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VALUATION AND NONFORFEITURE DEVELOPMENTS

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1. Society Committee on valuation and related problems.

2. Current valuation regulatory developments and industry studies in the United States.

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4. Annuity nonforfeiture values - practice and regulation in North America.

5. Sex-distinct mortality tables for valuation and nonforfeiture purposes.

MR. E. PAUL BARNHART: The purpose of the Society's Committee on valuation and related problems is (1) to study in depth the underlying actuarial principles and practical problems in connection with the valuation of assets and liabilities, the determination of adequate surplus levels, and other related solvency questions, and (2) to develop a report on its findings.

The committee has not been formed at the request of the NAIC or any trade association, but is strictly a study and research committee of the Society itself. It will be giving considerable emphasis to basic theory in its work, and to possible fresh approaches to these problems, as free as possible from traditional concepts and regulatory philosophy. From theory, it will move into practical considerations, and ultimately should have an impact on regulatory philosophy. The committee will be concerned with valuation and surplus in relation to all personal lines of insurance: life, annuities and pensions, health and disability, both group and ordinary.

The committee was constituted in December of 1976, and we have taken only the first steps in our work. Consequently, there is as yet nothing tangible to report. The committee would be delighted to hear from anyone who has particular thoughts or ideas to express on these subjects. We are eager for your help.

MR. JOHN K. BOOTH: The rise in interest rates to record levels over the past decade has had a significant impact on life insurance products and valuation standards. The aggregate yield on life insurers' total general account investment portfolio was over 6½% in 1976, and the yield on new fixed income investments by 60 companies, accounting for about 65% of the assets held in life insurers' general accounts, was well over 9½%. Because of the shortage of capital funds and the pervasive influence of inflation on both a national and a worldwide scale, most economists believe that interest rates will remain well above pre-1974 levels for the foreseeable future.

Today's higher yields have been reflected in the pricing of life insurance and annuity products as insurers compete with other financial institutions for a greater share of the savings dollar. However, at the same time insurers have been faced with surplus strains arising from minimum reserve standards which are based on investment yields and economic conditions which prevailed in the past. Surplus strains are especially severe with respect to products whose pricing is primarily influenced by yields on new investments, such as group pensions and individual single premium immediate annuities. The emergence of a surplus strain problem for such products at this time is of great concern to the life insurance industry for two reasons. First, the Employees Retirement Income Security Act of 1974 has greatly expanded the potential market for non-participating annuities to fund terminated pension plans. Second, the insurance industry's competitor in this market is the Federal Pension Benefit Guaranty Corporation which is not subject to the minimum reserve requirements of the Standard Valuation Law. Consequently, overly conservative reserve requirements may force a federal takeover of an important segment of the insurance market.

The surplus strain problem has resulted in two amendments to the Standard Valuation and Nonforfeiture Laws, one in 1972 and a second in 1976 to bring these laws more into line with current and expected future economic conditions. The 1972 changes recognized for the first time that there should be different statutory valuation interest rates and different minimum reserve standards for products involving different degrees of investment risk. This concept was continued and expanded in the 1976 amendments.

At the same time that out-of-date valuation interest rates have been causing surplus strain problems for annuity and permanent insurance products, an obsolete 1958 CSO Mortality Table and questions as to the interpretation of deficiency reserve requirements have created a potential surplus strain problem for companies that are reflecting current lower mortality rates in their pricing of renewable term insurance products. Walter O. Menge in his paper, "Commissioners Reserve Valuation Method" pointed out that reserve requirements for renewable term insurance may be subject to different interpretations when he stated: "... the adaptation of the Commissioners reserve valuation method to fit policies for which the gross premium varies from year to year becomes a problem of generalization which, from a purely theoretical viewpoint, has an infinite number of possible solutions, some of which are practical and others of which are impractical." 1/ and; "For these reasons it seems desirable not to formulate at this time any fixed rules for the valuation of these unusual types of policies and riders. The second paragraph of Section 4 of the Standard Valuation Law does not define the method of valuation of such contracts but requires that the method used, whatever it may be, must be consistent with that employed for uniform premium policies providing uniform insurance benefits, thus leaving open the possibility of a choice of several consistent methods." 2/ There is general agreement that deficiency reserves should be established for the current term period under a renewable term policy where net premiums exceed the gross premiums for such period. It can also be argued that additional reserves should be established where net premiums for future term periods exceed future guaranteed gross premiums. If, however, such net premiums were based on the 1958 CSO Mortality Table, enormous deficiency reserves would result and insurers would be forced unnecessarily to

1/ The Record, American Institute of Actuaries, Vol. XXXV, 1946, p. 270.
2/ Ibid., p. 300

raise the cost of renewable term products to the consumer. For this reason, a Task Force of the American Council of Life Insurance developed a proposal which was submitted to the NAIC in June, 1977 which would provide for determining additional reserves for renewable term insurance on the basis of a mortality table more representative of modern experience.

