RECORD OF SOCIETY OF ACTUARIES
1980 VOL. 6 NO. 4

NEW AND PROPOSED VALUATION AND NONFORFEITURE STANDARDS FOR INDIVIDUAL INSURANCE

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Discussion of new and proposed standards and their potential implications for rates, reserves, federal taxes and surplus.

1. Increased responsibility of actuary signing the reserve opinion on the convention statement.

2. Tax effect of new standards.

3. Proposed deficiency reserve treatment.

4. Improved management reporting.

5. Longer-range proposals.

MR. RICHARD S. MILLER: Several bodies are currently active in the valuation and nonforfeiture field. (1) The American Council of Life Insurance (ACLI) is very active in this field through its Actuarial Committee, that committee's Subcommittee on Valuation and vertically throughout its various structures. (2) There is an Advisory Committee to the C-4 Subcommittee of the National Association of Insurance Commissioners (NAIC) which is chaired by Charles Greeley of the Metropolitan. It was not intended to be specifically an industry committee or an industry advisory committee. Nor, for that matter, were the members operating as representatives of their companies or organizations. Rather, it has been structured as an actuarial advisory committee operating under professional actuarial standards. (3) There is also the Society of Actuaries special committee on mortality, chaired by Charles Ormsby, which has constructed the K tables. I will talk a little more about that later. (4) There is the Ad Hoc Committee on dynamic segmentation, perhaps more particularly on deposit term and its sub-categories, which has been referreed by Charles Greeley. (5) Finally, there is the C-4 Technical Subcommittee of the NAIC cochaired by Ted Becker and John Montgomery. It is the focal point for review of all valuation or nonforfeiture proposals.

These groups have produced several documents which are in the process of being put into final draft form by the ACLI. These documents will be either transmitted to the NAIC for adoption or will actually be adopted within the Financial Examiners Guidelines in the near future. Mechanically those recommendations for adoption must be out by November 1st, so the time fuse is running very short.

Since the 1976 amendments were constructed there have been at least four developments which have the effect of being extensions or at least interpretations of that law. As the law makes distinctions between life insurance and annuities for nonforfeiture purposes, a definition of a life insurance policy or an annuity policy is required for borderline cases. Such a definition has been proposed by the ACLI to the Technical Subcommittee and if adopted it will have the force of law in practical effect. In very brief terms this proposal defines a test on the presence of at least a rather minimal average net amount at risk. In addition, there is required a definition of an immediate annuity versus a deferred annuity -- again pertinent for valuation distinctions. An immediate annuity has been termed to be anything with a periodic payment beginning no later than 13 months after receipt of premium and with successive benefit payments increasing no more than 15% over those during the previous policy year. If you think a little while you will see some subtle distinctions being made there. Guidelines 3 and 4 in the Financial Examiners Handbook refer to interpretations of the existing law with respect to the definition of a maturity value for an annuity policy which does not use the voluntary cash-out value in determining the amount of income to be paid at maturity. A second definition has to do with the valuation of policies which guarantee future coverage at currently guaranteed rate. It is more commonly known as the deficiency reserve law for ART policies, and it adopted the modern CSO mortality table resulting from the work of the Unruh Committee as its test for that purpose. Guideline 2 establishes a minimum reserve value for guaranteed interest contracts and deposit administration type contracts. It is particularly pertinent to New York filed or California domiciled companies where it has been specifically applied by the departments but it probably applies throughout the United States.

In addition, work is being done on an interpretation which would permit excess interest credits under individually allocated annuities to have an immediate cash value less than the credit amount. In contrast, dividends credited may never have a value less than the initial amount, whether left on deposit or used to purchase paid-up amounts. The presence of partial surrender rights was probably assumed in that interpretation.

New legislative proposals are primarily generated by the ACLI. The most dramatic of the current proposals is the dynamic interest rate proposal. In addition to that we have the proposals to enact the remaining elements of the Unruh Committee suggestions concerning nonforfeiture. Without a detailed explanation, I will briefly summarize: The circularity of the net premiums versus net adjusted premium calculation is removed; the Richardson expense allowances are adopted; the equivalent level insurance amount is defined as the average of the first 10 years; expense allowances are based on a level net premium, not a uniform percentage of the gross; there is accommodation both for experimental designs which do not directly fit the law and for policy fees or quantity discounts on non-level premium policies; there is a triviality test at 2½% of the face amount; and, there is extension of the term cash value exemption to age 71 and 20 years.

