15. Appendix I. The formula for the credit accident and health single premium rates, as included at the end of this Appendix, contains a typographical error. It should read:

Formula: 1.25 x Claim Cost + $.60 (Subject to a maximum of 2 x Claim Cost).

16. Attachment 2 sets out examples of various types of calculations for unusual plans and benefits. Presumably this is intended to aid insurers in determining rates and charges not specifically covered in the regulation. However, no mention of Attachment 2 appears in the body of the regulation.

Since Attachment 2 can be of substantial value to insurers, we suggest that a reference be included in the body of the regulation. It appears appropriate to include the reference in both Section 6 and Section 7 dealing with credit life and credit accident and health rates, respectively. The reference should, of course, refer to the attachment as containing illustrative calculations since there are other acceptable methods which should be permitted.

Respectfully submitted,

Robert Younger

LIFE INSURANCE (C3) SUBCOMMITTEE

Reference:
1971 Proc. Vol. I. p. 598
1971 Proc. Vol. II. p. 477

Dick L. Rottman, Chairman - Nevada
Stanley C. DuRose, Vice-Chairman - Wisconsin

AGENDA

1. Report from the Valuation Task Force.

2. Report from the Policy Loan Interest Rate Task Force.

3. Report from the Split Life Task Force.

4. Report from the Price Illustration Task Force.

5. Discussion on whether to appoint a Task Force to study the broad area of life insurance products in general and its various characteristics - Commissioner Stanley C. DuRose of Wisconsin will speak on this subject.

6. Discussion on Deposit Term Life Insurance.

7. Any other matters brought before the Subcommittee.

The Life Insurance (C3) Subcommittee met at 2:00 p.m. December 5, in the Condor Room at the Hyatt Regency Hotel . Each item on the agenda was discussed in open sesssion prior to adjourning into executive session.

The Subcommittee received the final report from the Valuation Task Force. Discussion on this report was minimal and the Subcommittee voted unanimously to adopt the report as submitted. The Task Force was given a hearty thanks and was discharged.

The Subcommittee received the final report from the Policy Loan Interest Rate Task Force. The report was submitted to the Subcommittee for the first time; however, the Task Force Chairman, Dr. Glenn L. Wood, indicated it was reasonably similar to the model bill that had been prepared by a previous task force. Several members of industry indicated their approval of the report. The Subcommittee decided to defer action on the adoption of the report until the members have an opportunity to evaluate its contents. The Chairman agreed to distribute copies of the report to each of the Subcommittee members.

An interim report from the Split Life Task Force, chaired by Harold Jacobsen, CLU, was submitted to the subcommittee. The report was verbal. This report illicited considerable discussion during executive session. The Chairman of the Task Force was instructed to maintain an unbiased and objective view toward the study of this entire issue. He was specifically instructed to investigate the legality of the product in relation to the NAIC Unfair Trade Practices Model Act (both past and present), deficiency reserves, marketing and replacement implications, and specifically enumerate both the positive and negative aspects of split life insurance. There was the general feeling by subcommittee members that new life insurance products should be encouraged wherever and whenever possible.

Some discussion ensued regarding the inclusion of health insurance in the split life package. Discussion by representatives from states who had approved split life insurance and from those who had not approved split life insurance was rather vigorous. The Chairman of the Task Force was instructed to try to have a final report prior to June, 1973, meeting.

The Subcommittee heard an interim report from the Price Illustrations Task Force. The report was widely distributed prior to the meeting. Some discussion ensued and a specific presentation was made to the entire Subcommittee by Mr. Robert Seiler. The written document was distributed to the Subcommittee members, but it was decided not to attach the document to the Task Force report. The Task Force decided during the meeting to receive a written report from Mr. Moorehead. It is attached to the Task Force interim report.

The Subcommittee voted to receive the report and it was reported by Commissioner Stanley C. DuRose that the Task Force would continue to study the matter of price illustrations and make another report at the next committee meeting.

A report was received from Commissioner DuRose concerning a proposal to study the broad area of life insurance products and related issues. Some discussion ensued and it was determined by the Subcommittee that the written documents submitted by Commissioner DuRose be attached to the Subcommittee report and forwarded to the Parent Committee. It was the Subcommittee's instructions that the Executive Committee review the proposal in a positive light with specific reference to the feasibility of such a study, the level of such investigation, the technical assistance required and the source and amount of funding. The Subcommittee requested the guidance of the executive committee on this particular issue.

A brief discussion was held with regard to Deposit Term Life Insurance. It was voted to drop this item from the agenda. However, Commissioner Payne was asked to make a report at the next committee meeting on the California investigation of deposit term. Also, Dan Anderson was requested to outline for the Subcommittee possible problems of life insurance advertising for its consideration.

No other matters came before the Subcommittee, so the meeting adjourned.

Hon. Dick L. Rottman, Chairman, Nevada; Hon. Stanley C. DuRose, Vice-Chairman, Wisconsin; Hon. John G. Bookout, Alabama; Hon. Gleeson L. Payne, California; Hon. J. Richard Barnes, Colorado; Hon. Robert A. Short, Delaware; Hon. James Baylor, Illinois, Hon. William H. Huff III, Iowa; Hon. James P. Dalton, Missouri; Hon. Lester L. Rawls, Oregon; Hon. Samuel H. Weese, West Virginia.

THE PROPOSED CHANGES IN THE STANDARD VALUATION AND NONFORFEITURE LAWS

As Recommended by the Joint Actuarial Committee of the Life Insurance Association of America and the American Life Convention

December, 1972

The report of the Valuation Task Force was submitted to the (C3) Subcommittee on June 13, 1972, at the Denver meeting by Henry F. Ries, Chairman. Certain objections were raised by industry representatives to the report as submitted. The Task Force was directed by the Subcommittee to explore the matter further with industry representatives and obtain a resolution of existing differences of opinion.

Because of the illness of Henry Ries, a new Chairman to the Task Force was named. The Task Force consulted with industry representatives and arrived at a mutually agreeable revised report. This revised report was discussed with the Subcommittee on October 9, 1972, at the Sioux Falls, South Dakota, meeting. The Subcommittee instructed the Task Force to proceed with the drafting of amendments to the NAIC Standard Valuation and Nonforfeiture Model Acts reflecting the provisions of the revised report. Transmitted herewith are:

1. The revised report of the Valuation Task Force,

2. The proposed amendments to the NAIC Standard Valuation Model Act, and

3. The proposed amendments to the NAIC Standard Nonforfeiture Model Act.

In summary, the amendments to the Standard Valuation and Nonforfeiture Laws (1) establish new valuation mortality standards for annuity and pure endowment contracts in the 1971 Group Annuity Mortality Table and the 1971 Individual Annuity Mortality Table; (2) allow for the use of interest rates not to exceed six percent for group annuity/pure endowment contracts and individual single premium immediate annuity contracts and four percent for all other individual annuity/pure endowment contracts, to January 1, 1986; (3) allow for an interest rate not to exceed four percent, to be used for all other insurance contracts, to January 1, 1986; and (4) establish an operative date of January 1, 1979 - or earlier at the election of the company.

Eugene F. Jacks, Actuary (Chairman)
State of California, Department of Insurance

Henry F. Ries, Chief Actuary
State of Colorado, Division of Insurance

Mary F. Kingston, Life Actuary
The Commonwealth of Massachusetts, Division of Insurance.

I. Valuation Task Force Revised Report

The subject to be discussed concerns changes in the Valuation and Nonforfeiture Laws Recommended by the Joint Actuarial Committee of the Life Insurance Association of America and the American Life Convention.

The continuing attempt to understand economic forces and the constant experimenting to control them might well yield enough knowledge within eight years to seriously change the outlook on investment projections. Furthermore, there is always the possibility of an important breakthrough in medical science which would affect mortality assumptions.

Some thought might be given to the possibility of making the standard valuation law more sensitive to change with regard to interest and mortality than action of the 50 legislatures. A technical information source working with industry and making recommendations to the NAIC membership could be effective. There is value in more realistic valuation assumptions, but more realism requires more flexibility.