Increases in insurers' investment yields and increased surplus strain problems where product prices are more closely tied to new money yields were recognized by the NAIC when it increased valuation interest rates for group annuities and single premium individual immediate annuities from 3½% to 6% in 1972 and subsequently to 7½% in 1976. The NAIC increased valuation interest rates for other life insurance and annuity products from 3½% to 4% in 1972 and subsequently in 1976 to 5½% for single premium products and to 4½% for all other products. In addition, the 1972 changes updated the valuation mortality tables for both group and individual annuities. Another important change which will give insurers more freedom in pricing products was the removal in 1976 of the linkage between valuation and nonforfeiture interest rates. Under the amended Standard Laws, the maximum nonforfeiture interest rate that may be used is 1% higher than the statutory interest rate specified for determining minimum reserves. The elimination of the former linkage recognizes that reserves are an aggregate measure of future liabilities whereas nonforfeiture values are an approximate measure of accumulated policyholder equity in a particular contract.

Other changes in the Standard Valuation Law adopted by the NAIC in 1976 included (1) increasing the maximum permissible ordinary life insurance age setback for women from three years to six years, (2) defining a Commissioners Annuity Reserve Method, and (3) replacing deficiency reserve requirements for life insurance with minimum reserve requirements. The new Commissioners Annuity Reserve Method requires companies which issue individual annuities with high interest rate guarantees in the early contract years followed by much lower interest rate guarantees in later contract years to fully recognize the present value of the high early guarantees in determining minimum reserves for such contracts. The new minimum reserve requirements for life insurance require the substitution of the contractual gross premium at each duration at which it is exceeded by the net premium calculated according to the minimum standards of mortality and rate of interest specified in the law. This change in the law makes it possible for insurers to hold reserves above the minimum required by law without being forced as a consequence to hold additional deficiency reserves.

The American Council of Life Insurance supports these changes with two modifications which it is seeking at the NAIC and in the various states. The first is a proposal to increase the statutory valuation interest rate for group annuities purchased prior to the operative date of the 1972 NAIC Amendments to the Standard Valuation Law from 3½% to 5%. This change would recognize that reinvestment of the funds underlying much of the old group annuity business originally issued in the 1940's and 1950's has increased the average yield on this business to about 6% or 6½%. A revaluation of existing group pension business to reflect current and anticipated earnings on this business would enable the life insurance industry to support the surplus strain resulting from new pension business (even at the new valuation interest rate) or to increase the experience credits given on existing business, or both.

The second modification sought by the Council would conform the statutory interest rates for single premium life insurance to those proposed for annual premium whole or limited payment life insurance, namely, 4½% for minimum reserve standards and 5½% for minimum nonforfeiture values. The Council reached this conclusion because questions had been raised as to whether a full 1% interest differential between single premium and annual premium life insurance could be justified, because single premium life insurance constituted a relatively tiny proportion of life insurance business sold, and because there was concern that some companies might misjudge the appropriate level of premiums and reserves for this product. There was also concern similar to that which has been voiced in Canada that the sale of such contracts might lead to significant replacement of existing policies.

While the NAIC has been updating statutory valuation interest rates, the Society of Actuaries Committee to Establish New Valuation Tables has been developing a new valuation mortality table to replace the 1958 CSO Table. Because of criticisms which had been leveled against the use of the age-setback method for reflecting mortality differentials between men and women, both the NAIC and the American Council of Life Insurance urge the Society to develop separate tables of mortality rates for men and women which would more precisely reflect differences in mortality by sex.