The dynamic interest rate proposal has generated a great deal of discussion -- it was the topic of discussion in a concurrent session this spring in Hartford. It is now moving forward to the NAIC. The primary changes from the ACLI version were generated out of a report by the Greeley Advisory Committee to the NAIC.

On the mortality side, K tables as prepared for males and females are being recommended to the NAIC. Ten-year select factors are being recognized for use with those tables on an optional basis to the company at the plan level. If the company does take the option of using the select tables, however, they must be used for both the basic reserve, probably increasing that amount, as well as in any test for a deficiency or minimum reserve using the gross premiums. A complicating factor is that the Society committee which developed the K tables was unable to fully meet as a committee with respect to the select factors. That may have been a contributing factor to the fact that the Society Board did not approve, recognize or endorse the ten-year select factors, but they did acknowledge that they were transmitted to the NAIC C-4 Subcommittee. The select factors probably will go forward anyway.

Dynamic segmentation is also a topic which has to be mentioned and will be discussed later.

At this point I am going to take the liberty of quoting from the Greeley Committee report to the NAIC with respect to the dynamic interest rate proposals. "We emphasize that of the weighting factors proposed above, the larger ones assume conservatively designed interest guarantee products and a high degree of immunization of assets and liabilities. This is in addition to the fundamental assumption applicable to all weighting factors, that the individual company's investment yield is sufficient to support the guarantee. The company's valuation actuary should ascertain whether these assumptions are met. If they are not met the actuary should establish reserves on a more conservative basis or comment appropriately in the actuarial opinion furnished in connection with the company's annual statement. We also suggest that the C-4 Subcommittee ask the American Academy of Actuaries to consider principles of actuarial practice with regard to this part of the valuation actuary's opinion."

As an introduction to Paul Sarnoff, I will quote from his letter written to the NAIC C-4 Technical Subcommittee concerning dynamic interest. "The Technical Advisory Committee pointed out that some of the more sporty interest rates permitted under the proposed dynamic interest law should be used by an actuary only where he is reasonably confident of the company's ability to meet the cash flow requirements of the contract involved. The American Academy of Actuaries should provide guidance in this matter."

MR. PAUL E. SARNOFF: The 1980 amendments that Dick referred to in the model Standard Valuation Law include these new interest rate standards. Instead of listing the minimum reserve interest rate standards item by item, the new model law will specify a procedure for deriving the interest rate standards for various kinds of products. The procedure is based on the performance of a popular bond interest rate index. The result will be realistic interest rate assumptions, particularly for such contracts as are referred to by the term guaranteed interest contracts or GIC's.

A Technical Advisory Committee that Dick just mentioned composed of actuaries has been working with the NAIC C-5 Technical Subcommittee. The Advisory Committee has approved the use of these assumptions, but it felt their use could be supported only after the Academy has made a pronouncement on proper actuarial procedure. The reason for the Advisory Committee's concern is that the suitability of the new interest rate standards will vary widely from company to company, depending upon the withdrawability of funds under its contracts and the relationship between the potential demand for funds and the cash flow. In particular the company needs to be sure that it can meet withdrawal demands even if there is a sudden <u>increase</u> in interest rates accompanied by a sharp drop in the regular cash flow or even a reversal of the regular cash flow.

I would like to examine the various laws and regulations that affect determination of policy reserves in the United States and then review the position of the Academy on the 1980 model amendments.

Under state law, the commissioner of insurance is assigned the responsibility of valuing or causing to be valued the reserve liability of every life insurance company doing business in the state. As a practical matter the principle of reciprocity is used; thus, each commissioner is mainly concerned with the valuation of reserve liabilities of the companies domiciled in his state. The law goes on to specify the minimum standard that the commissioner must apply in making these valuations.

The United States Corporation Income Tax on life insurance companies takes into account the existence of these laws that require companies to hold reserves. When a company establishes reserves that meet the specifications in the federal income tax law, the result may be to reduce or eliminate the amount of income that is subject to tax. The main requirements for a reserve to qualify for federal income tax (FIT) purposes are that the reserve must be set aside to liquidate future unaccrued claims involving life, accident or health contingencies. They must be computed or estimated using mortality tables and assumed rates of interest, and they must be required by law. Therefore, there is a strong relationship between the regulation of life insurance reserves by the states and the taxation of life insurance companies by the Federal Government. This relationship has less relevance to GIC's receiving the interest paid treatment for FIT than it does for life insurance reserves. Nonetheless, it is important to observe that a divergence between professional expectations as to standards of reserve adequacy, and those called for by the law, can lead to tax difficulties and even litigation among the parties involved.