There were state acutaries who felt that there should be more stringent requirements for an actuary signing the annual statement or other documents related thereto. Take the following from a reply:

I do not have any problem in accepting the increased interest rates except that all companies operative in my state, and throughout the country do not actually experience a four and one-fourth percent net rate on new business in some instances. There are some companies with poor investment experience. There may well be companies having problems meeting a six percent net rate if we allow them to value the group business at six percent. As such, I feel it may be best to consider implementing a requirement similar to that utilized in Canada wherein the actuary's signature is considered very important in the filing of an annual statement. In a Canadian annual statement, the actuary attests to the fact that the the reserve liabilities established on a block of business not only meets the minimum statutory requirements but are sufficient to provide the benefits in his own estimation. In other words, he attests to the fact that the reserves are adequate in his own mind and not that the reserves simply meet minimum requirements. I would very much like to institute this type of requirement within the United States. I feel that this would go a long ways in helping to solidify the American Academy of Actuaries, and its position relative to the insurance industry.

Among the letters received, there were three state actuaries who felt that further study should be made; ten of the replies indicated complete approval of the proposed changes; one expressed disapproval, and one a no decision, a wait and see; the remainder of the twenty-three, eight indicated some approval with modification.

There have been recommendations that the annual statement be modified to bring out certain information when the proposed changes are approved. It has been suggested that the industry be required to demonstrate statistically on the basis of new investments which have been made during a recent period, such as the last three years, that the average investment returns for the industry are well above six percent, such as eight percent or more. The industry should also propose a method by which investment earnings rates for recent investments could be computed on a uniform basis and reported in each company's annual statement. Provision should also be made for reporting the portfolio interest rate after excising such new investments. Under this approach, if the proposed six percent is approved, a company whose new investment rate drops below a certain level, such as seven percent, should be required to establish a program for increasing its reserves for these classes of annuities. Here again, a specific time limit should be established for such valuation basis, such as annuities purchased during the next five or ten years.

Concerning the two 1971 annuity tables, the question has been raised as to whether consideration should be given to an alternative of including a projection scale in the valuation requirements or advancing the data of the static tables five or ten years hence. Also, the question has been raised as to whether or not the revised valuation and nonforfeiture standards should be applicable to annuity benefits purchased under group annuity contracts which were in effect prior to the operative data of the new statute. This would eliminate the need for an alternate approach, such as, cancelling inforce group annuity contracts and issuing new contracts to the same groups.

Other questions raised as to whether these increased interest rate assumptions would lower the premium rates? One state actuary suggested a strong model law dealing with minimum cash values for annuities. Some mention should be made of the small amount of data available for annuity mortality for ages under 50.

With regard to annuity tables, (this has been touched on) since the mortality tables being proposed do not mandate a projection for mortality improvements, we should anticipate that such mortality improvements will in time remove what margins there may be in the proposed six percent and four and one fourth percent interest rates in the annuity valuation mortality tables.

I wish to thank the state actuaries and all those who wrote offering comments and recommendations. Especially do I wish to express my gratitude for the cooperation and help given me by Mary F. Kingston, Life Actuary of the Massachusetts Department and Gene Jacks, Actuary of the California Department.

At the request of the Life Insurance (C3) Subcommittee, the proposals for changes in the standard valuation and nonforfeiture laws have been studied, and as Chairman of the Task Force to report on these proposals, this paper represents a written reaction to these recommendations.

These changes as you probably know pertain to the recommendations of new annuity tables and changes in the laws pertaining to interest assumptions. A summary of the proposed changes is as follows:

1. Raise the maximum statutory interest rate to four and one-fourth percent for individual deferred annuities, for all life insurance and benefits supplementary thereto, and for health insurance. This change would apply to business issued after the operative date.

2. Raise the maximum statutory interest rate to six percent for all group annuities and single premium immediate individual annuities purchased after the operative date, and

3. Concurrently introduce the 1971 Group Annuity Mortality Table and the 1971 Individual Annuity Mortality Table as statutory mortality standards for group and individual annuities respectively, to replace present standards. Both of these new mortality tables have been published by the Society of Actuaries. To allow time to comply, the new standards for annuities would not be compulsory until after an operative date not later than eight years after adoption of the new standards by the NAIC.

In connection with these recommendations, the Task Force communicated with state actuaries from over the nation, as well as members of the investment and insurance industry.

It may be of interest to convey some of the highlights, - - - excerpts of these communications follow:

We could accept the judgment of many, but not all, financial experts that we are now in a "new era" of economies in which interest rates will continue at a relatively high level for many years, if not permanently. But, if these experts should prove wrong, this choice would, in time, lead to considerable financial losses to companies under long-term, investment-type policies, assuming a reasonable level of lapse rates.

The "new era" experts may be right, but they may be wrong, no one knows. And, it is of paramount importance to a life insurance company that it continue to be solvent on any reasonable assumptions.

There is no problem or dilemma in respect of term, group life and health insurance with their low reserves, for short-period policies running for say 10 or 15 years during which interest rates are almost sure to be relatively high, or for single premium immediate annuities with their one premium and declining reserves.

Another reply - - -

My first reaction to the six percent rate for group annuities and single premium individual immediate annuities was that it was too high. In considering the availability of long-term maturities in bond investments at between seven percent and eight percent, however, it appears that there is enough margin and adequate opportunity for the companies to reduce interest assumptions on new issues when there is a need for such reductions.

Another - -

In recommending a minimum valuation standard, it is important to bear in mind that the purpose of that minimum standard is to guarantee that sufficient funds will be available, perhaps many years in the future, when a company must meet its obligations to its policyholders.

Although a valuation rate as high as six percent is probably being proposed for the first time, the situation that prompts the proposal is also appearing for the first time. Single sum sales of immediate annuities, supported by high yield long-term bonds, have been made on rates based on these higher earnings, and are currently producing startling results from an accounting point of view.

The amendments proposed by the industry advisory committee include a suggestion that they not be made mandatory until eight years after adoption by the NAIC.

The comments and recommendations received are much appreciated. However, some of these recommendations come under the category of "other proposed changes" which might be considered for another future Task Force Study if the Subcommittee deems it so advisable.

We do believe that the question at hand is, will prevailing interest rates continue at a relatively high level for a number of years? We believe they will. Economic forecasts indicate that the present high level of interest rates is projected to continue for the balance of this decade and, perhaps, well into the 1980's.

Quoting a reputable economist:

> Perhaps the most pervasive factor influencing the supply and demand for funds is the commitment by the federal government and other governments throughout the free world to a policy of economic growth with full employment even if this results in some inflation. Since such policies create an expectation of inflation, businesses and consumers are more eager to borrow so that they can finance purchases before price increases take place. Lenders, realizing that they will be repaid in funds which will have eroded in value, require an additional "inflation premium" in interest rates to compensate for this loss in value. Thus, inflationary pressures are expected to keep interest rates higher over the next decade than in the recent postwar years. Because competition for funds if international in scope, rising interest rates abroad will place continued pressure on the Federal Reserve Board to pursue monetary policies which will keep domestic interest rates high to avoid capital outflows and balance of payment problems.
>
> All of the previous factors taken together lead economists to believe that although interest rates may drop somewhat from their highest peaks of recent years, the general trend of interest rates will be represented by a sidewise movement on a high plateau compared with historical standards.

In considering the availability of long-term maturities in bond investments at between seven percent and eight percent, it appears that there is enough margin and adequate opportunity for the companies to raise interest assumptions on new issues. The opportunities are equally true in other avenues of investments.

Therefore in taking into consideration the several factors and in assessing the responses received, we have modified the suggested maximum statutory interest rate from four and one fourth percent to four percent with an automatic cutback to an interest rate of three and one half percent as of December 31, 1985.

The following are the recommendations by the Task Force to the Life Insurance (C3) Subcommittee on the proposed changes to the standard valuation and nonforfeiture laws:

1. Raise the maximum statutory interest rate to four percent for individual deferred annuities, for all life insurance and benefits supplementary thereto, and for health insurance. This change would apply to business issued after the operative date, and would automatically be cutback to an interest rate of three and one half percent on new issues as of December 31, 1985.

