordinary life column. An alternative smaller company identifier could be used.

Reduced Data Format - Instead of using the data format of Section 2, smaller companies could use output from their valuation system to determine the expected amount of death claims based on the 2001 Valuation Basic Table. Smaller companies may group the data instead of reporting on individual policies. However, each company must provide the actual death claim amounts corresponding to the grouping used.

Submissions of data should include identifications of gender, smoking status (e.g., nonsmoker, smoker, unknown), underwriting class (e.g., preferred, standard, substandard), issue age and duration since issue. Over time, the data format used by smaller companies is expected to become more defined and eventually become the data format in Section 1.

#### Extent of Data Call and Time Frame for Data Call

For data calls, the expected amount of death claims based on the 2001 Valuation Basic Table will be submitted for individual life policies valued in the company's main life valuation system for the two most recent annual statements. The groupings for individual life policy expected deaths will be the same for both years. The actual death claim amounts from the year of the most recent annual statement for the corresponding groupings of individual life policies will also be submitted. For example, a 20XX+2 data call would require the expected amount of death claims from policies valued for the 20XX Annual statement and the 20XX+1 Annual Statement as well as the actual death claim amounts for 20XX+1.

Time frame for smaller companies' data call:

Smaller companies data submission to comply with the data call

- a. A notification of when the data submission will be made by April 30<sup>th</sup> of the year of the data call.
- b. Data submissions will be given no later than August 31 of the year of the data call.
- c. Corrections of data submissions will be given no later than November 30 of the year of the data call.

When the data format for smaller companies becomes identical with the Section 1, Data Format, the extent of data call and time frame of data call will become the same as Section 2.

#### Statistical Report for Smaller Companies

For the initial data call, the statistical report to state regulators will aggregate the data collected from the smaller companies. The specifics of the report will depend upon the data groupings used by smaller companies.

## Appendix B

As long as it does not identify individual companies, an additional report will be given to states which contain the business of companies domiciled in that state.

### C. Policyholder Behavior

#### 1. Statistical Plan for Policyholder Behavior

To submit policyholder behavior in addition to the mortality study, this format assumes:

- i. All Minimal Mortality Data Contribution format fields are submitted.
- ii. Providing data for all fields is NOT required for submitting policyholder behavior data.
  - Each company will supply data for fields easily available in their systems/databases.
  - The Minimal Policy Behavior format provides a good starting point for what data will be needed for principles-based reserves and experience studies.
- iii. Contributing companies will be sent a questionnaire on policyholder behavior items not typically kept on an individual policy record level but vary by plan/policy form.

#### PREMIUMS AND SECONDARY GUARANTEES

COLUMN	L	DATA ELEMENT	DESCRIPTION
354-364	10	BASE POLICY GUARANTEED PREMIUM	ANNUAL PREMIUM AMOUNT THAT MUST BE PAID TO GUARANTEE THE POLICY WILL NOT LAPSE :  1) FOR UL/VUL SPECIFIED PREMIUM DESIGNS: IT IS THE SPECIFIED PREMIUM AMOUNT REQUIRED TO MAINTAIN THE NO LAPSE GUARANTEE. 2) FOR UL/VUL WITH SHADOW ACCOUNT DESIGNS: IT IS THE PREMIUM ILLUSTRATED AT ISSUE TO MAINTAIN NO LAPSE GUARANTEE. 3) FOR WHOLE LIFE/TERM: IT IS THE PREMIUM AMOUNT REQUIRED TO MAINTAIN THE POLICY INFORCE.  THE PREMIUM INFORMATION PROVIDED HERE WILL NEED TO BE CONSISTENT WITH THE NEXT TWO FIELDS.
365-367	3	LENGTH OF BASE POLICY PREMIUM GUARANTEE (NUMBER OF YEARS)	IF THE BASE POLICY PREMIUM IS GUARANTEED FOR A SPECIFIED NUMBER OF YEARS, PROVIDE THE LENGTH OF THE GUARANTEE IN YEARS. USE THE LONGEST GUARANTEE PERIOD. 999= LIFETIME.  IF THIS FIELD IS FILLED OUT, LEAVE NEXT FIELD BLANK.
368-370	3	LENGTH OF BASE POLICY PREMIUM GUARANTEE (ATTAINED AGE)	IF THE BASE POLICY PREMIUM IS GUARANTEED FOR A SPECIFIED NUMBER OF YEARS, PROVIDE THE ATTAINED AGE AT WHICH THE GUARANTEE ENDS.  IF THIS FIELD IS FILLED OUT, LEAVE PRIOR FIELD BLANK.
371	1	SECONDARY GUARANTEES:  RETURN OF PREMIUM OPTION	1= POLICYHOLDER ELECTED A RETURN OF PREMIUM (ROP) RIDER 2= POLICYHOLDER DID NOT ELECT RETURN OF PREMIUM RIDER (ROP)