There is a reason why life insurance companies are required to hold reserves which meet a definite minimum standard. As experience in the United States has shown, when a company accumulates and maintains an amount of assets in its statement which exceeds its reserve and other liabilities by an appropriate margin, it will have the ability to meet all the obligations called for under its policies when they fall due. It is true that states require companies to hold minimum amounts of capital and surplus in addition to the reserve and other liabilities; however, well-run companies should maintain surplus in excess of the minimum requirements. The purpose of the annual statement is to demonstrate how much assets the company has on hand over and above its reserves, liabilities, and minimum capital and surplus.

The annual statement requires a statement of opinion by a qualified actuary to the effect that he has reviewed the assumptions and methods used to determine the policy reserves and other actuarial liabilities. He is also required to give his opinion as to whether the reserves meet the requirements of the law, are in accordance with and reflect all the policy provisions, and that provisions have been made for all the liabilities that should be established.

The actual requirement for a statement of opinion in the annual statement relates to the reserve reported in the statement. In contrast, it is the level of <u>assets</u> in the statement that governs the ability of the company to carry out all the terms of its contracts. All other things being equal, the greater the reserve held in the statement the less likely the company is to be able to meet its obligations without becoming technically insolvent. After all the reserve is the standard by which solvency is measured; a high reserve standard is a tougher one and a low reserve standard is an easier one to meet. It would indeed be a paradox if the requirement for an actuarial opinion which was intended to assure a company's ability to meet its obligations had the opposite effect.

The Academy has a number of guides to professional conduct -- one is called Guide 4-B. This guide requires that the actuary should see that assumptions are adequate and appropriate and the methods used are consistent with sound principles and procedures and usage of the profession. When an actuary expresses an opinion on reserves, he is performing a function that is subject to this guide. Ordinarily, an assumption which is adequate and appropriate for the purpose of determining reserves is also adequate and appropriate from the standpoint of the company's overall ability to meet the terms of its contracts. However, an actuary may find a situation where the reserve assumption is adequate and appropriate from the standpoint of complying with statutory reserve requirements but is not adequate and appropriate from the standpoint of the overall operations of the company.

Under Guide 4-B such an actuary has a responsibility to the company to point out the need for covering the potential demand for the maturity value by matching an appropriate asset maturity, by obtaining a line of credit for short term borrowing, or by arranging for the possible liquidation of some permanent investments. At the same time, the actuary should not be expected to mention in his statement of opinion on reserves that there is a potential problem relating to the mismatch of assets and liability maturity or cash flow irregularity, etc. These matters do not relate to the reserve liability, which is the standard by which the company's solvency is measured.

The result of all this is that actuaries should be careful about the interest rate assumptions they adopt, especially for such contracts as GIC's. The pending law would permit the use of an interest rate that might be entirely appropriate for some classes of contracts, but completely inappropriate for others, depending on how the withdrawal and maturity values correspond to the company's overall asset distribution and cash flow. Guide 4-B has an important application to such a case. The actuary should take the necessary steps to protect the financial integrity of the company as well as his own professional standing. Such steps include making recommendations as to the nature and amount of invested assets which should be held by the company in order to meet its obligations. Hopefully, the regulators will be satisfied with such an application of the guides to professional conduct. The Academy can help the practicing actuary, including one who renders an opinion on reserves, by reminding him of this application of Guide 4-B.

As a general comment, I hope there is a realization of the many thousands of man hours of work involved in the committees referred to by Dick. This work has spanned a period of many years culminating in the new draft legislation which is about to be presented to the commissioners for action in December. If you believe that it is a general improvement and worthwhile for the life insurance industry, I would like to urge you to call your commissioner or insurance department. Explain how you believe some of these changes in the law will benefit the policyholders, regulators, and the insurance companies. Register your support of these professional actuaries who have been doing the work of your Society.

MR. MILLER: Our next panelist is Jack Turnquist of Tillinghast, Nelson & Warren, Inc. Jack is the reserve specialist for the firm and reviews all opinions expressed by the firm, specifically including the actuarial opinions required in the NAIC Convention Blank.

MR. JACK M. TURNQUIST: My exposure to the proposed revisions to the Standard Valuation and Nonforfeiture Laws is quite recent. Unlike Dick and Paul, I was not a member of the Greeley Committee and I have not participated in the various stages of drafting, suggestion and critique.

