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Valuation law and the Mandatory Securities Valuation Reserve

by Anthony T. Spano

The NAIC Special Advisory Committee on the Standard Valuation Law presented proposals at the December 1988 NAIC meeting for implementing the valuation actuary concept into law. The proposals were contained in a preliminary report presented to the NAIC Life and Health Actuarial Task Force, which appointed the Special Advisory Committee. The committee is chaired by John Tweedie, Senior Vice President and Chief Actuary at the Metropolitan Life Insurance Company.

The committee was responding to a charge from the Task Force to "develop a draft of a model law and accompanying regulations that would require each company to submit an acceptable opinion by a qualified actuary, supported by an appropriate memorandum describing the basis of such opinion, as to the adequacy of certain specified reserves, and the assets supporting such reserves." In addition to drafts of proposed amendments to the Standard Valuation Law and of an accompanying regulation, the committee's report includes a tentative mandatory Securities Valuation Reserve proposal. The following are principal features of the committee's report and proposals:

1. Minimum reserve standards as currently defined by the Standard Valuation Law would not change. However, the law would be amended to require that every company submit annually the opinion of a qualified actuary that the reserves for certain policies and contracts specified by the state insurance commissioner, when considered in the light of the assets held by the company with respect to such reserves, make "appropriate provision" for the company's obligations under the policies. This might require the company to hold reserves higher than the statutory minimums.
2. Each company would designate a qualified actuary, who must be a member of the American Academy of Actuaries, to render the required opin-

ion. The company must notify the state insurance commissioner of the name of the qualified actuary and of any change in the qualified actuary and the reasons for any change.

3. The opinion would be in a form prescribed by the commissioner and would be based on standards of practice as adopted from time to time by the Actuarial Standards Board of the Academy.

4. The committee has developed a framework to guide the Actuarial Standards Board in establishing the required standards. A basic element of the framework is that reserves be considered adequate if there is a substantially better than even chance that the cash flow generated by the assets supporting the reserves will be sufficient in the aggregate to mature the underlying contractual obligations and related costs. However, this does not imply that the reserves must be sufficient to mature these obligations under catastrophic conditions. Such conditions should be covered by surplus.

5. The committee concluded at the onset that the consideration of surplus levels was outside its charge and therefore limited its work to policy reserves.

6. The committee feels there is a wide array of techniques that can be used to support the actuary's opinion, running from simple arguments based on the contractual provisions to multi-scenario cash flow testing. The committee thinks that this type and depth of the analysis should be related to the type and extent of the asset and/or reserve risks and that the actuary must choose the level of refinement appropriate for each case.

7. The actuary's opinion would be kept concise. Detailed justification for the opinion, including descriptions of analyses performed, would be set forth in a separate supporting memorandum. This memorandum would not be filed with the state regulators but would be a confidential document

in the same sense as other documents that are available only in the examination process. The memorandum would be maintained in the company's files but would be available for regulatory examination. If a regulator requests such a memorandum and no such memorandum exists or the regulator finds that the analysis described in the memorandum does not meet the standards promulgated by the Actuarial Standards Board, the regulator may engage an independent consulting actuary at the company's expense to prepare a satisfactory memorandum.

8. Except in cases of fraud or willful misconduct, the actuary rendering the opinion would be accountable only to company management and the regulators for damages resulting from any act, error, omission, decision, or conduct with respect to the actuary's opinion.

9. Losses due to defaults and market value changes in investments would be assumed to be covered by the Mandatory Securities Valuation Reserve (MSVR), while losses due to increases in benefits and expenses, pricing insufficiencies, and changes in the interest rate environment would be covered by the basic policy reserves.

10. The committee presents a tentative proposal for making significant changes in the nature, structure, and calculation of the MSVR. Under the proposal, all invested assets other than real estate would be subject to the MSVR. The MSVR would be split into a basic component, which would be a liability item, and an additional component, which would be an item of earmarked surplus. The basic component would be further subdivided into a stabilization component and a default component. On acquisition of an investment, a target MSVR "default" amount would be determined by a prospective formula and would be immediately set up in the additional component of the MSVR. In

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At the time he was writing, issue expenses of 2% were not uncommon.