## Appendix B

			3= POLICY INCLUDES RETURN OF PREMIUM AS PART OF THE BASE POLICY 4 = POLICY DOES NOT OFFER RETURN OF PREMIUM OPTION
372-374	3	SECONDARY GUARANTEES:  RETURN OF PREMIUM PERIOD	IF THE ROP OPTION FIELD ABOVE IS CODED AS "1" OR "3",  PLEASE PROVIDE THE NUMBER OF YEARS UNTIL THE FULL RETURN OF PREMIUM IS AVAILABLE
375	1	SECONDARY GUARANTEES:  GUARANTEED WITHDRAWAL BENEFITS	1 = POLICYHOLDER ELECTED GUARANTEED WITHDRAWAL BENEFIT RIDER. 2= POLICYHOLDER DID NOT ELECT GUARANTEED WITHDRAWAL BENEFIT RIDER. 3= GUARANTEED WITHDRAWAL BENEFITS ARE OFFERED AS PART OF THE BASE POLICY. 4= POLICY DOES NOT OFFER GUARANTEED WITHDRAWAL BENEFITS.
376-378	3	SECONDARY GUARANTEES: GUARANTEED WITHDRAWAL BENEFIT PERIOD	IF THE GUARANTEED WITHDRAWAL BENEFIT FIELD ABOVE IS CODED AS "1" OR "3": PLEASE PROVIDE THE NUMBER OF YEARS OVER WHICH THE POLICYHOLDER MAY MAKE EQUAL WITHDRAWALS OF BENEFIT.
379	1	SECONDARY GUARANTEES:  GUARANTEED MINIMUM DEATH BENEFITS	1= POLICYHOLDER ELECTED GUARANTEED MINIMUM DEATH BENEFIT RIDER. 2= POLICYHOLDER DID NOT ELECT GUARANTEED MINIMUM DEATH BENEFIT RIDER. 3= GUARANTEED MINIMUM DEATH BENEFIT IS OFFERED AS PART OF THE BASE POLICY. 4= POLICY DOES NOT OFFER GUARANTEED MINIMUM DEATH BENEFIT.
380-389	10	CURRENT YEAR TOTAL PREMIUM COLLECTED	REPORT THE TOTAL AMOUNT OF PREMIUM COLLECTED DURING THE CURRENT OBSERVATION YEAR.
390-399	10	PRIOR YEAR TOTAL PREMIUM COLLECTED	REPORT THE TOTAL AMOUNT OF PREMIUM COLLECTED DURING THE PRIOR OBSERVATION YEAR.
400-409	10	TARGET PREMIUM (UL AND VUL PRODUCTS ONLY)	TARGET PREMIUM IS TYPICALLY THE AMOUNT OF PREMIUM ON WHICH A FULL FIRST YEAR COMMISSION IS PAID. ENTER THE EXACT DOLLAR AMOUNT.
410-419	10	PLANNED PREMIUM	FOR UL AND VUL PLANS, THIS IS THE AMOUNT OF ANNUAL PREMIUM THAT THE POLICYHOLDER PLANS TO PAY AT ISSUE. TYPICALLY THIS IS THE BILLED AMOUNT. FOR WHOLE LIFE AND TERM PLANS, THIS IS THE ANNUAL REQUIRED PREMIUM. ENTER THE EXACT DOLLAR AMOUNT.
420	1	MODE OF PREMIUM PAYMENT	1= ANNUAL 2= SEMIANNUAL 3= QUARTERLY 4= MONTHLY 5= SEMIMONTHLY 6= BIWEEKLY 7= WEEKLY 8= SINGLE PREMIUM 9= OTHER
421-422	2	BILLING TYPE	01= DIRECT BILL 02= PAYROLL DEDUCTION 03= ELECTRONIC FUNDS TRANSFER 04= CREDIT CARD 05= DEBIT

## Appendix B

			06= COUPON BOOK 07= ON PREMIUM WAIVER 08= AUTOMATIC PREMIUM LOAN 09= POLICY IS PAID UP 10= POLICY IS IN VANISH (NOT PAID UP BUT NOT PAYING PREMIUM CURRENTLY) 11= OTHER
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### ACCOUNT VALUES AND TRANSFERS