My participation on this panel is intended to provide a consulting actuary's view of the currently proposed revisions and their anticipated effect and to address the issue of the actuary's increased responsibilities in rendering his opinion relative to the statutory annual statement as suggested by the Greeley Committee and as elaborated upon by Paul.

I feel qualified to speak from the consultant's viewpoint since I did none of the work, will critize what was done, will accept none of the blame and, as a result of appearing on this panel, will hope to share some of the credit for what was done.

In preparing for this panel, I first reviewed the current proposed revisions as reported to have resulted from the meeting of the C-4 Committee less than two weeks ago. I then read, in reverse chronological order, the large volume of reports, proposals, arguments, revisions and correspondence dating back to the development of the initial exposure drafts of the proposed revisions in May of this year. This provided an interesting perspective and a greater appreciation of the significant number of individuals, committees, task forces and organizations whose work, opinions and counsel have influenced the currently proposed revisions. The amount of work, consideration and compromise that have gone into this project can never be fully appreciated from a reading of the final proposals.

I believe that Paul's comments on the increased responsibilities of the actuary in rendering his opinion relative to the reserves are appropriate, but I would disagree with some of his premises and conclusions.

The current form of the opinions required to be rendered by the actuary relative to the reserves include statements that they:

a. are fairly stated in accordance with sound actuarial practice, and

b. make a good and sufficient provision for all unmatured obligations of the company guaranteed under the terms of its policies.

These two opinions, in consort with Opinion 4a of the Guides to Professional Conduct, would seem to me to require that the actuary give consideration to the assets underlying the reserves.

Further, because the valuation and presentation of invested assets are prescribed by statutory fiat, and are beyond the control of the actuary, any problems inherent in the assets must therefore be considered and commented upon in the opinion required relative to reserves. Reserves cannot be viewed in a vacuum.

Paul indicated that if there was a potential problem relating to the mismatch of asset and liability maturity, it was the responsibility of the actuary to point this out to the company but he should not be expected to point this out in his opinion on reserves. I would take exception to this conclusion. If the mismatch were such that the surplus of the company were likely to be depleted below minimum requirements, I believe the actuary has the responsibility to so state in his opinion on reserves. What good does it do to have good and sufficient reserves if it is likely that the company will have impaired capital or be insolvent next year?

It should be recognized that my disagreement may in part stem from my perspective as a consulting actuary as opposed to Paul's perspective as a company actuary. Although I notify the company management of the problem and possible actions they might take, I would not be in the position to follow up and require that the appropriate action is taken. I would also recognize that if the company management did not take the appropriate actions, the Insurance Department might look with disfavor upon my lack of "early warning" to the Department.

As a general premise, I feel it is the obligation of the actuary rendering an opinion on statutory reserves to identify any situation where, in his judgment, it is likely that additional surplus funds will be required in the immediate future, regardless of the reasons. It has been the practice of our firm to make such qualifications and provide appropriate follow-up.

The proposed revisions to the Standard Valuation Law also suggest that the NAIC Instructions and/or the Academy broaden the definition of those reserves and liabilities which should be subject to the actuary's opinion.

Financial Reporting Recommendation 7 currently indicates that the actuary need not extend his or her review to items other than those specified in the Instructions (Exhibit 8, Exhibit 9, Deferred and Uncollected Premiums and Exhibit 11, Part 1) except possibly in instances where such items are computed by means of long term discounting of future payments which are dependent upon occurrence of events in the future (emphasis added). For a number of years some rather significant reserves and liabilities relating to annuity and guaranteed interest funds have been appearing on Page 3 of the annual statement under various and sundry headings and have not been subjected to inclusion in the actuarial opinions. I believe, at a minimum, the actuarial opinion should also include any reserve or liability subject to the Standard Valuation Law, especially as it has been proposed for revision.

I would like to comment briefly upon the proposed revisions to the Standard Valuation and Nonforfeiture Laws and their anticipated effect.

Probably the most significant and appreciated feature of the proposed revisions is that of automatic update of interest rates and revision of mortality standards without going through the cumbersome and time-consuming process of individual state legislative adoption.

In general, the proposed revisions should result in greater availability of products which provide the best benefits to the consumer for the price as the result of the dampening of deficiency reserves and the ability to offer significantly greater interest guarantees on fund accumulations without incurring inordinate surplus drains.