2. Raise the maximum statutory interest rate to six percent for all group annuities and single premium immediate individual annuities purchased after the operative date, and likewise would automatically be cutback on new issues to an interest rate of three and one half percent as of December 31, 1985.

3. Replace the current statutory mortality standards for group and individual annuities respectively with the 1971 Group Annuity Mortality Table and the 1971 Individual Annuity Mortality Table.

II. Proposed Changes in the Standard Valuation Law

Draft of November 20, 1972

Section 3.

Amend the first two sentences to read as follows:

3. Except as otherwise provided in section three - a, the [The] minimum standard for the valuation of all such policies and contracts issued prior to the effective date of this Act shall be that provided by the laws in effect immediately prior to such date. Except as otherwise provided in section three - a, the [The] minimum standard for the valuation of all such policies and contracts issued on and after the effective date of this act shall be the commissioners reserve valuation method defined in section four, three and one half percent interest, or in the case of policies and contracts, other than annuity and pure endowment contracts, issued on or after the effective date of this amendatory Act of 197- and prior to January 1, 1986, four percent interest, and the following tables:

Sections 3 - 2

Add a new Section 3 - a to read as follows:

3 - a. The minimum standard for the valuation of all individual annuity and pure endowment contracts issued on or after the operative date of this section three - a, as defined herein, and for all annuities and pure endowments purchased on or after such operative date under group annuity and pure endowment contracts, shall be the commissioners reserve valuation method defined in section four and the following tables and interest rates:

a. For Individual Annuity and Pure Endowment contracts issued prior to January 1, 1986, excluding any disability and accidental death benefits in such contracts -- the 1971 Individual Annuity Mortality Table, or any modification of this table approved by the commissioner, and six percent interest for single premium immediate annuity contracts, and four percent interest for all other individual annuity and pure endowment contracts.

b. For Individual Annuity and Pure Endowment contracts issued on or after January 1, 1986, excluding any disability and accidental death benefits in such contracts - the 1971 Individual Annuity Mortality Table, or any modification of this table approved by the commissioner, and three and one-half percent interest.

c. For all annuities and pure endowments purchased prior to January 1, 1986, under group annuity and pure endowment contracts, excluding any disability and accidental death benefits purchased under such contracts - the 1971 Group Annuity Mortality Table, or any modification of this table approved by the Commissioner, and six percent interest.

d. For all annuities and pure endowments purchased on or after January 1, 1986 under group annuity and pure endowment contracts excluding any disability and accidental death benefits in such contracts -- the 1971 Group Annuity Mortality Table, or any modification of this table approved by the commissioner, and three and one half percent interest.

After the effective date of this amendatory Act of 197-, any company may file with the commissioner a written notice of its election to comply with the provisions of this section after a specified date before January 1, 1979, which shall be the operative date of this section for such company, provided, a company may elect a different operative date for individual annuity and pure endowment contracts from that elected for group annuity and pure endowment contracts. If a company makes no such election, the operative date of this section for such company shall be January 1, 1979.

III. Proposed Changes in the Standard Nonforfeiture Law

November 20, 1972

Amend the first sentence to read as follows:

In the case of Ordinary policies issued on or after the operative date of this section five-a as defined herein, all adjusted premiums and present values referred to in this Act shall be calculated on the basis of the Commissioners 1958 Standard Ordinary Mortality Table and the rate of interest,[not exceeding three and one half percent per annum,] specified in the policy for calculating cash surrender values and paid-up non-forfeiture benefits provided that such rate of interest shall not exceed three and one-half percent per annum except that a rate of interest not exceeding four percent per annum may be used for policies issued on or after the effective date of this amendatory Act of 197- and prior to January 1, 1986 and provided that for any category of Ordinary insurance issued on female risks, adjusted premiums and present values may be calculated according to an age not more than three years younger than the actual age of the insured.

Section 5 - b

Amend the first sentence to read as follows:

In the case of Industrial policies issued on or after the operative date of this section five-b as defined herein, all adjusted premiums and present values referred to in this Act shall be calculated on the basis of the Commissioners 1961 Standard Industrial Mortality Table and the rate of interest,[not exceeding three and one half percent per annum,] specified in the policy for calculating cash surrender values and paid-up non-forfeiture benefits provided that such rate of interest shall not exceed three and one half percent per annum, except that a rate of interest not exceeding four percent per annum may be used for policies issued on or after the effective date of this amendatory Act of 197 - and prior to January 1, 1986.

POLICY LOAN INTEREST RATE TASK FORCE REPORT
December, 1972

Outline

I. Foreword.

Numerous studies have documented the problems that may arise for life insurance companies and policyholders from a fixed policy loan interest rate. But even to the astute life insurance professional, the importance of life insurance policy loan interest rates is deceiving. Relatively few problems exist when general interest rates in the economy are not greatly different from rates being charged on policy loans. Severe problems, however, are created when there is a wide discrepancy between policy loan interest rates and other interest rates. Problems are most acute when interest rates are at their extremes. Although concern over the problems tends to coincide with interest rate movements, implementation of

practical solutions to these problems requires time. During the time solutions are being considered, interest rates often reverse themselves. Thus, positive action to alleviate problems associated with a fixed policy loan interest rate may be required at a time when the problems are not at their greatest intensity. This leads some observers to underestimate the importance of the problems. To be most effective, remedial action should be taken to assure that a predetermined solution has been developed.

II. Conclusions and Recommendations.

The Policy Loan Interest Rate (C3) Task Force offers the attached draft model policy loan interest rate bill to the NAIC for its consideration. Members of the Task Force unanimously believe the draft model provides a viable solution to the problem inherent in the present policy loan interest rate situation.

The essential characteristics of the draft are:

A. All policies issued after the effective date of the enactment of the bill shall contain a provision establishing either, but not both of, a variable policy loan interest rate or a fixed policy loan interest rate. Insurers may simultaneously issue policies providing for a variable rate and policies providing for a fixed rate, but both alternatives may not be contained in the same policy.

B. Maximum fixed and variable interest rates which may be charged on policy loans will be established by each jurisdiction enacting the model bill.

C. An insurer may increase the variable loan interest rate only on or after the date 12 months following the preceding effective date of change. The new loan rate will apply, in the case of each policy providing a variable rate, to all loans outstanding on the effective date of the change for that policy and to all loans made thereafter--until the subsequent loan interest rate change.

D. If the change in the policy loan interest rate is an increase, it may not exceed one percent per annum above the previous rate. Thirty-day prior notice of a loan interest rate increase must be sent to policyowners having outstanding loans.

E. In maximum policy loan situations, insurers are authorized to withhold from loan proceeds sufficient value so as to preclude the possibility of lapse due to an increase in the applicable interest rate before the end of the current policy year.

III. Origin and Charge of the Task Force

In view of severe policy loan problems and numerous studies, the Task Force was formed under the direction of Commissioner Rottman during the summer of 1972. The charge to the Task Force was to study the desirability and feasibility of a variable policy loan interest rate system and to draft a model bill, if appropriate, to submit to the NAIC for its consideration.

IV. Methodology

Rather than undertake an exhaustive study of policy loan problems (which would require a prohibitive amount of time), the Task Force agreed to focus upon previous studies and reports. After careful deliberation, the Task Force elected to critically evaluate the Policy Loan Interest Rate Draft Bill submitted by the ALC-LIAA (on November 24, 1971) in the light of the annotations and report that accompanied it. As a result, this report is based largely upon that study and much of the wording has not been changed except in those areas where the Task Force agreed that changes would be desirable.

V. Objectives

The Task Force established certain objectives that it felt should be considered in drafting a model bill. Primarily, the Task Force felt that the bill should optimize equity between borrowing and non-borrowing policyholders and should tend to inhibit extreme drains on the cash flow of insurers during times of high market interest rates by providing for a policy loan interest rate that may be changed in response to prevailing market interest rates. Various other important, but subsidiary, considerations were:

A. To minimize financial selection by the policyowner against the insurer.

B. To minimize administrative complexity.

C. To notify the borrower in advance as to what the interest rate will be on his loan.

D. To prevent the indebtedness from rising above the cash value.

E. To enhance the attractiveness and salability of the policy contracts.

As set forth more fully in the following discussion, the Task Force (with the previous study by ALC-LIAA) has attempted to draft a model bill that will come closest to meeting these objectives.