Future Prospects -- A More Flexible Valuation Law

The fact that the NAIC has had to amend the Standard Valuation Law twice within the past five years highlights its major defect, its lack of flexibility to respond to changes in mortality and interest rates. Because changes in the Standard Law require positive legislative action in 52 political jurisdictions, there is a lag time of more than half a decade to effect any change. Proposals to have valuation standards determined by a national body run afoul of questions of state sovereignty while proposals to establish valuation standards by insurance department regulation rather than by law would greatly increase the risk of a multiplicity of different and possibly conflicting state valuation standards. Therefore, the NAIC, the Society of Actuaries and the American Council of Life Insurance are all working toward the development of a new valuation structure which will be more responsive to the effects on appropriate minimum reserve levels of future changes in industry experience. In this effort a careful balance will need to be achieved so that minimum reserve standards are high enough to provide reasonable assurance of solvency but are not so high as to inhibit competition and unnecessarily increase the cost of insurance products.

A Council Subcommittee which is working on this subject has directed its efforts toward developing a valuation system which responds uniformly and automatically to changes in insurers' investment earnings. Consideration is being given to how statutory interest rates within the system should vary either by type of product or by duration or by both to recognize the differences in investment risks associated with short-term as opposed to long-term contractual obligations. Work has been done within the Subcommittee on immunization of contracts from investment risks through matching of asset and liability cash flows. If asset and liability cash flows can be matched, the valuation interest rate is unimportant as long as assets and liabilities are valued similarly.

In considering appropriate interest assumptions for use in determining minimum statutory reserve requirements, the Council Subcommittee developed a number of proposed basic principles. The first of these was that the objective of statutory minimum reserve requirements is to measure in the aggregate an insurance company's future contractual obligations. Second, for the company as a whole, minimum reserve requirements should be based on assumptions that reflect yields that the company expects to earn on the funds available to support the business. Third, the reserve system should be prospective and should adjust gradually from year to year to reflect changes in the future outlook for interest rates. The change in minimum reserve standards would apply to all existing as well as new business and could result in either an increase or decrease in minimum reserve standards. This would cure the defect in the present statutes which bases minimum reserve standards on projections of the future made at a particular moment in the past. Current requirements make it difficult or impossible to release reserves which are no longer needed,and do not require strengthened reserves when future risks appear to be significantly greater than originally estimated. In actual practice most companies would probably build sufficient margins into their reserves under any legal system to avoid any recalculation occasioned by minor changes in minimum reserve standards. Fourth, the valuation basis should recognize the variance in investment risks for different types of products by taking into account contractual guarantees with respect to future considerations and by recognizing contractholder options to take withdrawal or nonforfeiture benefits. With respect to the latter, it should be noted that there is no reason for any connection between valuation assumptions used in determining the reserve for nonforfeiture and withdrawal benefits and the assumptions used in determining the benefits themselves. In addition, the Subcommittee did not feel it was necessary for reserves in the aggregate to equal the sum of all nonforfeiture and withdrawal values on the valuation date. The assumption of instant liquidation of liabilities has an extremely low probability. The assumption that the entire portfolio of assets can be instantly liquidated is similarly impractical. The meaningful test is whether a company's assets can cover reasonable withdrawals and other demands for cash that may occur.

With respect to actual valuation interest rates to be assumed, the Council Subcommittee is still considering a number of fundamental questions. What should be the ultimate interest assumption in the distant future and should it include an assumed "inflation premium" corresponding to that which is considered to be an integral part of today's high interest rates? Alternatively, should the ultimate interest assumption be based on insurers' current earnings rates less a margin for conservatism for future uncertainties? Should the current earnings rate to be used as a basis for determining the valuation interest rate for short-term liabilities be based on each insurer's own interest earnings rate, an interest earnings rate derived from industry experience or some other non-insurance industry index of current investment yields? Should protection against adverse contingencies be provided for in the statutory valuation interest rate and higher minimum reserve standards or should there be lower minimum reserve standards with protection against adverse contingencies provided by additional required levels of surplus?

Alternative approaches to establishing minimum statutory reserve requirements were considered by the Council Subcommittee. The first would be based upon a solvency test for life insurers that would involve separate but consistent valuations of assets and liabilities with solvency being defined in terms of the excess of assets over liabilities. The second would test for solvency by matching future flows of funds with the differences, either net inflow or net outflow, being discounted on the basis of valuation interest assumptions. A third approach which is a combination of the first two would give an insurer the option of using a higher valuation interest rate for a particular group of liabilities. The higher valuation interest rate would be based on that interest rate which equates to zero the present value of all the differences of the future flows of funds of the selected liabilities and selected assets supporting them. Safeguards would have to be developed to ensure that the selection process did not create an imbalance in the future flow of funds for the remaining assets and liabilities which would be valued under the first alternative.