The actuary will have to exercise judgment in the choice of method and assumptions in establishing reserves for annual renewable term insurance, especially for plans involving select and ultimate premiums and re-entry provisions, to avoid the deferral of statutory losses. The use of Table K with select factors and a unitized policy reserve approach would be a step in the right direction, but the slope of the mortality is insufficient to reflect the combined effects of selection at issue and deterioration on renewal. A more appropriate mortality basis would require the application of ultimate factors increasing by duration for these plans.

I am disappointed that the deficiency reserve requirements were not dealt with on a more direct basis. It would appear to me that the only justification for deficiency reserves is to prevent the deferral of statutory losses. No single statutory requirement, based only on mortality and interest considerations, can appropriately measure the need for such reserves under the diverse range of contracts and operating environments in existence. A more reasonable approach, therefore, might be to require the actuary, as part of his opinion, to indicate that for any plan of insurance where the valuation net premiums exceed the gross premiums, the failure to establish deficiency reserves does not result in the deferral of statutory losses based upon reasonable assumptions as to mortality, lapse, interest and expense.

MR. MILLER: Two other developments, though not specifically within the valuation laws, should be reported at this time. One is a significant amendment to the policy loan law to provide for variable interest rates. Another is the adoption of an industry position to take before the Treasury, and presumably the Congress, for modification of the federal income tax law. Both of these are under the sponsorship of the ACLI.

The policy loan provision is moving forward. As for the federal income tax item, the conclusions of a recent Dallas meeting are as yet unsettled.

DISCUSSION

MR. J. WILLIAM JOHNSTON: Do the dynamic segmentation proposals as they have been modified have any effect on, for instance, standard ordinary life policies in CRVM reserves and adjusted premium cash value formulae?

MR. MILLER: The modification of the proposals on dynamic segmentation are in two elements. One is with respect to nonforfeiture values. The compromise proposal would forbid changes in the ratio of the actual policy nonforfeiture factor to the gross premium more often than once every five years. In addition it would forbid use of any actual nonforfeiture factors which produce a larger negative cash value in years when the minimum value is zero. This particular addition needs to be made in order that the compromise solution will actually achieve the desired result, which is a smooth gradation into any required nonforfeiture value. On the valuation side the compromise is a little bit more difficult to describe. Let it be sufficient to say that it results in a first year terminal reserve approximately equal to 10% of any deposit term premium.

MR. LLOYD K. FRIEDMAN: I simply want to disagree completely with the opinion that actuaries should be responsible for the assets. I feel that it is outside our particular field of technical knowledge. The most we should be expected to do is perhaps to indicate the incidence of the liabilities which we are valuing. The assets, except for policy assets, should be left to other experts.

MR. DONALD D. CODY: We are going to have to struggle with this question of where the actuary's responsibility ends, and the answer is not going to be easy. For one thing, it is quite evident to a number of us who have worked in this area for some years that considerable humility is proper as to the extent of our knowledge.

We understand the "downside risk"; we have dealt with that for years and have a reasonable conception that we should hold reserves against required interest if the interest rate falls off.

The "upside risk" is an altogether different cup of tea. It involves the relationship of assets to liabilities and distribution of asset cash flows to liability cash flows. As the scenarios change and as the economic picture changes, these things fluctuate and may become worse or better. The actuary's responsibility is to anticipate an improper asset cash flow for a particular line of business which is important in the company.

Consider the situation where the company does go insolvent. Who gets blamed? The actuary has designed the products, has done the pricing, has indicated what reserves to set up and presumably has some interest in surplus. Yet, if the problem is a mismatch of assets and liabilities and a failure of cash flow, can we suggest that the actuary does not have any responsibility for warning the company or adjusting the liability cash flow?

We do not understand what is expected of the actuary, and the Society realizes this lack of information. The Trowbridge Committee on Valuation and Related Problems is trying to work this out. Much more help is needed. We have to demonstrate the problem before we can begin to understand it. You can see the effect of these considerations in the design of the dynamic interest proposal of the NAIC Technical Advisory Committee on Dynamic Interest and Related Matters.

Life insurance is a liability long line and Heaven help us if it ceases to be. The original ACLI proposals were mainly carried through and such changes as were made were unimportant. For a reference rate of 8.65% (approximately the 1979 result) we could use 5%. That is at a 35% weighting. For immediate annuities, we use an 80% weighting between the reference rate and 3%; the minimum valuation reserve interest rate resulting is 7.5%.