VI. Considerations

A. Variable rate only or variable and fixed as alternatives.

A case can be made for permitting a variable policy loan interest rate only. However, the decades of use of the fixed rate lend weight to its continued availability as an alternative as provided in the draft model bill.

The intent of the model bill is to permit an insurer to issue all policies with a variable rate, all with a fixed rate, or, by means of separate but concurrent policy series, to issue both types of policies simultaneously. However, an insurer will not be able to incorporate both alternatives in the same policy.

B. Basis for Maximum Rates.

The Task Force discussed at length various alternatives that might be used to tie the maximum policy loan interest rate to the appropriate maximums established in usuary laws. Whichever technique is used it is recommended that an express numerical maximum rate be included rather than referring to the particular jurisdiction's usury law. The latter might create confusion because often there are several limits, depending frequently on the size of the loan or on the nature of the borrower. Finally, if a maximum rate is necessary, then there is some advantage to having it remain stable once the policy is issued; the usuary rate is subject to varying definitions and may go up or down.

It could be argued that it would be desirable to have no maximum indicated at all on the theory that competitive pressures would be entirely adequate to hold the loan rate to realistic levels. However, the Task Force felt, that such a recommendation would be too dramatic a change from the traditional fixed loan rate.

A case can be made for a separate, somewhat lower, maximum rate schedule for fixed rate policies, but simplicity of approach favors using the same maximum for both fixed and variable rate policies.

It should be noted that it is highly desirable to have a uniform maximum rate throughout all the states. Otherwise many questions will arise because of the different policies (and different policy loan rates) that one individual will have as he moves about the United States. Some degree of uniformity could be achieved if the starting point for all legislation would specify eight percent. This would then be accompanied with a specific amendment in those few states with a lower usury rate exempting policy loans.

C. Basis for determining effective date of rate change.

The variable policy loan interest rate presents the life insurance industry with a new and fundamental issue to resolve, namely, what shall be the basis for determining the effective date of a rate change? It should be noted that this question is not the same as that of the interest billing date which is considered later in this report.

The Task Force recognized three alternative bases:

1. Interest rate change tied to policy date under this approach, the rate applicable during an entire policy year would be that set by the insurer and in effect on (or a given number of days in advance of) a particular policy's anniversary date. Any loan made during the policy year would be charged interest at the current (for that policy rate until the next policy anniversary date, at which time a new rate could become effective for the ensuing policy year.)

2. Interest rate change tied to loan date under this approach, the rate used would be that in effect when the loan is taken out, and it would apply for a period of one year from the loan date. If further borrowing were to be made on the policy, the insurer's current rate would apply to the consolidated indebtedness consisting of the balance of the old loan as well as the new loan.

3. Interest rate change tied to a calendar date-Under this approach, all loans outstanding would be charged the same rate of interest. When the loan interest rate changed, the new rate would apply from its effective date to all existing loans, as well as to new loans, until a further rate change.

The following table sets forth certain of the considerations considered by the Task Force as to which of the bases to choose.

TABLE A	Policy Date	Loan Date	Calendar Date
Promotes equity among borrowers.	Partially	Subject to borrower control	Yes
a. Inhibits periods of particularly heavy borrowing.	No	Yes	No
b. Precludes obtaining more favorable rate by "rolling" loans over.	Yes	No	Yes
Effective interest rate known in advance.	For balance of policy year	For One Year	Until next date on which insurer is authorized to change rate.
No potential lapse problem in maximum loan situations.	No problem	Not Necessarily	Potential Problem
Affects all policies equally (i.e., regardless of policy or loan date).	No	No	Yes
Consistent with current practices of insurers.	Many	Some	None
Conceptual simplicity.	No	No	Yes

Each of the three bases has advantages and disadvantages. The draft model bill permits each insurer to make its own decision although the Task Force feels that the calendar date basis may be preferable because (1) it is reasonably equitable and responsive to the economy, (2) it treats all policyholders equally, (3) it is conceptually simple, and (4) because its biggest disadvantage, unfamiliarity, is not as serious as the major disadvantages attached to each of the other two. The policy date approach treats borrowers unequally, allows substantial delays in effective rate change on individual policies and may produce different rate change on individual policies and may produce different rates for a policyowner with two or more policies. The loan date basis suffers from its potential for severe financial selection against the insurer and the non-borrowers, as well as administrative peak load resulting from financing after an interest rate reduction.

D. Notice and lead time for rate change.

The Task Force debated the necessity of sending any notice of a rate change at all, with the thought that the interest billing notice would suffice, possibly augmented by a "notice advertisement" in financial publications. It was decided, however, that notice of an increase in rate should be sent to policyowners with existing loans at least 30 days in advance of the effective date, and that loans closed subsequently should receive notice with the loan. A provision to that effect has been included in the draft. No notice is required for policies without loans, nor for a decrease in the policy loan interest rate.

The requirement of 30 days advance notice of any specified rate increase on outstanding policy loans allows the borrower sufficient time to investigate alternative sources of credit and to repay the policy loan with funds obtained elsewhere prior to the actual increase. While a 30 day notice of decrease in rate is not required, such notice, of course, may be given if the insurer so elects.

E. Frequency and maximum increase in interest rate.

A cogent argument may be made that total consistency with the main purposes of the model bill would require that there be no limitation on the frequency of changes of the policy loan interest rate or on the maximum increase in rate which may be accomplished by any rate change. The Task Force has the opinion that in practice insurers would generally follow self-imposed guidelines to achieve an orderly pattern of rate change. However, the Task Force also feels that it is in the public interest to impose limitations which reasonably slow the frequency and restrict the amount of changes which may be made in policy loan interest rates. Moreover, practical considerations dictate such limitations.

The limitation that any increase in policy loan interest rate may not exceed one percent in a 12 month period has considerable significance. In as much as the applicable interest rate may be varied during the policy year or other interest payment period, it will usually be impossible for a borrower to know his precise interest charge at the beginning of the applicable interest payment period. The one percent limitation assures the borrower that his interest cost can at most increase by this amount in any 12 month period.

F. Operational requirements.

The very nature of this effort to ease the policy loan problem in the future implies increased administrative complexities. Procedures required to administer loans on a variable interest rate basis, however simple, introduce new operational requirements even as the old requirements continue for policies issued with a fixed rate.

1. Maximum loans.

When the loan rate is fixed, or when the loan rate may vary but only at the time interest is billed or added to principal for a new loan, the maximum loan is easily determined. However, the draft model bill provides that the loan rate may change during the interest accrual period for any individual policy. In the calendar date approach, this means that a loan rate increase occurring less than 12 months after the date of a maximum loan could cause the cash value to be exhausted prematurely.

The Task Force recognizes this as an administrative problem. The insurer can obviate the problem by determining the maximum loan by use of a discount factor which provides for the possibility of an increase of up to one percent in the loan rate within the coming year. The draft accomplishes this by varying the usual statutory language by specifying "and any interest which may be allowable on the loan to the end of the current policy year".

It is important to note that the establishment of this safety-margin only creates a technique which allows use of variable policy loan interest rates in maximum loan situations and does not ultimately affect the amount of cash value of a policy. The amount of cash value available to a policyholder upon surrender, available to preserve the policy from lapse and available to be used as required by non-forfeiture provisions is not reduced.

2. Interest billing.

The draft model bill is silent as to interest billing procedures. The Task Force believes that each insurer may choose to administer the accrual and billing of interest in any feasible way, subject to sound accounting practices.

3. Off-anniversary rate changes.

The most significant administrative complexity introduced by the draft model bill is the possibility of a change in the effective interest rate during the policy year or other interest accrual period. For companies electing calendar date basis, a system will be required for policy loans which is able to accommodate two different interest rates for a 12 month period on the same policy. The Task Force considered this problem and understands that such insurers will be able to modify their systems, whether computer or manual, so as to deal satisfactorily with this more complicated situation, but especially in the case of those who compute interest in arrears.