Just as there is need for flexibility in the valuation structure to reflect changes in insurers' interest earnings so there is also a need to reflect changes in mortality experience. This is particularly important for mortality-sensitive products such as renewable term insurance. One possibility which has been discussed by a Task Force of the American Council of Life Insurance would be to provide that the valuation mortality table will be based upon a graduation of the latest five years of intercompany experience on standard ordinary issues compiled and published in the Society of Actuaries Transactions Report of Mortality and Morbidity Experience. The valuation law could include specifications as to how this data should be loaded to produce a valuation mortality table and these loadings could be changed, probably at infrequent intervals, based upon recommendations of the Society of Actuaries. The advantage of this approach is that companies would have the flexibility to reflect improvements in mortality in their reserves without having to wait until the statutory mortality table becomes a generation out of date and an additional decade is needed to develop a new valuation mortality table and incorporate it into all of the valuation laws around the country.

The rise in interest rates and the obsolescence of the 1958 CSO Mortality Table have led to unnecessary surplus strains for companies writing life and annuity business at competitive rates. These problems are being corrected through changes in the valuation laws, but there is no guarantee that rapid changes in our economy and society may not soon make even the newest minimum reserve standards inappropriate. The long lead time required to effect changes in all of the valuation laws calls for the development of a new form of valuation law which will respond uniformly and automatically to changes in future industry experience. The challenge to actuaries is to design a valuation law that responds to change and at the same time safeguards solvency without inhibiting healthy competition.

MR. CHARLES F. B. RICHARDSON: The fundamental valuation and nonforfeiture values problems are incomparably more difficult to solve in the United States than in countries like Great Britain or Canada, the basic difficulty being the state regulatory system in this country, its technical weaknesses and the lack of a uniform regulatory standard for measuring solvency. My discussions of these matters are in the Record of April and October 1975 and many of the questions raised there have not been answered. Many of the possible solutions to the present unsatisfactory situation involve highly sophisticated techniques which would have to be applied by state regulators in a uniform and competent manner. Some examples of the types of techniques and principles being considered are these:

1. Statutory interest rates varying by type of product or duration and the possibility of matching asset and liability cash flows. This is quite dangerous and impractical for reasons given in my discussion of the Buol report in the Record, April 1975.

2. The basic principles proposed to determine valuation interest assumptions, which would be applicable to existing as well as new business and might distinguish between various types of contractual guarantees, inevitably must involve some form of gross premium valuation. Who is to judge whether the underlying assumptions made are safe and proper? How many states have actuarial staffs capable of even understanding the highly sophisticated actuarial problems involved? How could anything resembling consistent standards of solvency in all states be achieved under such a system?

3. The use of each insurer's interest earnings rate to determine liabilities and even different interest rates for short and longer term liabilities would be highly dangerous and would encourage speculative investments in seeking higher yields. It is most surprising that any such basis is even being considered. This suggestion may have arisen on account of the high interest gurantees being made today on group annuity and other funds, some of them demand deposits, such as premium deposit funds, which urgently need regulatory action not yet taken by NAIC. These are potentially dangerous developments, unless properly controlled.

4. Some of the other suggested approaches to minimum reserve requirements which involve discounting future cash flows, and might even permit different interest valuation rates for different groups of liabilities, involve concepts which are positively frightening in their implications.

One must recognize that regulators are not generally concerned with the kind of companies represented on these dedicated committees of the Council or the Society. They must be concerned with another kind of company, unfortunately much more numerous, which lacks competence, or high purpose; and may not be managed in the public interest, and which needs strong and competent regulation. Under the present system, there is not enough such regulation in many states, nor is there sufficient personnel to undertake it.

If any new system of valuation is to be adopted, other than the net premium system, which involves sophisticated techniques involving a high degree of actuarial competence, then one is driven to the conclusion that the only safe and practical answer to the problem is a change to federal supervision with adequate and properly qualified actuarial and examining staffs for all matters of solvency standards, such as exists in Great Britain and Canada. It is not generally realized that only about six states have even one Fellow of the Society on their staff and less than a dozen have even one Associate. Whether we like it or not, the existing state regulatory system obviously cannot possibly cope with the concepts under discussion. In saying this, I fully recognize that the present valuation standards are out of date and inflexible and that there is urgent need for reform to provide the life insurance industry with more realistic methods of determining solvency. The present system has in recent years undoubtedly prevented the life insurance industry from reducing premiums to anywhere near the full extent that current economic conditions would justify and has severely hampered effective free competition with other types of savings institutions.