When confronted with deferred annuities, we had to change the original ACLI ideas because of growing knowledge about disintermediation between the time of the original suggestions and the time of the Advisory Committee's work. We finally decided to combine all deferred annuities and other types of investment contracts like GIC's. They are defined on three bases, depending on the combination of designs of the voluntary withdrawal guarantees and the maturity guarantees, as well as the length and level of interest guarantees.

The highest valuation interest rate applies to a short-term GIC with market value design for both voluntary withdrawals (if there are any at all) and maturities. A problem which confronted us was the use of 100% weights on some conservatively designed 5-year GIC's. Advising us on this matter were some knowledgeable companies, heavily staffed, which had done a considerable amount of work in this area and used immunization. They assured us that their procedure was all right and, as long as it was done correctly, there was no reason why the Advisory Committee should make it difficult for these companies to do this kind of business. However, a number of us felt very hesitant to make the resultant 8.75% rate available for all such 5-year GIC's. The only way we could agree with this was to suggest an actuarial opinion stating that the procedure used is all right, because we cannot write the design of immunization into the valuation statute at this time.

We then established an intermediate area where the maturity value is equal to book value, but the voluntary withdrawal values are market value. The definition of market value is a spread of at least five years or a market value design. You cannot establish market value by percentage or dollar amounts of surrender charges.

The worst design was the use of book value for both voluntary withdrawals and maturities. These have the lowest interest rates - some as low as 5% on long term deferred annuities. However, it is to be noted that a deferred annuity with a low guaranteed interest rate (such as 3½ or 4%) which credits excess interest at the new money rate has a reserve which certainly does not have any margins in it. Additional surplus is needed. We do not know how much surplus.

These are the concerns for Phase 2 of the NAIC Advisory Committee work and should be the concerns of the Society of Actuaries.

The great fear is that actuaries will accept these minimum valuation bases without further thought as to the matching of assets and liabilities. This can lead to insolvencies. We have to protect our clients and ourselves against this. In so doing, we can intrude on asset determinations or we can examine the asset cash flows in the same way we examine the level of income provided by the assets. Such certification could be made by the valuation actuary in the Annual Statement at NAIC direction or the valuation actuary could make a report to his client management under Academy guidelines.

Regarding this problem, it appears that the guidelines of the British Institute of Actuaries were inadequate. Some British companies went to an American style of cash value guarantees. They either went bankrupt or had to be bailed out by their more conservative fellow companies. As a result, I understand that the Institute has sharpened its rules.

That is the background I wanted to lay out. I am not offering any solutions, but we must learn something about this matter. We are in a new environment, and we must know something about minimum surplus and understand that sometimes minimum legal reserves are not proper. We are not fulfilling our actuarial responsibility either as company actuaries or as consultants by merely saying "Oh well, it is the minimum legal reserve" and then walking away from it. Thus, I leave you with this concept without any suggestion, except that we must work on this problem.

MR. MICHAEL R. TUOHY: I would like to take up these last few points about the Institute's stand and what happened in the early 70's. The British actuary has always been educated to look at the asset side of the balance sheet as much as the reserve side of the balance sheet. The matching of assets and liabilities has always had a more prominent place in the Institute's examination syllabus than the Society's.

Back in 1973-74, the U. K. did experience its first significant life insurance insolvencies of the twentieth century. All related to small companies that had shown dramatic asset growth over a short period due to the sale of a product similar to the single premium deferred annuity. Unwisely, those products were offered with guaranteed cash values. Most of the insolvencies can be attributed to irresponsible investment policies that were outside the control of the actuaries. Since that time, the actuary has been given a power of veto over the investment policy of a life insurance company. However, even those companies that attempted to match the liabilities ran into trouble when interest rates increased, as the minimum reserve that could be held was the guaranteed cash value and assets were valued at market. If the same rules had been applied in the U. S. at the end of 1979, many companies would have been declared insolvent. During 1980, the extent of any negative cash flow was not sufficient to force companies to realize their capital losses and after April, interest rates moved sharply downwards and the crisis was avoided. Will the outcome be the same the next time interest rates bulge?

I have one further question regarding cash values. Is it correct that the new cash value basis is a guaranteed cash value basis with the interest rate set at issue as a function of recent new money rates?

MR. MILLER: Yes. The interest rate applies from date of issue and is fixed thereafter.

MR. TUOHY: Was there any consideration given to ridding ourselves of this horrible concept of guaranteed cash values? If one took Jack Turnquist's point to its logical extreme, one could not sign off on a U. S. balance sheet as it is impossible to match against guaranteed cash value products. Maybe we should qualify every opinion.