G. Marketing and Competition

The Task Force did not overlook these considerations. A few brief observations are, therefore, in order. It is probable that the concept of a variable loan rate can be presentated to the consumer in a positive manner. The increased equity for the non-borrower is a factor which even the occasional borrower will recognize as fair. However, sales which have been made specifically because of the availability of the guaranteed five percent and six percent interest maximum will no longer be made as easily. It can be anticipated that the minimum deposit route will lose some attractiveness because, principally, of the inability to guarantee that the policy loan interest rate will be low enough to produce tax savings.

There may also be problems of competitive practices between agents selling policies with a fixed loan interest rate and those selling policies providing for a variable loan interest rate, but the Task Force found that they would not outweigh the advantages of the proposed approach taken by the draft model bill.

H. Conflict of laws.

The basic concept of variable policy loan interest rates would work best if the maximum permissible loan rate were the same in all jurisdictions. However, this is unrealistic. With the great diversity among the states in their statutory usury rates, it is hardly to be expected that they will adopt a uniform maximum policy loan interest rate. The fact that substantially different policy loan interest rate maximums may exist in different jurisdictions may be particularly significant in times of high market interest rates.

The life insurance industry currently has analagous problems in respect to the five percent policy loan rate allowed in New York compared with the six percent rate allowed in other states. Several conflict of laws questions arise from these state-by-state variations.

I. Standard Nonforfeiture Law and Reinstatement

So long as the insurer's procedures are adequate to prevent premature exhaustion of the cash value by the accrual of interest on the indebtedness, the Standard Nonforfeiture Law provisions do not seem to be affected by the proposed provision for a variable interest rate. In some states the statutes provide specified interest rates in

connection with reinstatement. This could be taken into consideration by insurance department regulations in such states upon passage of the model policy loan bill.

J. Minimum Deposit Business

Minimum deposit business has been mentioned in an earlier section. The Task Force believes that the variable loan rate may make minimum deposit life insurance less attractive to the consumer, and hence this type of business may decline as a result. To the extent that minimum deposit business has flourished at the expense of non-borrowing policyowners, this result is supportable. Further, companies that prefer to encourage minimum deposit business may elect to use the traditional fixed rate.

K. Relative Effects on Different Insurers.

The Task Force recognizes that no change in insurance law will have a uniform effect on all types of insurers and on individual insurers within each type. The effects of the variable loan rate, and the particular approach of the draft model bill, will have varying impact on insurers– stock or mutual, large or small, permanent-plan oriented or term-plan oriented, large loan balances or small, systems run on computer or by hand, and like. The Task Force is not aware of any bias in favor of or against any category of companies.

L. Retroactive Rate Changes

In regulating the maximum policy loan interest rate, regulators and insurers should be aware of the potential dangers in making retroactive rate changes. If a company uses a rate that is retroactively reduced, a question may arise concerning death claims that arise from deaths during the period of time after coverage has expired with higher interest rate charges but would have continued with lower charges.

Respectfully submitted,

Glenn L. Wood, Chairman, Capital Resources Development
Warren R. Adams, Drake University
Victor Henningsen, Northwestern Mutual Life
Charles W. Kappes, Mutual Benefit Life
F. Joseph O'Regan, California Department of Insurance
Roger Sherman, U.S. Financial
John Rosseau, Founders Life

Policy Loan Interest Rate Draft Model Bill

Enacting Clause:

Section 1. Delete the reference in Section to rate of interest.

Section 2. A policy shall contain either, but not both of the following policy loan interest rate provisions: (1) a provision that a policy loan shall bear interest at a specified rate (not exceeding percent per annum), or (2) a provision that all loans under the policy, including outstanding loans, shall bear interest at a variable rate (not exceeding percent per annum), specified from time to time by the insurer. The effective date of any increase in such variable rate shall be not less than one year after the effective date of the establishment of the previous rate. If the interest rate is increased, the amount of such increase shall not exceed one percent per annum. With respect to policies providing for a variable rate, the insurer shall, (a) when a loan is made and when notification of interest due is furnished, give notice of the variable rate currently effective, (b) as to any loans outstanding 40 days before the effective date of any increase in the variable rate, give notice of any such increase at least 30 days before such effective date, and (c) as to any loans made during the 40 days before the effective date of the increase, give notice of such increase when the loan is made. Every such notice shall be given to the policy owner and any assignee as shown on the records of the insurer at its home office.

Section 3. The loan value of the policy shall be at least equal to the cash surrender value at the end of the then current policy year, and the insurer may deduct, either from such loan value or from the proceeds of the loan, any existing indebtedness not already deducted in determining such cash surrender value, including any interest then accrued but not due, any unpaid balance of the premium for the current policy year, and any interest which may be allowable on the loan to the end of the current policy year.

Section 4. This Act shall take effect_____ .

LIFE INSURANCE COST COMPARISONS TASK FORCE REPORT
December 5, 1972

Subsequent to the June 1972 annual meeting of the NAIC, President Russell E. Van Hooser appointed a restructured Task Force. The new Task Force met in executive session at the Marriott Inn, Chicago, Illinois on July 26, 1972. The Task Force determined that there should be public discussion by both the industry and the Task Force of the various concepts and issues involved with the matter of life insurance cost comparisons. An open meeting was held at Sioux Falls, South Dakota on October 9, 1972 in connection with the NAIC Zone IV meeting. The published agenda for this meeting is attached to this report. An excellent public discussion was had of the various agenda items. Oral statements were presented by:

Mr. Jack Moorhead, Chairman
Joint Special Industry Committee

Mr. Ed Morey
Michigan State Association of
Life Underwriters

Mr. Herbert Mischke, Past President
National Association of Life
Underwriters.

Mr. Bartley Munson, Associate Actuary
Aid Association for Lutherans

Mr. Raymond Sauvey
Wisconsin Association of Life
Underwriters

Mr. David Feintuch
Michigan Insurance Bureau

Mr. William Burns, Actuary
North Dakota Department
of Insurance

Mr. Victor Henningsen, Senior Vice President
Northwestern Mutual Life
Insurance Company

Mr. James Hunt, Actuary
New Hampshire Insurance
Department

Mr. Dale Gustafson, Actuary
American Life Convention

Written statements were presented by:

Mr. Walter S. Rugland
Connecticut General Life
Insurance Company

Mr. Russell Jensen, Actuary
Northwestern Mutual Life
Insurance Company

Mr. Robert Seiler
Allstate Life Insurance
Company

Mr. Ardian Gill, Actuary
Mutual Life Insurance
Company of New York

Mr. Joseph Hartley
Philadelphia Life
Insurance Company

Mr. Julius Vogel, Actuary
Prudential Insurance
Company

Mr. Harold Baird, Executive Asssistant
Northwestern Mutual Life Insurance Company

The task force noted receipt of a technical paper "On the Impropriety of Benefits-Premiums Ratios in a System of Life

Insurance Price Disclosure" by William C. Scheel, University of Alberta, Canada.

The Task Force met in executve session following the open discussion. It was noted that the then session had apparently been the first public discussion either by the NAIC or by the life insurance industry in the recent history of the insurance business. The Task Force, after considerable discussion, concluded that it would be most desirable for the Task Force to meet in executive session with the members of the Joint Special Industry Committee and with Professor Joseph Belth, Indiana University, and Professor William Scheel, University of Alberta, Canada for the purpose of additional discussion and interchange of thoughts and ideas as to concepts and problems involved.

The Task Force met in executive session with the members of the Joint Special Industry Committee and with Professor Belth and Professor Scheel on November 8 and 9, 1972 at the Arlington Park Towers, Chicago, Illinois. Both Professor Belth and Professor Scheel have written extensively on the subject of life insurance cost comparisons and both presented specific proposals and suggestions to the combined meeting of the Task Force and the Joint Special Committee. There was full participation in all the discussions by the members of the Task Force, the members of the Joint Special Committee and Professors Belth and Scheel during the entire two day meeting.

The Task Force met in executive session following the meeting with the Joint Special Committee. The Task Force determined that it would hold an open meeting at the December NAIC meeting in Atlanta for the purpose of considering comments and suggestions on its proposed interim report and on its conclusions based on the information submitted and the discussions had during the past 12 months. The following are the specific conclusions and recommendations of the Task Force at this time.