MR. TOM HERGET: A growing concern is the lack of concise definition that clearly distinguishes group from individual insurance. The need for a generally accepted distinction between the two types of insurance is evolving from the recent Standard Valuation Law amendment. This law permits the use of a group valuation interest rate two (2) percentage points higher than the maximum individual rate. Also, the existence of less precise valuation statutory requirements for group insurance causes a need to establish a universal distinction between group and individual insurance.

Depending upon years to maturity, the use of 6% as a valuation rate may produce reserves substantially different from the same liability valued at 4%. How does one distinguish group from individual insurance? Is it the method of underwriting used, the number(s) of individuals covered, or the mere appearance of the word "Group" in the policy form?

This is an area for which definitive guidelines should be established to ensure valuation of liabilities consistent with statutory requirements.

MR. WAID J. DAVIDSON, JR.: The Society has appointed a committee, of which I am a member, to develop a new Ordinary Mortality Table to replace the 1958 CSO Table. I am also a member of a subcommittee of this parent committee concerned with the method of handling male and female mortality rates. Currently, the statutes mandate the 1958 CSO Table and permit, but do not mandate, up to a three-year age setback for females. The latest Valuation and Nonforfeiture Law amendments adopted by the NAIC still mandate the 1958 CSO Table, but permit up to a six-year age setback for females.

In preparing the new table, we see three choices. These are (1) a unisex table, (2) a male table with age setback for females, and (3) separate male and female tables. The use of the female setback or separate table could be either permissive or mandatory. Each of these alternatives has advantages and disadvantages. The basic premise of our deliberations is that males and females have significantly different mortality characteristics and recognizing this difference is not unfair discrimination based on sex. If we do not accept this premise, the problem becomes very simple from a rate and value standpoint. We must charge men and women the same premium rate and use a unisex table. Cash values, dividends, and reserves must also be the same. The balance of my remarks assume that fair discrimination by sex will continue to be permitted in life insurance.

A survey has been conducted under the direction of our subcommittee which involved contacting the actuaries for the smaller and medium-sized companies to obtain their reaction to the method of handling females in developing the new table or tables. We concentrated on this group of companies because we felt that they would have special problems with any system which expanded the size of the rate book and increased the valuation and administrative problems. In all, responses were received from Society members representing approximately 43 companies. The general conclusions we derived from this survey can be summarized as follows:

> An age setback method is inappropriate for determining premiums. The opinion was divided as to whether the setback method might be appropriate for cash values or reserves. Currently, the companies use either the age setback method with lower cash values for females or the premium discount method with the same cash values for males and females. There was general agreement that the use of a unisex table was undesirable and that sex should be considered in determining mortality for the purpose of setting premium rates. While it

> was generally agreed that the use of separate mortality tables was justified for determining premium rates, there was no general agreement that it was necessary for the purpose of determining cash values and reserves. It was pointed out that cash values are a benefit like any other benefit and the method of obtaining these cash values is not relevant. Most companies use cash values significantly above the minimum cash values required. Reserves need to be adequate, but only in the aggregate. The refinement of using separate tables may not be justified for calculating reserves. There was concern expressed about the additional expense that would be involved with the use of separate tables for cash values. There was generally very little concern about the complication of valuing business on two separate tables.

We must keep in mind that the use of separate tables, the question of discrimination by sex, and the use of lower rates for females is an emotional and political issue in addition to a scientific one. Even though we may be able to advance good technical arguments for the use of the single statutory table for reserves and cash values, these technical arguments will be difficult to sell to the public.

If either separate tables or an age setback method is used, one of the benefits (the cash values) in the policies issued to females is less than the corresponding benefits in a male policy. This is offset by charging lower premiums to females. We may find ourselves, however, in the position of defending the lower benefits in the female policy against one group and justification of the differential of premiums to another. One partial solution, of course, is to use male cash values for both males and females even though a separate table is developed. The cash values presumably would be acceptable so long as they exceeded the minimum required by the female table. The basic problem with this approach is the other nonforfeiture benefits, i.e., paid-up and extended, where using the male table for these benefits would produce lower nonforfeiture benefits than required by the female table. This could be resolved by drafting the law to allow, but not mandate, the female table.