MR. MILLER: There was some talk about taking on that particular sacred cow. We did not feel that bold. Don referred to an element of the Greeley Committee which needs to be mentioned. There are certain further studies in the mill and a pledge to undertake them. I will again quote from the report. "The Committee proposes to conduct long-range research into the following areas as part of a broad reexamination of the regulation of valuation and nonforfeiture benefits:

(1) the appropriate matching of assets and liabilities;

(2) the appropriate level of surplus and its relation to liability; and

(3) related questions in the areas of mortality, morbidity and expenses.

In doing this work we expect to coordinate our studies with the Society of Actuaries and the American Academy of Actuaries Committees with interest in these matters."

Don has mentioned the concern that arises in that committee, and there is a great deal of concern about this matching of assets. This is achieved not by a usurping of the investment department's authority or an assumption by the actuary of an expertise on investments that he does not profess to have. Rather, it is that there be a demonstrated ability of the company to meet its obligations. The projected cash flow is an item which can be projected on the liability side by normal actuarial techniques and on the asset side, if only in rough fashion, by investigation of the contractual cash flows represented by the assets. If there is a violent mismatch here there is obviously a potential for great difficulty.

That potential was brought home dramatically last spring to all of us. I would hesitate to say there was any U. S. company that would have been termed solvent, much less viable, along about April 14th or 15th last spring. If we all had to cash out at that time none of us would have been able to cover our demand obligations - at least none of us with any substantial block of individual life insurance.

MR. WALTER S. RUGLAND: I will share some of the thoughts I had over the summer as I worked on the changes to the valuation and nonforfeiture law. Don mentioned one that continually has to emerge - we are working with minimum levels. We are not working with prescribed levels but minimum levels that actuaries need to interpret as they meet their particular company needs. Secondly - and other members of the Advisory Committee may wish to respond to this if they do not exactly agree with me - one of the landmark thresholds we crossed was that we agreed a company has the right to fail in this environment today as opposed to perhaps the environment 20 years ago. Back at that time, we were really in business to preserve everybody under the umbrella.

The life insurance business as we have structured it today, in order to survive, needs products which are really accumulation vehicles. We need to assess that part of the portfolios of many companies and allow those, as Don said, that are well run to do the job right. We need to try to establish guidelines to assure the public that all companies are reserving themselves adequately.

Throughout this whole arrangement we were working in compromise; the most significant compromise was the fact we were working with a law that was and is no longer applicable. There are many assumptions underlying the Standard Valuation Law and the Standard Nonforfeiture Law that just are not right. Still, we made the assumption that this was not the time to try to change the law, but instead what we needed to do was to try one more time to carve the square peg to see if we could fit it into the round hole. In so doing, we hopefully would make it the last time so that the next time around we can change the law. In my view, that is the goal of Phase 2 of the Advisory Committee's work. I hope it is the next phase of every ordinary and company actuary's work, for those who are working in this area. It is going to be a tough job. We have so much put into place surrounding the valuation and the nonforfeiture law in the training of our agents to the sales processes that we have locked and stoned to the federal income tax. You name it and it just is not right any more. We have talked about that often in the last couple of years. After this particular change is completed I hope this problem is on everybody's agenda or calendar.

MR. MILLER: The discussions that have gone on here have been primarily related to the dynamic interest rate feature. A less publicized feature of the same proposal would involve dynamic mortality and the permission for the commissioner to adopt any mortality table previously approved by the NAIC for use on that category of business.

Probably the first use of this feature of the proposed law will be a revision of the required mortality for annuities, and that table is already moving forward under Society committee impetus.

One of the modifications of the ACLI and the Greeley committee recommendations proposed by the C-4 Subcommittee dealt with individual life insurance which terminates or matures in less than 20 years. Such policies are being allowed higher weighting factors, which effectively means higher valuation interest rates than were originally recommended. To illustrate these I can quote to you what the law would produce for issues of ten-year endowments to be first valued at December 31, 1981. Under today's circumstances these policies could use a 6¼% valuation interest rate and a 7 3/4% nonforfeiture rate. That peculiar little addition added to the law by the NAIC Subcommittee leads me to speculate that we may find endowment policies being revived as a viable product. The firm guarantee from a standpoint of a relatively high interest rate within that product is a risk that appears to be a viable one. It is a risk that can be measured and valued.