1. In general, life insurance cost comparisons and price disclosure can best be accomplished by a system or format for display of certain basic data for the life insurance policies being sold, supplemented by combinations of such basic data to produce one or more ratios or indices of the costs or benefits of the specific policy being sold or offered for sale.

2. The basic data and the ratios or indices ultimately to be determined under conclusion one should perform a consumer education function. They should provide information which will enable the prospective purchaser to understand the insurance contract and the reasons why he would be making a decision to purchase the contract. The ratios or indices should facilitate comparisons among similar policies issued by different companies.

3. After careful consideration the Task Force concluded that any ranking of insurers based on some form of policy analysis for only one insurer's policy forms at only one policyholder age is not an adequate or valid representation of the relative price or value of the insurers products generally sold. The Task Force is mindful of the various shopper's guides and ranking systems currently in use and concludes that they are inadequate and of questionable validity.

4. The Task Force proposes to continue its research and discussion with particular focus on the identification of the basic data to be disclosed to prospective buyers and the format for the display of such data. A second and concurrent consideration of the task force will be the matter of the development of meaningful combinations of such basic data to produce appropriate ratios or indices concerning policy costs and benefits. To this end the Task Force proposes to continue to invite participation by all interested parties and in particular the Joint Special Industry Committee and academicians such as Professors Belth and Scheel. Members of the Joint Special Industry Committee have volunteered to produce such statistical analyses as may be desirable to facilitate the evaluation of the several proposals and suggestions under consideration.

5. It is noted with regret by the Task Force that the very valuable participation in the work of the Task Force by Professor Belth and Professor Scheel can only be continued if the NAIC Executive Committee authorizes a modest expenditure for necessary travel expenses to committee meetings and, if substantial amounts of time and the use of university computer facilities is deemed essential, a nominal consulting fee to be paid to the appropriate university authority. The Task Force requests that an amount not to exceed $2,000 be made available to the Task Force by the NAIC Executive Committee.

6. The Task Force has considered the matter of the appointment of a broad based industry advisory committee for the Task Force. At this time it is the conclusion of the Task Force that it will have full open discussion of all of its proposals and that it welcomes all comments and suggestions from any person. It is requested, however, that all

written material be submitted concurrently to the Chairman and each member of the Task Force.

In response to the request of the Chairman of the Task Force, the Chairman of the Joint Special Industry Committee, Mr. E. J. Moorehead submitted to the Task Force a summary of suggestions for specific research projects to be undertaken by the Task Force and the industry and a listing of guiding principles applicable to life insurance cost comparison matters. This submission is attached to this report.

Hon. Dick L. Rottman, Chairman, Nevada; Hon. Stanley C. DuRose, Vice-Chairman, Wisconsin; Hon. William H. Huff III, Iowa; Hon. Clay Cotten, Texas; Hon. Samuel H. Weese, West Virginia.

September 14, 1972

NAIC Task Force on Life Insurance Cost Comparisons
Meeting at 9:00 a.m. on October 9, 1972

Holiday Inn, Downtown
Sioux Falls, South Dakota

Agenda

1. Discussion of concepts underlying price comparison methods in life insurance.

2. Discussion of advantages and disadvantages of a benefit-to-premium ratio method wherein the present value over the life of the policy of the face amount and cash surrender value of the policy are divided by the present value of the net premium of the policy with all factors discounted for reasonable assumptions of mortality, persistency and interest. (Belth A', 1969)

3. Discussion of the advantages and disadvantages of a method wherein there would be a tabular display of annual values including the net amount of protection and the price of protection per $1,000 and a display of the present expected values of the components of the premium and a ratio of the present expected values of the protection element and the savings element divided by the difference between the present expected values of the premiums and the illustrated dividends. (Belth, 1972)

4. Discussion of the advantages and disadvantages of any other methods presented for consideration.

5. Should the Task Force investigate into the underlying causes of the difficulty of price comparison in life insurance. For example, it would appear that cost comparisons are made difficult by the absence of reasonable standards or parameters prescribing an appropriate range within which the cash surrender value and policyholder dividends should be structured.

November 29, 1972

Honorable Stanley C. DuRose, Chairman
NAIC Task Force On Life Insurance Cost Comparisons
C/o Wisconsin Insurance Department
201 East Washington Avenue
Madison, Wisconsin 53702

Dear Commissioner:

The papers accompanying this letter are a response by the Joint Special Industry Committee on Life Insurance Costs to the assignment we were so pleased to be given by you at Arlington Heights on November 9, i.e., to offer some practical suggestions for further work on the questions that your Task Force is examining.

You will find two enclosures herewith.

Enclosure number one expands on our offer to engage in cooperative research aimed at furnishing facts for analysis and decision-making purposes. These are illustrative in nature and might be superseded by other approaches as the result of a conference that we invite for the purpose of establishing the objectives of such research. Nevertheless, they may give a sufficiently clear idea of the kinds of activity that ought to prove useful.

Enclosure number two is a memorandum of some considerations to which the members of the special committee seem to be largely, perhaps entirely, sympathetic. In presenting these we desire very much to avoid mistakenly giving the impression of a fixed position on any points. As we see it, our usefulness to your Task Force depends heavily upon our willingness to discuss any approaches that appeal to you and your associates. Of this willingness you may rest assured.

We hope very much that these enclosures convey the flavor of a working relationship between the Task Forceand the special committee that we believe would be beneficial to the people that the life insurance business aims to serve.

Sincerely,

E. J. Moorehead, F.S.A. Chairman
Joint Special Committee on Life Insurance Costs
Vice-President, Integon Life Insurance Corporation

Members of Joint Special Industry Committee

James N. Ackerman, Harry E. Atwood, Joseph B. Crimmins, Kenneth C. Foster, H. Carey Hanlin, Jr., Ronald K. Holmberg, Russell R. Jensen, Richard A. Leggett, J. Edwin Matz, Armand C. Stalnaker, George W. Young.

Enclosure Number One

Illustrations of Research Projects as Thought-Starters for a Conference

Illustration Number one

Policy data would be requested from about 40 life insurance companies for participating ordinary life policies and about 40 life insurance companies for non-participating ordinary life policies.

Each company would be asked to give details of all the essentially whole life continuous premiums policies in its 1972 portfolio, explaining the purpose of each, the amount limits, the number of policies and amount of insurance sold in 1972, the premiums, cash values and illustrated dividends at several representative ages, any available mortality experience if the policy is labeled as preferred risk, and any other information considered relevant for appraisal.

This information would be used to test the results obtained by whatever cost comparison methods are to be explored, and particularly to identify the reasons for material differences in rankings by different methods.

Illustration Number Two

An attempt would be made to examine the contrasts observable among representative participating policies between the dividend scales published 10 and 20 years ago and the dividends actually paid. The purpose would be to provide a commentary upon the usefulness of dividend illustrations to the life insurance buyer.

Each company would be asked to describe its philosophy in the computation and dissemination of dividend illustrations, leading perhaps to a useful position paper on this subject.

Illustration Number Three

The range of prices by some agreed-upon method or methods would be examined in an effort to determine the extent to which these differences are attributable to (a) the different markets served by different companies, (b) policy features not reflected in the index, (c) other identifiable causes.

Illustration Number Four

A memorandum would be prepared setting forth the relative advantages and drawbacks of what have been called the "snapshot" and "average" approaches to policy cost comparisons.

Illustration Number Five

A memorandum would be prepared suggesting what disclosure information appears desirable–distinguishing "disclosure" from "comparison"–and what steps, if any, need to be taken to discourage, limit and qualify information that is unsuitable for comparison purposes but may erroneously be used for comparison.

Illustration Number Six

A course of action would be developed for minimizing the possibility that any comparison system will be presented in a manner that creates misunderstanding rather than enlightenment.

Illustration Number Seven

To the extent that an interest rate assumption is necessary for comparison purposes, a position paper would be attempted on the question whether a single interest rate is practical, or whether comparative information should be promulgated at more than one interest rate for alternate use by buyers in materially differing circumstances.