One point which has been raised is in connection with the additional expense and problems of using a separate table for females for life insurance. There has been no complaint by the companies about the separate table for annuities. It would seem we must be consistent and if we wish to use higher female tables for annuity, disability, and medical expense policies, we are hard pressed to object to the lower female tables for life insurance.

Another point which must be considered is the effect of deficiency reserves on female rates. We can be criticized if we develop a system which limits the ability of the companies to reduce premium rates to females because of deficiency reserve requirements.

We have been asked to Makehamize our final tables to facilitate joint life calculations. Since many joint policies involve a combination of male and female lives, Makehamizing separate male and female tables will not help in calculating joint life functions unless all the insureds are of one sex.

There does not appear to be any simple answer to this whole question. No matter what we do, it is wrong from some point of view. Our committee and our subcommittee would be most interested in any thoughts that Society members have with regard to this whole question concerning the recognition of sex differentials in the new mortality tables.

MR. HAROLD B. LEFF: Let me briefly summarize the past events with regard to the proposed changes to the Standard Nonforfeiture Law. The Society of Actuaries Special Committee on Valuation and Nonforfeiture Laws produced a report, published in January 1976 and reflecting several years of research, which proposed a series of changes to update the Standard Nonforfeiture Law. As a first step in this direction, the NAIC approved amendments to the various Model Laws which: (a) increased valuation and nonforfeiture interest rates; (b) eliminated the linkage between valuation and nonforfeiture interest rates; and (c) defined minimum nonforfeiture values on deferred annuities. Legislation enacting these changes has been passed in several states, and has been introduced in a number of other jurisdictions.

The industry also supported authorization of a retroactive destrengthening of reserves on certain group annuities -- this would be accomplished by permitting the reserves on such inforce business to be valued at a maximum interest rate of 5%, rather than the current 3½%. The NAIC, however, did not approve such change last December -- rather, they referred this proposal back to the NAIC Technical Task Force on Valuation and Nonforfeiture Value Regulation for development of guidelines to enable the Insurance Commissioners to consider applications for such destrengthening. These guidelines had been developed jointly by the Task Force and the ACLI, and this proposal was reconsidered by the NAIC Task Force earlier this month. The Task Force decided, however, not to submit the retroactive destrengthening proposal to the NAIC -- one of the Insurance Commissioners indicated he would vehemently oppose this proposal, and the Task Force abandoned the proposal. However, since legislation in several states is expected to include such destrengthening, the guidelines which had been developed will be included in the proceedings of the NAIC so that it may be referred to by states in which such legislation has been enacted.

As regards the implementation of the recommendations made in the Report of the Society's Special Committee, the American Council of Life Insurance prepared a draft of a proposed nonforfeiture law reflecting these recommendations. This draft has been circulated within the industry and received general approval, although some minor suggestions have been received which will be reflected in the final version, if appropriate. The draft was also submitted to the NAIC Technical Task Force. The Task Force has requested and received certain additional technical supportive data for some of the Society Committee's proposals. While the Task Force has now expressed virtually total approval of the draft, they do not anticipate making any recommendations to the NAIC until a new Standard Ordinary mortality table for valuation has been developed.

There are several specific areas which either appear to be of possibly substantial significance to the industry or have caused some degree of controversy. The first subject concerns Recommendation 25 of the Society Committee -- permitting a company to offer more favorable non-guaranteed purchase bases under the reduced paid-up or extended term nonforfeiture options. This recommendation would place the non-cash nonforfeiture options in a similar position to that of settlement options, where most companies permit the election of a more favorable current (as compared to guaranteed) settlement option. There are two favorable results to the industry arising from this recommendation -- the industry will be better able to compete with other financial institutions for the "investment" of cash surrender values, since companies will be able to adjust their "offers" of nonforfeiture benefits as economic factors change; and companies will be able to reduce the possibility of asset losses on surrender by making a risk charge, effectively, against the cash option.

The second is the Model Deferred Annuity Nonforfeiture Law passed last December by the NAIC, which provides for the first time uniform regulation of nonforfeiture values on deferred annuities. Prior to that time, nonforfeiture values on deferred annuities were regulated in only a few states, such as New York, New Jersey, Tennessee, Washington and Maryland, and what regulation that did exist was extremely non-uniform.