In addition to that product speculation, there are a couple of other product consequences that I expect to see coming out of the proposals. I expect to see a stronger competitive environment on the nonpar side with respect to some term products, though sometimes I wonder whether it can get any stronger. This new strength arises from the relief being granted on the deficiency reserve on ART and similar products. In addition to that, the select and ultimate factors as they apply to reentry term would appear to give very significant relief, also. We are going to have to look at the interpretations that are applied there. Jack, did you get enough definition in order to make some comments on these two problems?

MR. TURNQUIST: The select mortality modifications factors were not received in time to test their effect on the reserves for various types of term plans. However, I have a summary comparison of the Table K rates using select factors with the annual renewable term rates during the first ten policy years of some 130 companies. On the basis of this summary, it would be anticipated that a large number of companies would eliminate deficiency reserves entirely and that the level of deficiency reserves required for the balance of the companies would be significantly reduced. Still, a large number of companies are going to require rather significant deficiency reserves with their reentry term rates on the select and ultimate rates.

MR. MILLER: In the same vein, I would mention that the advent of a smoker and nonsmoker mortality distinction is something that is being recognized by the C-4 Subcommittee. It is of great interest to John Montgomery and Ted Becker and the rest of those people, because they feel that they are going to have to accommodate the pricing and design of products within that scheme. Yet the required deficiency reserves on many of those products will be prohibitive. That is because it appears that two-thirds of the business would be nonsmoker business at discounts which are rather substantial relative to current mixed type rates.

One item which was a personal project of mine was a casualty of the negotiation. This was to obtain elimination of the last piece of linkage between the standard nonforfeiture law and the valuation law. There is an element within Section 6 of the valuation law which in essence says that you may hold stronger reserves than required, but in no case may the interest rate used in the calculation of those stronger reserves exceed the interest rate inherent in the nonforfeiture calculation. Now that sounds like an innocuous enough phrase, but it prevents a company from using anything very dramatic in the way of split interest, for example, in a nonpar situation for purposes of valuing its business. Split interest was a topic which was vigorously discussed in the negotiations and development of the dynamic interest rate proposal. It is one that never was completely answered. The instinctive attraction of a higher interest rate in the early years and a lower interest rate thereafter for valuation purposes and the supposed match between those interest rates and the earnings rates that might be achieved under a conservative scenario would have led many of us on the committee to that type of thinking. Yet at the same time, we were deathly scared that the same pattern of decreasing interest rates would have been transferred into nonforfeiture where, instead of producing relief, they would produce a higher nonforfeiture value than considerably lower level rates. We also got into some other practical restrictions that prevented us from going to split interest for long term life insurance.

I had another speculation when pushing the severage of that last linkage; there should be no restriction on the company actuary valuing, within its reported convention blank, future illustrated dividends as if they were a benefit. We do it in GAAP reserves routinely, and I have become very comfortable with the practice and feel that it would be appropriate within the convention blank. Use of a high, level, interest rate would probably be consistent with inclusion of current scale dividends. The fact that resulting reserves valued at 8% would exceed the minimum reserves as required by law diminishes the worry over the adequacy of the reserves. For a situation B company the federal income tax effect would be a decrease of about 150 - 160 basis points of tax on the federal income tax return. That would be even better than a cure of the Menge adjustment. This particular proposal was a casualty of the C-4 Subcommittee's concern over specific inadequacy by plan of certain reserve schemes where the reserve standard was being divorced from the nonforfeiture standard. I have great sympathy for that particular concern but I am not too happy with the result.

MR. TURNQUIST: An interesting result of the proposed revisions is the number of tables which will be required to support the minimum reserves and cash values for ordinary insurance.

If one considers the possibilities of curtate and continuous functions, age last birthday and age near birthday mortality rates, separate male and female mortality tables, aggregate and select and ultimate mortality rates, regular and extended term mortality rates, the three rates of interest applicable to reserve depending on the term of contract and the additional three rates of interest applicable to nonforfeiture values, 192 sets of commutation functions are possible relative to minimum values for a given year of issue. The number of traditional books required to cover CRVM, Net Level and Minimum Cash Values would become prohibitive and would multiply annually. The possibilities for reserves and cash values resulting from lower rates of interest, split interest rates and the other traditional and exotic reserve and cash value bases are mind boggling.

I believe we have reached the point where the actuary will have to rely totally on computer-developed functions rather than published tables. The consulting actuary and the insurance department examiner will require access to computer facilities in order to verify the accuracy of the annual statement reserve factors.