Enclosure Number Two

List of Guiding Principles Which Have Been Widely Supported in Recent Discussion
By the Joint Special Committee on Life Insurance Costs

(The first two of these already have, in addition to Joint Special Industry Committee agreement, the blessings of the governing bodies of its sponsoring organizations.)

1. Life insurance companies have a responsibility to provide, upon request from insurance buyers, the most helpful price information concerning their own policies that is practical so that such buyers can compare like policies between companies.

2. Because every method suggested contains inherent limitations it is important that price comparison information be accompanied by a statement of its qualifications and limitations.

3. Any cost comparison index that is adopted should be put into proper perspective. This means, among other things, that buyers should be encouraged to recognize considerations other than are reflected in price differentials, that the value of the services of the agent not be underrated, that the importance of small price differences not be exaggerated, and that the hazards of inadvertently fostering undue reverence for a particular index be avoided.

4. Presentation of any cost comparison index should not be made mandatory in every sales situation. The emphasis here is on the word "index". Purchase of life insurance inevitably involves self-denial by the purchaser for the benefit, usually, of family members, and people often find it easy to postpone making the necessary sacrifice. A price index has meaning for a particular buyer only if that buyer uses it to make price comparisons.

5. There is need to define what price information is helpful for comparison purposes. The Special Committee has no fixed position in favor of a particular solution but welcomes continued study of this question.

6. There is value in looking at a policy in several ways, even under a single method, but no single number can be satisfactory. If the so-called "average" method is used, no one set of averaging assumptions can be found to fit the circumstances of even a substantial proportion of life insurance buyers. On the other hand, if the so-called "snap-shot" method is used, the interested buyer must be enabled to examine his or her situation under several different perceived circumstances.

7. Any promotional material that creates confusion instead of enlightenment or that misleads the public is deplored. This should go without saying and is stated here to avoid any possible misunderstanding of our view on this point.

8. It is highly desirable that any index be understandable by the agent who is selling the policy. This follows, we believe, from the nature of a life insurance sale and the relationship between agent and buyer that is so important if the life insurance is to achieve its full potential.

Note: Comments in this enclosure are in part personal interpretations by the Chairman of the Special Committee.

November 1, 1972

Hon. Dick L. Rottman
Office of the Commissioners
Nevada Insurance Division
Department of Commerce
Nye Building
Carson City, Nevada 89710

Dear Dick:

Re: Life Insurance (C3) Subcommittee Agenda
NAIC Regular Meeting
December 3-8, 1972, Atlanta

At the Sioux Falls meeting of the (C3) Subcommittee I was given the responsibility of developing an agenda item concerning a broad study of life insurance. I suggest the following:

To consider the need for a comprehensive in-depth study to determine whether there should be an updating of:

a. Standard valuation laws.

b. Standard nonforfeiture laws.

c. Laws relating to distribution and accumulation of surplus as respects participating life insurance.

d. Laws prescribing maximum and minimum parameters for life insurance premiums.

e. Laws requiring that existing policyholders be given the advantage of improvements in life insurance costs.

I believe that this is representative of our discussion and look forward to meeting with you in Atlanta.

Very truly yours,

S.C. DuRose
Commissioner of Insurance
Office of the Commissioner
Wisconsin Insurance Department
212 North Bassett Street
Madison, Wisconsin 53703

Intra-Department Memo

Wisconsin Insurance Department
212 North Bassett Street
Madison, Wisconsin 53703

TO: S. C. DuRose, Commissioner of Insurance

FROM: K. B. Desai, ASA, Life and Health Actuary

DATE: December 1, 1972

SUBJECT: Attached are notes on background information along with my comments on the agenda items you have suggested for the (C3) Subcommittee agenda items to meet at Atlanta.

Standard Nonforfeiture Law and Standard Valuation Law

This legislation is at least thirty years old having resulted from the Guertin Study in 1941.

One of the basic objectives of the study was to remove the inequities resulting from continued use of obsolete mortality tables and formula for calculations of nonforfeiture benefits which do not properly reflect the current conditions or current methods of transacting business nor the equities involved of the terminating policyowners as against those surviving.

It was felt that a minimum standard for nonforfeiture values be prescribed in order to protect the equities of the withdrawing policyholder but that a maximum placed on these values would unnecessarily penalize companies who were willing to pass the economies resulting from efficiency and volume operations to its policyowners. No maximum standard was, therefore, prescribed.

One of the most important features of this legislation was the prescribing of MAXIMUM EXPENSE ALLOWABLE factors in the formula for calculating the MINIMUM nonforfeiture values. This maximum allowance was based on the studies of expenses of representative companies and especially the incidence of these expenses in the early policy years which produced considerable strain on the surpluses of the companies. This strain was recognized properly in the Standard Valuation Law which permitted a minimum standard method of valuation such as Commissioners Reserve Valuation method. It was only natural, therefore, that the Standard Nonforfeiture Law recognize this strain and lay down the maximum expense allowance. The actual factors used, however, in arriving at this maximum expense allowance calculation are outdated in the light of the current expense levels experienced by the companies and should probably be revised soon to be realistic.

Both the Standard Nonforfeiture Law and the Valuation Law laid down minimum standards as to the interest rate which is the most influential factor in the development of the actual nonforfeiture and reserve values. These standards were proper and adequate more than three decades ago but are definitely out of line with the current experience of the companies. On the other hand, a hasty decision to relax, particularly the valuation standards would prove to be too dangerous from the point of view of the solvency of the companies. If anything, the solvency of the companies should be a prime consideration of the regulators.

It was recognized very properly that nonforfeiture values should, in practice, be divorced from the reserves maintained on that policy, since otherwise, different modes of valuation such as preliminary term and net level will produce different nonforfeiture values even though the basic equities of the withdrawing policyholder would not obviously change with a change in the reserve method. Any proposed revisions of these laws should also take this fact into consideration.

The basic general approach underlying both these laws was very sound and rooted on sound insurance theory of reserves and assumptions of risks. The same general approach of calculating "adjusted premiums" for nonforfeiture values and modified reserves should probably be followed, in any new proposed legislation. On the other hand, doors have been opened in recent years to more sophisticated mathematical risk theories which permit the risk for any given company' portfolio to be measured more reliably with the assistance of powerful computers. It is necessary to take advantage of this power to achieve equity not only between terminating and surviving policyowners but also between large and small companies. Naturally, considerable amount of research work needs to be accomplished before any decent legislation can be developed along these lines.

Laws Relating to Distribution and Accumulation of Surplus as Regards Participating Insurance

There is very minimal legislation or regulation in this area at present. Most of the states do not regulate accumulation of surplus directly. New York, however, has placed some limitations on the size of surplus a mutual company can accumulate. This was a direct result of the Armstrong investigation in 1906. This is a subject that ought to be studied more closely and is linked directly to the solvency of the company. Most states permit non-participating companies to write participating business but do not allow a mutual company to write non-par contracts.

There are two basic considerations which enter into the question of how large the surplus of an insurance company (whether a mutual or a stock company) should be. The first one is the financial solvency of the company. However, the relationship of the size of surplus to its total liabilities is not as fundamentally significant in life insurance as in casualty insurance. Life insurance is a long-term contract and is not exposed to as much of a catastrophe risk as casualty insurance.

On the other hand, limiting the free surpluses of the companies will have an adverse effect on the investment earnings of the company and will eventually affect the net cost to the policyowners or the return on the capital for the stockholders.

The main objective of any legislation placing a maximum limit on the surplus would be to make sure that the equities of the policyholders who withdraw for any reason and go off the books of the company are properly recognized and redeemed. In order to achieve this objective properly, more detailed legislation in other related areas such as nonforfeiture values, valuation of reserves, valuation of assets and investment restrictions aimed at preserving the general financial liquidity and solvency of the companies, etc., would be necessary.

Life insurance product has become far more complex today than it was thirty years ago. The average consumer is not able to comprehend the complexities of today's product. Obviously, he relies more and more on the representations made to him by the agent or the company he is dealing with. This results in competition exerting much lesser influence on life insurance costs than three decades ago. This in turn could lead to companies charging higher premiums than necessary just so they could offer more incidental benefits (as against the real death benefit protection) such as savings features, cash values or fancy options on dividends or nonforfeiture values which may not be of real interest to the consumer. Unless a maximum is placed on these incidental benefits, these misuses of the premium dollar would increase.

