

**1990 VALUATION ACTUARY  
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**GUIDELINE XXX**  
John R. Miller and William M. Buchanan

Proposed Guideline XXX was drafted by the NAIC Life and Health Actuarial Task Force (LHATF) in 1988 as an update to Actuarial Guideline 4. Guideline 4 was adopted in 1984 and was entitled "Minimum Reserves for Certain Forms of Term Insurance." Proposed Guideline XXX would apply to insurance with the following characteristics:

1. Life insurance issued on or after the operative date of the 1980 amendments to the Standard Valuation Law.
2. Premiums or benefits or both that are nonlevel.
3. No cash values guaranteed during the first ten years of the policy.

Proposed Guideline XXX is much broader than Guideline 4 in terms of plans covered. The proposed guideline also adds a third reserve method not found in Guideline 4. This third reserve method is called the unified approach because it combines the unitary method and the renewable term method.

Companies writing business affected by the proposed guideline objected to the onerous reserves that would be required on their current block of business and also indicated it would severely restrict their ability and willingness to continue to write this business as it

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is currently marketed. As a result, the LHATF appointed a committee representing both the ACLI and National Association of Life Companies (NALC) to do the following:

1. To examine the current practices and methods used to determine minimum statutory reserves for certain forms of life insurance with nonlevel premiums or benefits.
2. To examine the current practices and methods used in determining the overall adequacy of statutory reserves for such products to make good and sufficient provision to meet future obligations.
3. To develop recommendations with respect to consistent and appropriate interpretation of the Standard Valuation Law as it applies to such products.
4. To develop recommendations with respect to the establishment of actuarial standards of practice for determining the overall adequacy of reserves for such products.
5. To develop recommendations with respect to the appropriateness of the current statutory mortality standards.

The committee produced a report for the September 27, 1990 meeting of the LHATF in Los Angeles. The highlights of the report are as follows:

### **Findings and Conclusions**

The Standard Valuation Law and its supporting regulations, do not:

- adequately deal with many products currently in the marketplace;

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- reflect lapses;
- dynamically allow for mortality changes over time and for differences in risk classification;
- reflect current expense levels, including products which contain no acquisition expenses; nor
- recognize the interrelationships of the above factors.

The theoretically correct reserves are inextricably linked to increasing premium patterns and the resulting excess lapse experience and deteriorated mortality.

Test Benefit Reserves (TBRs), were determined as a benchmark test for the pattern of good and sufficient reserves.

TBRs are very sensitive to premium increases, associated lapses, and deteriorated mortality.

Proposed Guideline XXX reserves are inappropriate as to both incidence and magnitude.

Unitary reserves for some issue age and duration cells on certain plans of insurance are less than the TBRs.

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1980 Basic Mortality Tables are generally sufficient to support mortality deterioration resulting from excess lapses.

The 1980 CSO Mortality Tables have become increasingly redundant.

### **Recommendations**

The NAIC Life and Health Actuarial Task Force should ask the Society of Actuaries (SOA) to immediately begin work on a new CSO mortality basis. Such basis should:

- a. seek ways to make the table and selection factors dynamic.
- b. seek ways to recognize various classifications of risks, e.g., preferred vs. standard.

As an interim mortality standard for basic reserves, the newly developed 15-year select factors, applied to the 1980 CSO Table, should be used. Such mortality is to be available for use on all plans.

Selection factors should be modified to reflect premium increases.

Basic reserves should be calculated as follows:

1. Basic Reserve -- The maximum of the mean reserves produced by the unitary and segmented methods, as defined in (2) and (3) below.

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2. Unitary -- The unitary method with all negative terminal reserves treated as zero and a minimum mean reserve of  $1/2$  cx.
3. Segmented -- Unitary reserves calculated for each "segment" or "levelized" premium period.

Further work should be done by this task force on deficiency reserves. The issue of deficiency reserve calculations has been addressed, but not yet resolved, by the task force. The task force believes it can have a recommendation in time for the December 1990 NAIC meeting.





