

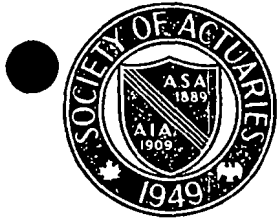


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## LINKAGE OF NONFORFEITURE VALUES WITH VALUATION RESERVES

by John R. Gardner

*Editor's Note: This report was prepared for the use of the Committee on Nonforfeiture Values. Mr. Gardner is Vice Chairman of the Committee.*

The following commentary, after highlighting the strong linkage that currently exists between valuation reserves and nonforfeiture value requirements, discusses the origins of this relationship. It is concluded that this linkage is undesirable and should be severed.

Standard valuation and nonforfeiture laws tie closely together minimum required nonforfeiture values and policy valuation reserves on both a policy by policy basis and on aggregate basis. The linkage is forceful in that the required relationships between mortality and interest assumptions and expense allowances cause the policy reserve generally to be not less than the minimum nonforfeiture value applicable to that contract. Typically, the minimum nonforfeiture value is the policy valuation reserve less the unamortized balance of an initial expense allowance. The valuation law also requires that aggregate reserves be not less than aggregate reserves calculated on the nonforfeiture mortality and interest basis.

The 1941 Report of the Committee to Study Nonforfeiture Benefits and Related Matters commissioned by the National Association of Insurance Commissioners stated clearly that this linkage should be broken. Among the conclusions in Chapter XI one finds:

*There is no necessity for the requirement that valuation of policy reserves and determination of nonforfeiture benefits be made on the basis of the same mortality table and rate of interest. Such a requirement is unnecessarily awkward and does*

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## SYMBIOSIS

This issue of *The Actuary* is being distributed to all members of the Casualty Actuarial Society. We are glad of this opportunity to exchange periodicals with our Casualty colleagues and we invite their comments and subscriptions. *The Actuary* is published monthly except for July and August. The annual subscription is \$4.50.

## EXPERT WITNESS

Joseph G. Van Matre and William N. Clark, *The Statistician as Expert Witness: The American Statistician*, Vol. 30, No. 1, February, 1976.

by Frank L. Griffin, Jr.

"The Statistician as Expert Witness," (an article that appeared in the Feb. 1976 issue of *The American Statistician*), has general application to anyone serving as an expert witness in a court of law, especially in its remarks about the ethical responsibilities of such a person and in its advice on preparing to give testimony.

For these points in particular the article is a worthy reference for actuaries, who are frequently called to testify on matters involving life contingencies — such as life estates and reversionary interests, and measures of lost earnings over work-life expectancies in personal injury cases. In fact, the entire article might well have been written by substituting the word "actuary" for the phrase "economist statistician."

The article points out: "Expert Witnesses may be men of science educated in the art or persons possessing special or peculiar knowledge acquired from practical experience. One need not have years of graduate work and several de-

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*Reports of Consultants on Actuarial and Definitional Aspects of Social Security Disability Insurance*, U.S. Government Printing Office, Washington, D.C., 1976, pp. 176.

by Robert B. Shapland

This publication presents the reports of three consultants to the Subcommittee On Social Security of the Committee On Ways and Means, U.S. House of Representatives along with a copy of a proposed draft of HEW regulations regarding the use of nonmedical factors in determining disability. All of this material is concerned with the disability portion of the Social Security Act and more specifically, with certain aspects of the definition of disability and the increases in benefit utilization that are taking place under this disability program.

The proposed regulations regarding the use of vocational factors in the disability determination process are a formalization of current operating instructions. They involve a detailed classification of age, education, and work experience, and define the level of each which, in conjunction with the various levels of medical impairment, produce a finding of disabled or not disabled. For example, an individual limited by medical impairment to sedentary work, age 55 or over, with limited education (7th through 11th grade), and skilled or semiskilled work experience that is not transferable to other occupations, is defined as disabled.

The report by Edwin Yourman, formerly the Assistant General Counsel, Social Security, is entitled *Feasibility Of A More Objective Test For Disability Under the Social Security Act*. Here, Mr. Yourman discusses the pros and cons attendant upon the current and proposed rules for disability determination. He recommends that consideration be

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## Nonforfeiture Values

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*not necessarily promote equity. In the first instance solvency is principally involved while, in the second instance, the company-policyholder relations of equity are principally involved."*

The first recommendation put forward proposes:

*"the elimination of the artificial relationship existing between the mortality and interest standards now specified for the valuation of policy reserve liabilities and the determination of nonforfeiture benefits. The same minimum nonforfeiture requirements should apply regardless of the basis or mode of valuation."*

The concept of policy nonforfeiture values unfolded slowly over the decades, tracking the development of valuation reserves. Over time the valuation reserve came to represent prefunding of future liabilities out of policyholder premiums. When a policyholder came to terminate his policy in midstream, questions began to be asked as to why he should not have back the equity he had built up in his policy. Accordingly nonforfeiture values and valuation reserves became closely intertwined.