The Zillmer Method results in negative first-year terminal reserves at the younger issue ages. Zillmer urges that these negative first-year reserves not be included in the summation of policy reserves. Otherwise, high lapse rates can result in sudden increases in the company's aggregate reserves. If negative calculated reserves are posted as zero, then high lapse rates have no effect on the company's reserves. Not posting negative reserves results in higher expenses, but Zillmer demonstrates that this does not have a material effect on the income statement.

Zillmer's emphasis on the income statement is surprising. In the United States the balance sheet, rather than the income statement, was the primary accounting statement until well into the twentieth century. Zillmer's arguments show that the effects of reserving on the income statement were at least as important to him as its effects on the balance sheet.

All through *Contributions*, Zillmer illustrated his points by referring to an extensive model office calculation. The model office illustrated the effect of Zillmer reserving on the income and reserves of a growing company. The model office extended for some 60 years. Since the standard policy in the simulation was an endowment at 90 and the youngest assumed issue age 30, this was long enough to assure that "steady state" had been reached. Replicating Zillmer's calculations with an AT clone and a third-generation spreadsheet language was a substantial effort. Carrying out such an extensive set of calculations in the mid-nineteenth century must have been a monumental task.

The second part of *Contributions* provided a muckraking analysis of alternatives to the Zillmer Method used by some British companies. Zillmer provided a list of English actuarial practices calculated to shock proper German actuaries: 1) booking the profit from an insurance contract when it is sold, 2) using higher interest rates for discounting mortality than for discounting future premiums, and 3) calculating the net present value of gross premiums but the net present value of mortality unloaded for expenses or contingencies.

Again Zillmer focused on the income statement; he showed that the English accounting practices could not accurately depict the earnings of a growing company. A consequence of gross premium valuation as practiced by the English companies was that, after an initial period of attractive earnings, the company had to grow at an increasing rate to compensate for the write-off of assets due to lapses. Zillmer assured his readers that the German mind could not even conceive of anything so foolish.

Zillmer's examples of the English insurance industry in the early nineteenth century remind one of the history of American railroads; in many cases both the stockholders and the policyholders were defrauded. Rapidly growing companies were looted by their founders, and the corporate carcass was sold to naive investors.

Zillmer's ultimate epithet for the English insurance companies was to compare them to the fraternal (assessment) burial societies. At least when the burial societies went broke, the damage to the policyholder was minimized. The member of the fraternal burial society had not paid in enough to have an interest (cash value) in the policy. The policyholder of the English company had paid enough, but there was nothing left in the company after the entrepreneurs had finished their work.

William L. Roach is Professor at Washburn University of Topeka, School of Business. Gunnar Alksnis, not a member of the Society, is a professor at the same school.

Record registration

Registration for the February 1989 Course 100 exam has broken records. According to SOA Registrar Bernard A. Bartels, 3,767 students signed up for the February 1989 exams, an increase of 46% over the February 1988 registration figure of 2,580. Course 100 was offered in February for the first time in 1987, when 1,596 persons were enrolled.

The February exams have not significantly decreased the number of registrants for the traditional spring and fall exams, said Bartels, who added that this year Course 110 was offered this February for the first time.

Valuation Law cont'd

subsequent years, the additional component would be amortized into the basic default component. If the additional component were to exceed a company's surplus, the company would be required to restrict its operations. The report indicates several open issues with respect to the MSVR proposal.

The committee and the NAIC Actuarial Task Force are seeking comments on the committee's report and proposals. The Task Force plans to issue an official exposure draft at the June 1989 NAIC meeting so that an amended Standard Valuation Law and accompanying model regulation can be adopted at the December 1989 NAIC meeting.

Anthony T. Spano is Actuary, American Council of Life Insurance, and is Secretary of the SOA.

Omission

The January 1989 issue of *The Actuary* omitted Bruce D. Schobel as coauthor of "Numberless Nevertheless." Schobel is a consultant in the Mercer-Meidinger-Hansen Louisville office and is a frequent contributor to *The Actuary*.

New members

As a result of the November 1988 exams, the Society has newly awarded the Associateship designation to 318 persons and has promoted 128 Associates to Fellowship.

In memoriam

Garnett E. Cannon FSA 1935
Joel E. Feingold ASA 1979
John Haynes Miller FSA 1931
(Past President of the Society of Actuaries, 1962-63)

1989 Symposium for the
Valuation Actuary
September 14-15, 1989
Wyndham Franklin Plaza
Philadelphia, PA