**SURPLUS RELIEF REGULATION**  
Stephen L. White

**New York Regulation 102**

Relief is disallowed if any of these apply:

1. Agreement merely transfers deficiency or excess interest reserves, without significant participation in mortality, morbidity, or surrender benefits.
2. Reserves transferred are not consistent with policy obligations transferred.
3. Ceding company must reimburse reinsurer for negative experience (though experience refunds based on cumulative experience and payment upon voluntary termination by ceding company are okay).
4. Ceding company can be deprived of surplus, at reinsurer's option or automatically (even if the automatic event is a contingent one).
5. Recapture is mandatory.
6. No cash payment from reinsurer occurs until after termination (in particular, reinsurer does not transfer cash to pay claims).

Surplus relief insurance for annuities seems difficult though true risk-sharing coinsurance is acceptable.

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### **California Bulletin 89-3**

This is similar in intent to New York Regulation 102. The following differences exist:

1. Renewal expense allowances must cover the anticipated variable renewal expenses of the ceding insurer on the reinsured portion.
2. Modified coinsurance reserve adjustment interest rates cannot exceed the maximum valuation interest rate for more than one year (unless the ceding company holds an additional reserve for the excess). Margins (over credited rates or an index) can be guaranteed for over a year provided (a) the resulting rate does not exceed the anticipated earned rate and (b) the resulting modified coinsurance reserve adjustment interest rate does not exceed the maximum valuation interest rate for more than one year (unless additional reserves are held).
3. Reinsurer must have significant participation in mortality, morbidity, investment (including market value changes) or surrender benefit risks. (The corresponding New York provision does not mention investment risks.)
4. Possible payments from ceding company to reinsurer must be from income reasonably expected from the reinsured policies.
5. Reserve credits are consistent with obligations transferred (a general requirement of California Insurance Code. The motivation for Bulletin 89-3 mentions that insurers were taking significant reserve credits when only catastrophic risks were transferred).
6. Settlements must be at least quarterly and must be made in cash.

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7. The ceding company's actuary determining reinsurance reserves must consider this bulletin (89-3) and any applicable actuarial standard of practice. The actuary must maintain adequate documentation, including the tests of renewal expense allowances and reserve adjustment rates.
8. There is grandfathering of contracts executed and in force prior to August 2, 1989, provided (a) there is no new business after October 31, 1989; (b) the California Department is notified by October 31, 1989, including identification of all related assets/liabilities in 1988 statement; (c) assets/liabilities are reduced pro-rata, from the 1988 statement, to 0 at 12/31/92; and (d) treaties, assets and liabilities otherwise meet all California requirements.

California Bulletin 89-3A clarifies that 89-3 applies to California-domiciled companies and other licensed companies not subject to a similar law in their state of domicile. New York Regulation 102 and the NAIC model regulation (if formally adopted) are similar. The NAIC model, if only used informally, does not count.

California Bulletin 89-3A adds two other acceptable bases for the modified coinsurance rate (with margins):

1. the Exhibit 2 rate
2. the rate earned on a specified asset portfolio

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These are acceptable provided:

1. Conditions 2(a) and 2(b) above are met,
2. Any initial assets are identified, and
3. The method for determining the rate is stated.

### **NAIC Model Regulation**

The model regulation was adopted by the NAIC in 1985. Adoption by individual states has been slow but is accelerating. About a dozen have adopted it now, with an additional state being added every couple of months.

The model is very similar to New York Regulation 102, which was adopted slightly earlier in 1985. Like California, it has a 3-year transition period if additional reserves are required. (New York 102 does, too, but it has expired).

State variations are slight. Thus far, only California has explicitly addressed transfer of investment risk, especially modified coinsurance reserve adjustment rates.

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### **Actuarial Standards Board**

The actuary involved in determining reinsurance assets and liabilities should be familiar with Standard 11. It covers traditional risk-sharing reinsurance as well as surplus relief reinsurance.



**NAIC ACTUARIAL GUIDELINES**  
Clark A. Ramsey

The NAIC actuarial guidelines provide guidance in the application of actuarial statutes in specific circumstances. There are currently 26 actuarial guidelines. Certain of the more notable guidelines are summarized below.

Guideline IV interprets minimum reserves for term life insurance without cash values valued on the 1958 CSO Mortality Table for the current term period. Minimum reserves are defined as the appropriate reserves for the current period of level premiums including any deficiency reserves, plus the present value of the excess of future test premiums over future gross premiums. Test premiums are based on 1980 CSO with ten-year select mortality factors and 4.5% interest. Future sufficiencies are not allowed to offset future deficiencies. Proposed Guideline XXX would expand the principles of Guideline IV beyond term plans without cash values valued on 1958 CSO.