The run-on-the-bank fear has always existed and will continue to exist as a concern for those who occupy themselves with the solvency of an insurance company. Should every policyholder decide to quit, the insurer must be certain that there is sufficient money on hand to pay everyone off. As a consequence of this requirement, it is argued that aggregate valuation reserves should equal or exceed aggregate nonforfeiture values. While the need to be able to handle the drain must be taken into account, it has become evident that if a problem should arise, it would not be because valuation reserves do not at least equal outstanding nonforfeiture values; the problem would lie primarily on the asset side of the ledger where book asset values might not be realizable.

The Society of Actuaries Special Committee on Nonforfeiture Laws in its work adopted the position that the subjects of nonforfeiture values and valuation reserves are severable. It is consistent with the thinking of that committee that there is no reason for the minimum nonforfeiture value to recognize the policy valuation reserve. The only obligation that does exist is that the valuation process

take into account, among other policy features, any guaranteed nonforfeiture benefits built into the policies being valued. The way in which that connection is handled will depend to a large extent upon the way in which thinking governing the valuation processes evolves. In particular it would appear that the concept that a policy valuation reserve should exceed the required nonforfeiture value will at best be only one factor to be considered in the valuation process.

Valuation and nonforfeiture processes reach out in different directions. Valuation should take into account futures — future gross premiums and projected expense rates; otherwise looming insolvency might not be detected. The basic concept of a nonforfeiture value, however it may be constructed, carries with it a retrospective flavor. All regulatory thinking to date also states that in the development of nonforfeiture values the margin for profit and overall expense is to be ignored and that required nonforfeiture values should not be influenced by the level of the gross premium. These contradictions cannot be reconciled with the connection between valuation reserves and nonforfeiture values contained in the current law.

Whereas nonforfeiture value requirements must of necessity relate to individual policies, future development of valuation theory and practice may well concern itself with the risks faced by a portfolio rather than by the individual policies of which the portfolio is made up. Should this development occur, with the concept of a valuation reserve for an individual policy becoming relatively unimportant, linkage between nonforfeiture values and valuation reserves could not even be forced.

If, as was recommended by the Society of Actuaries Special Committee, there is to be one and only one set of minimum values for any particular plan, the tying of valuation reserves to minimum nonforfeiture values will tend to depress valuation reserves toward that single minimum level. There is no logical or rational basis for this consequence; it merely demonstrates that the connection between the two does not possess the strength it was once thought to have.

It is important that the valuation process be made responsive to changes in

experience occurring following issue. Nonforfeiture values, on the other hand, are to be established at issue by law and by current marketing practice. A prudent company may well change from time to time its valuation basis and the valuation reserves on a block of business already in force. Each time such a change occurs, the linkage appears less and less real. In a similar vein, the concept of actuarial certification encourages examination of the appropriateness of reserve bases from time to time following issue; a valuation process that is hamstrung by nonforfeiture requirements set at issue defeats the concept.

The approach that aggregate policy valuation reserves must be at least equal to aggregate nonforfeiture values is somewhat more in tune with the direction that valuation thinking is likely to take. Maintaining the relationship between nonforfeiture and valuation requirements on an aggregate basis focuses attention on the need to value portfolios rather than policies. To the extent the relationship examined on an aggregate basis becomes one and only one of several valuation tests, the relationship between the two is useful.

In summary the close relationship that currently exists between valuation reserves and nonforfeiture values is contrary to the thinking underlying the two relevant standard laws. Examination of the implications of the relationship especially upon the valuation process suggests that maintenance of the relationship may have a retarding effect. Accordingly, it is recommended that nonforfeiture value requirements be established independently of valuation considerations, and that in the process of valuing policy liabilities existing guaranteed nonforfeiture values be only one element taken into consideration. □

### Actuarial Meetings

Nov. 30, Boston Actuaries Club

Dec. 9, Baltimore Actuaries Club

Dec. 9, Actuarial Club of Des Moines

Dec. 15, Seattle Actuarial Club