COLUMN	L	DATA ELEMENT	DESCRIPTION
423-432	10	TOTAL ACCOUNT VALUE	PROVIDE THE ACCOUNT VALUE BEFORE SURRENDER CHARGES BUT AFTER ADDITIONS FOR PREMIUMS, INTEREST CREDIT AND DEDUCTIONS FOR MORTALITY AND EXPENSE CHARGES, POLICY LOANS, AND WITHDRAWALS.  THIS SHOULD INCLUDE VALUES IN FIXED, VARIABLE AND INDEXED ACCOUNTS FOR VUL AND INDEXED UL PRODUCTS.
433-442	10	SURRENDER ACCOUNT VALUE	PROVIDE THE ACCOUNT VALUE <b>AFTER</b> SURRENDER CHARGES CURRENTLY APPLICABLE.  THIS SHOULD INCLUDE VALUES IN FIXED, VARIABLE AND INDEXED ACCOUNTS FOR VUL AND INDEXED UL PRODUCTS.
443-452	10	FIXED ACCOUNT VALUE	PROVIDE THE FIXED ACCOUNT PORTION OF THE POLICY'S TOTAL ACCOUNT VALUE FOR VUL AND INDEXED UL PRODUCTS.
453-462	10	INDEXED ACCOUNT VALUE	PROVIDE THE INDEXED ACCOUNT PORTION OF THE POLICY'S TOTAL ACCOUNT VALUE FOR INDEXED UL PRODUCTS.
463-472	10	VARIABLE ACCOUNT VALUE	PROVIDE THE VARIABLE ACCOUNT PORTION OF THE POLICY'S TOTAL ACCOUNT VALUE FOR VARIABLE UNIVERSAL LIFE PRODUCTS.
473-482	10	FIXED ACCOUNT TRANSFERS	PROVIDE THE NET AMOUNT OF MONEY TRANSFERRED INTO FIXED ACCOUNT(S) FOR THE CURRENT OBSERVATION YEAR. THIS MAY BE NEGATIVE.  DO NOT INCLUDE FUNDS TRANSFERRED DUE TO AUTOMATIC REBALANCING PROGRAMS.
483-492	10	VARIABLE ACCOUNT TRANSFERS	PROVIDE THE NET AMOUNT OF MONEY TRANSFERRED INTO VARIABLE ACCOUNT(S) FOR THE CURRENT OBSERVATION YEAR. THIS MAY BE NEGATIVE  DO NOT INCLUDE FUNDS TRANSFERRED DUE TO AUTOMATIC REBALANCING PROGRAMS.
493-502	10	SHADOW ACCOUNT VALUE	FOR UNIVERSAL LIFE AND VARIABLE UNIVERSAL LIFE PRODUCTS WITH SHADOW ACCOUNT DESIGNS,  PROVIDE THE SHADOW ACCOUNT VALUE AS OF THE END OF THE CURRENT YEAR OF OBSERVATION.  LEAVE BLANK IF PRODUCT DOES NOT EMPLOY A SHADOW ACCOUNT DESIGN.

## Appendix B

### OTHER POLICYHOLDER BEHAVIOR ITEMS

COLUMN	L	DATA ELEMENT	DESCRIPTION
503-512	10	FACE AMOUNT OF TERM/PAID UP RIDERS	REPORT THE PORTION OF THE TOTAL POLICY DEATH BENEFIT IN FORCE FROM TERM/PAID UP RIDERS OR THROUGH THE PURCHASE OF ADDITIONAL AMOUNTS OF INSURANCE THROUGH DIVIDEND OPTIONS. REPORT AMOUNTS FOR THE PRIMARY INSURED ONLY.
513-522	10	POLICY LOAN AMOUNT	REPORT THE TOTAL AMOUNT OF ALL POLICY LOANS OUTSTANDING. CODE AS ZERO FOR POLICIES WITH NO CURRENT OUTSTANDING LOANS.
523	1	DEATH BENEFIT OPTION (FOR UL AND VUL ONLY)	1= LEVEL DEATH BENEFIT 2= LEVEL NET AMOUNT AT RISK 3= OTHER
524-528	5	CURRENT INTEREST RATE CREDITED (FOR UL AND VUL PLANS ONLY)	REPORT THE CURRENT RATE OF INTEREST CREDITED TO ACCOUNT VALUES.  FOR VARIABLE PRODUCTS, PROVIDE THE CURRENT RATE CREDITED TO FUNDS ALLOCATED TO THE FIXED ACCOUNT OPTION. (EXAMPLE: ENTER 5.15% AS 00515)
529	1	REPLACEMENT INDICATOR (NEW ISSUE)	FOR POLICIES ISSUED IN CURRENT OBSERVATION YEAR:  1= POLICY IS AN INTERNAL REPLACEMENT (OF OWN COMPANY'S POLICY) 2=POLICY IS AN EXTERNAL (REPLACEMENT OF ANOTHER COMPANY'S POLICY) 3= POLICY IS A NEW ISSUE AND IS NEITHER AN INTERNAL NOR AN EXTERNAL REPLACEMENT. 4= UNKNOWN WHETHER POLICY IS A REPLACEMENT OR BRAND NEW ISSUE.
530	1	REPLACEMENT INDICATOR (TERMINATING POLICY)	FOR POLICIES TERMINATING IN THE CURRENT OBSERVATION YEAR;  1= POLICY WAS REPLACED INTERNALLY WITH A NEW POLICY FROM THE SAME COMPANY. 2= POLICY WAS REPLACED EXTERNALLY WITH THE PRODUCT OF ANOTHER COMPANY. 3 = UNKNOWN WHETHER POLICY TERMINATED FOR REPLACEMENT.
531-540	10	PARTIAL WITHDRAWALS	PROVIDE TOTAL AMOUNT OF PARTIAL WITHDRAWALS MADE DURING THE CURRENT OBSERVATION YEAR. REPORT AMOUNTS BEFORE DEDUCTION FOR SURRENDER CHARGES IF ANY.
541	1	DISTRIBUTION SYSTEM USED	INDICATE THE DISTRIBUTION CHANNEL THROUGH WHICH THE POLICY WAS PURCHASED. 1= CAREER AGENT 2= MULTILINE EXCLUSIVE AGENT (MLEA) 3= HOME SERVICE AGENT 4= PERSONAL PRODUCING GENERAL AGENT (PPGA) 5= INDEPENDENT LIFE BROKER 6= STOCKBROKER/WIREHOUSE AGENT 7= DIRECT RESPONSE MARKETING 8= BANK OF OTHER FINANCIAL INSTITUTION 9= OTHER