Guideline VII prohibits the inclusion of pure endowments in determining equivalent level amounts.

Guideline VIII states that under the 1976 amendments to the Standard Valuation Law, individual single premium deferred annuity (SPDA) reserves "shall at least equal the

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greatest of any of the discounted values of all guaranteed future benefits including cash surrender values available after the date of valuation, such benefits discounted to the valuation date at the maximum permissible statutory interest rate." Note that Illinois Regulation 89-57 interprets Guideline VIII as being continuous in nature and not discrete.

Guideline IX classifies individual single premium immediate annuity (SPIA) forms as immediate rather than deferred based on the timing of the first annuity payment, the frequency of succeeding payments, and the rate of increase in guaranteed payments from one year to the next.

Guideline IX-A specifies minimum reserves for substandard structured settlement annuities, including similar settlements such as workers' compensation or settlements of long-term disability claims where a temporary or life annuity has been used in lieu of continuing disability payments. Minimum reserves are determined by making a constant addition to the otherwise applicable valuation mortality table so that the resulting expectation of life is at least as great as the expectation indicated by medical directors or underwriters during the underwriting and pricing process. These minimums apply for 1990 and later issues for the 1990 and later valuations and to all business by the 1993 year-end valuation.



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Guideline IX-B clarifies the methods for deferred annuities and structured settlements. When payments begin, for SPIAs, supplementary contracts providing annuity payments, and deferred annuities, the valuation interest rate may be based on the calendar year of issue or on the calendar year of receipt of consideration or on the calendar year of the beginning of payments, but the procedure elected must be applied in a consistent manner. Structured settlements are to be split into lump-sum payments and annuity payments, as defined in the guideline.

Annuity payments are valued on SPIA or Plan Type A valuation interest rates as appropriate if payments in any year do not exceed a certain percentage of the prior year's payments (115% under a contract-by-contract basis or 110% for a block of contracts). Blocks which fail this test may be divided into component(s) passing the test and component(s) failing; the guideline specifies how to determine valuation interest rates for the passing and failing components.

Alternatively, blocks failing the test may be reserved for by holding for each contract for each valuation year the greater of the "level interest rate reserve" and the "graded interest rate reserve." The graded interest rate reserve is based on "X%" for the first 20 contract years and the Plan Type A valuation rate with guarantee duration greater than 20 years

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thereafter. "X" is determined so that the reserve at issue equals the level interest rate reserve, except that X cannot exceed 115% of the level valuation interest rate.

The guideline applies to 1990 and later issues for 1990 and later year-end valuations, and to all in-force business covered by the 1980 amendments for the 1993 and later year-end valuations.

The guideline further states that the examiner should request cash-flow projections under various interest rate scenarios demonstrating the sufficiencies of the assets backing the liabilities. If the dates of acquisition and yields on the supporting assets differ from the issue dates and valuation interest rates of structured settlements, the examiner may request a new valuation with rates based on the date of acquisition of the majority of the assets.

Guideline XIII defines when annuity-contract-contingent surrender charges are available under the Commissioners Annuity Reserve Valuation Method. For contracts issued on and after January 1, 1985, contingent surrender charges with bailout rates less than or equal to the calendar year statutory valuation interest rate for life insurance policies with guarantee duration in excess of 20 years issued in the same year may be treated as available.

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Guideline XIV provides surveillance procedures for review of actuarial opinions for life and health insurers. The guideline directs regulators to accept actuarial opinions only from qualified actuaries, to follow up with the actuary if the opinion is determined to be qualified or if items in the outline provided in the Instructions to the Blank are omitted, and to ascertain the reason for the change if the signing actuary differs from the previous year. The guideline also discusses the actuarial report.

Guideline XVII specifies that for 1980 CSO and subsequent issues, the equivalent level amount is the arithmetic average of the death benefit at the beginning of each of policy years 2 through 10, inclusive.

Guideline XXI requires that "the excess of (a) over (b)" in the definition of the Commissioners Reserve Valuation Method modified net premiums under the Standard Valuation Law is to be taken as zero if it is calculated as negative for policies issued on or after January 1, 1987.