The Model Law defines the net consideration for any year to be the gross consideration received less an annual contract charge of $30.00, and also less a collection charge of $1.25 per consideration credited during the year. Then, the minimum nonforfeiture value is defined as the accumulation at 3% interest of 65% of the first year net consideration and 87½% of the net considerations in subsequent years. Provision is also made for handling increases in considerations from one year to another.

One of the significant provisions of the Model Law is that cash surrender values prior to maturity will not be required on deferred annuities -- only a paid-up deferred annuity benefit is required. However, the absence of cash values must be adequately disclosed to the buyer. If cash surrender values are provided prior to maturity, such cash values are defined in terms of the cash value which would be applicable at maturity if no further payments are made. This projected maturity value may then be discounted back to the time of cash surrender at a rate of interest as much as 1% higher than the interest rate used in determining the maturity value, resulting in a cash value lower than the present value of the nonforfeiture paid-up benefits. The cash option thereby provides a built-in risk charge for asset losses, and the paid-up option appears considerably more favorable to the terminating contractholder. Presumably, this would also enable the insurance industry to be better able to retain accumulated values, rather than lose such values to other financial institutions.

A somewhat more controversial subject which arose over the past few months concerned the interest rates for Single Premium Life insurance contained in the update of the Model Laws approved by the NAIC last December. The new Model Law recommends maximum valuation interest rates of 4½% for annual premium life insurance and 5½% for single premium life insurance, and maximum nonforfeiture interest rates of 5½% for annual premium life insurance and 6½% for single premium life insurance. A number of Actuaries voiced serious concern that this more favorable treatment afforded single premium could lead to widespread replacement, especially in the case of non-participating policies, and also to possible insolvencies in the case of companies which might misjudge the interest considerations. Other Actuaries criticized the magnitude of the 1% interest rate differential, contending that the reinvestment risk on single premium life insurance is not very different from that on annual premium life, and that only a minor differential in interest rates appears justified. Other Actuaries argued that, on the positive side, the substantially lower single premium purchase rates possible with a 6½% nonforfeiture interest rate would have enabled the insurance industry to compete more effectively with other financial institutions for the investment of cash surrender values, and would have enabled single premium life to be a viable product in the United States for the first time. However, the current industry position is to attempt to maintain wherever possible the same maximum interest rates for annual and single premium life insurance -- that is, 4½% for valuation and 5½% for nonforfeiture calculations.

Regarding the paper, "Expense Formulas for Minimum Nonforfeiture Values", by Charles F. B. Richardson, there appears to be general satisfaction with his recommendations -- both from the Industry and the NAIC Task Force. However, the NAIC Task Force continues to maintain that further testing of the formula will be necessary once the new valuation mortality table has been developed. While Charlie's work used the 1958 CSO Table and 3½% in developing the final formula, additional testing was performed using net premiums based on interest rates as high as 6% -- the expense allowances produced by the new formula are satisfactory even at this level. The new mortality table is not expected to have an appreciable effect on the expense allowance formula.

The proposed formula is much simpler than the Guertin formula in several respects. First, the use of an arbitrary maximum net premium of $40.00 has been eliminated -- such maximum premium rarely has application. Second, the expense allowance formula is no longer a function of the plan premium and the Ordinary Life premium -- such a split of the allowance does not significantly improve the fit of the formula allowance to the actual excess first-year expenses. The third simplification is due to applying the $10.00 per $1,000.00 insurance allowance to the average amount of insurance in the first ten policy years, rather than to the Equivalent Uniform Amount, as currently defined on a present value basis.

The combined effect of the higher and more realistic expense allowance and the higher interest rates permitted for nonforfeiture purposes will be a substantial reduction in nonforfeiture values. Also, assuming that the CSO Table that emerges will not differ greatly from the Modern CSO developed by the Society of Actuaries Nonforfeiture Committee, nonforfeiture values will be reduced still further on most plans. This reduction in required surrender values will hopefully result in a substantial reduction in gross premiums on cash value plans, to the benefit of the insuring public.

While progress toward revising the standard nonforfeiture law continues to be made, such revision appears to be at least several years off since NAIC action does not appear to be forthcoming until the new CSO is developed, and also since a majority of the states must act before the revision can have a meaningful impact.