## Appendix B

**2. Data Call and Time Frame for Policyholder Behavior**  
Same as for Mortality

**3. Statistical Report for Policyholder Behavior**  
To Be Developed

**4. Reduced Reporting for Smaller Companies**  
To Be Developed

### **D. Expenses**

**1. Statistical Plan for Expenses**  
(See SOA Expense Study Worksheets.xls)

**2. Data Call and Time Frame for Expenses**  
To Be Developed

**3. Statistical Report for Expenses**  
To Be Developed

**4. Reduced Reporting for Smaller Companies**  
To Be Developed

## **III. Annuities**

**A. Introduction**  
To Be Developed.

### **B. Mortality**

**1. Statistical Plan for Annuity Mortality**  
To Be Developed

**2. Extent of Data Call and Time Frame for Annuity Mortality**  
To Be Developed

**3. Statistical Report for Annuity Mortality**  
To Be Developed

**4. Reduced Reporting for Smaller Companies**  
To Be Developed

## Appendix B

### **C. Policyholder Behavior**

#### **1. Statistical Plan for Annuity Policyholder Behavior**

**To Be Developed**

#### **2. Extent of Data Call and Time Frame for Annuity Policyholder Behavior**

**To Be Developed**

#### **3. Statistical Report for Annuity Policyholder Behavior**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

### **D. Expenses**

#### **1. Statistical Plan for Annuity Expenses**

**To Be Developed**

#### **2. Extent of Data Call and Time Frame for Annuity Expenses**

**To Be Developed**

#### **3. Statistical Report for Annuity Expenses**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

## **IV. Long Term Care Policies**

### **A. Introduction**

**To Be Developed**

### **B. Mortality**

#### **1. Statistical Plan for LTC Mortality / Morbidity**

**To Be Developed**

#### **2. Data Call and Time Frame for LTC Mortality / Morbidity**

**To Be Developed**

#### **3. Statistical Report for LTC Mortality / Morbidity**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

## Appendix B

### **C. Policyholder Behavior**

#### **1. Statistical Plan for LTC Policyholder Behavior**

**To Be Developed**

#### **2. Extent of Data Call and Time Frame for LTC Policyholder Behavior**

**To Be Developed**

#### **3. Statistical Report for LTC Policyholder Behavior**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

### **D. Expenses**

#### **1. Statistical Plan for LTC Expenses**

**To Be Developed**

#### **2. Extent of Data Call and Time Frame for LTC Expenses**

**To Be Developed**

#### **3. Statistical Report for LTC Expenses**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

### **V. Health Policies**

#### **A. Introduction**

**To Be Developed**

#### **B. Mortality / Morbidity**

##### **1. Statistical Plan for Health Mortality / Morbidity**

**To Be Developed**

##### **2. Data Call and Time Frame for Health Mortality / Morbidity**

**To Be Developed**

##### **3. Statistical Report for Health Mortality / Morbidity**

**To Be Developed**

##### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

## Appendix B

### **C. Policyholder Behavior**

#### **1. Statistical Plan for Health Policyholder Behavior**

**To Be Developed**

#### **2. Time Frame for Health Policyholder Behavior**

**To Be Developed**

#### **3. Statistical Report for Health Policyholder Behavior**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**

### **D. Expenses**

#### **1. Statistical Plan for Health Expenses**

**To Be Developed**

#### **2. Data Call and Time Frame for Health Expenses**

**To Be Developed**

#### **3. Statistical Report for Health Expenses**

**To Be Developed**

#### **4. Reduced Reporting for Smaller Companies**

**To Be Developed**