One of the fundamental ideas with which the mutual companies were started was to be able to provide insurance to the policyowners at cost allowing for the minimum expenses to operate. In other words, no surplus more than was absolutely necessary in order to achieve financial stability was contemplated. And yet, many large mutual companies are carrying surpluses of tremendous size. Obviously, such large surpluses cannot be accumulated unless monies were withheld from policyholders instead of being distributed to them in order to achieve the minimum cost originally intended. The surplus legitimately belongs to the policyholders who have long gone off the books. Some sort of regulation is, therefore, necessary in order to make sure that a minimum amount of surplus must be distributed after allowing for the contingency reserves required for the financial stability of the company.

Dividends paid out by mutuals today have hardly any relationship to the actual experience as to mortality, investment earnings and expense loadings even though theoretically such dividends are supposed to have been based on the actual contribution of the policy to the company surplus through more favorable mortality, expense level and investment earning levels originally estimated. Many mutuals have not cared to really investigate the actual experience for several years to make sure that the contribution supposed to have been made by a policy to the surplus are actually made and the same contribution formula has been used for several years continuously even if the company has been growing rather rapidly. Some kind of regulation, therefore, seems to be called for to make sure the companies are not paying too much, thus endangering their financial stability or paying too little, thus sacrificing the equity of the policyholders who go off the books sooner or later.

Over the years, the term "dividends" has come to be abused and has practically lost its original meaning. Today the participating premiums are invariably loaded with the margin necessary in order to "produce" a certain scale of dividends. In other words, today's dividends are indistinguishable from the actual death benefit, the only difference being that the company can vary the former as it pleases but cannot alter the latter. The point is that the dividends are actually paid for by the policyowner just as surely as he pays the premiums for the death benefits but he has no guarantee whatsoever that the former will be paid at the same level as originally indicated. This certainly is a strange situation and probably should be attacked right away. If this problem is taken care of properly, the problem regarding the huge surpluses that the mutuals have built will probably take care of itself.

Laws Prescribing Maximum and Minimum Parameters for Life Insurance Premium

Such legislation would indeed be breaking new ground and has not been contemplated in any state, and probably not in any country which has not nationalized the life insurance industry. Unless the minimum and maximum are set far apart to permit competition to play its proper role, this type of legislation will probably put the entire industry out of business. If the maximum and minimum are set too far apart, the very basic purpose of such legislation would probably be defeated.

Obviously the criterion for setting up the maximum and minimum parameters can be generalized, only if one can successfully figure out what the "true cost" of a life insurance policy is or should be. If there is one clear conclusion that can be drawn from the recent discussions within the NAIC, the industry and the insurance press about the subject of life insurance cost comparison, it is that nobody has yet been able to figure out a way to place a "true" value of a life insurance policy to a given individual. Some such objective standard for calculation of the cost will have to be decided upon before trying to generalize the maximum and minimum parameters for the life insurance premiums.

This type of legislation assumes (1) that there is no competition existing at the consumer level and (2) that there is a "standard" type of contract being used by all insurers, as in credit insurance. The first assumption could probably be true to some extent in today's environment because of the complexity of the product offered, but the second assumption is certainly and obviously not true. This is perhaps why such legislation has never been attempted before. Attempts to regulate the life insurance premiums indirectly by placing maximum limits on expense loadings, have been made but have been very weak and ineffective in controlling the ultimate premium rate.

In general, it is far more desirable to encourage true competition or remove any possible obstacles to competition so that price (premiums) will be automatically controlled by competition. Competition will force the companies to operate at the optimum efficiency level and pass on the benefit to the consumer.

Laws Requiring that Existing Policyholders be Given the Advantage of Improvements in Life Insurance Costs

Once again this question too has not been dealt with in any of the states and probably not in any other countries.

The proposition flows from the assumption that the costs of life insurance protection have been dropping and will continue to do so in the future at the same rate. The first part of the assumption is probably true but not necessarily the second. Mortality for instance, has been steadily improving over the past two decades but the trend has practically reached a plateau and it is doubtful that we will see similar improvements in future. The interest earnings, however, have skyrocketed recently but, once again, to assume that higher interest rates are here to stay and adjust the premium rates accordingly and to use these higher rates as minimum standards for premium rate purposes would prove to be too dangerous. Life insurance contract is basically a long term contract and casualty insurance concepts do not necessarily apply. Even if it was practicable to require that that premium rates be adjusted immediately in the light of actual experience (experience rating as it is called in group and casualty lines) all life insurance would be forced to be on annual renewable term basis only. This will have disastrous consequences for the industry as well as the consumer.

Also, there will be a need to adjust the cash values, loan values and other incidental benefits along with the basic benefit of insurance protection and this may prove very impractical and difficult.

Thirdly, if the existing policyholders are to be given the benefit of the improving conditions, by the same logic they should also share in the adverse conditions. While the conditions are improving the consumer may be very much willing to share in the benefits flowing therefrom but he will certainly object if he is made to pay a continuously higher premium in the light of deteriorating conditions. The problems faced by the health insurance industry today is a very clear example of this situation.

VARIABLE ANNUITIES AND OTHER CONTRACTS (C4) SUBCOMMITTEE

Reference:
1972 Proc. Vol. I p. 607
1972 Proc. Vol. I p. 481

John W. Lindsay, Chairman - South Carolina

AGENDA

1. Consideration of the comments by Department Actuaries on report submitted by Industry Advisory Committee on Reserves for Minimum Death Benefit Guarantees under Variable Life Insurance Contracts.

2. Any other matters brought before the Subcommittee.

The Variable Annuities and Other Contracts (C4) Subcommittee met in the Hyatt Regency Hotel, Atlanta, Georgia at 3:30 p.m. on Monday, December 4, 1972. A quorum was present.

Mr. Larry D. Gilbertson, Chairman of the Industry Advisory Committee, gave a brief presentation on the history of variable life contracts, the deliberations of the Subcommittee and the question of whether or not variable life insurance contracts were subject to Securities and Exchange Commission regulation. The presentation was made for the benefit of the several new members of the (C4) Subcommittee. It was brought to the attention of the Subcommittee that the official records of the NAIC were not clear with respect to a proposal considered at the December, 1969, NAIC Regular Meeting in New Orleans. This proposal was an Addendum to the Model Variable Contracts Regulation which provided a disclosure requirement. Mr. Malcolm Moss of the American Life Convention stated that it was his clear recollection that the Addendum had in fact been adopted at the New Orleans meeting in 1969. The Chairman stated that the matter would be taken up in executive session and clarified promptly.

Mr. Richard V. Minck, Actuary for the Life Insurance Association of America renewed the proposal of the ALC-LIAA Industry Advisory Committee to provide a method of calculation of reserves for minimum guaranteed death benefits on the variable life insurance contracts. Following this presentation, the Subcommittee went into executive session.

On motion made and seconded, the following resolution was unanimously adopted:

> Whereas, there has been confusion in recent months regarding the status of the Addendum to the NAIC Model Variable Contracts Regulation (1970 Proc. Vol. 2B, p. 1197); be it resolved that, in the interest of clarifying the official proceedings, the NAIC hereby confirms that the Addendum to the model regulation was adopted at the New Orleans NAIC meeting.

Mr. Maximilian Wallach, First Deputy Superintendent and Actuary, District of Columbia Department, analyzed for the Subcommittee the ALC-LIAA proposal for calculating

reserves for minimum guaranteed death benefits. In substance, Mr. Wallach stated that there is no doubt that reserves are required and that it is a most difficult task to achieve a proper balance between excessive reserves and insufficient reserves for variable contracts. Further, the proposal of the ALC-LIAA was a serious endeavor and, while complicated, represented a reasonable test basis for a limited period of time. He stressed that the formula was retrospective in nature and that an effort should be made to develop a prospective method which would also be less complicated. He further stated that he felt that the proposal should be adopted with a five year termination date, in order that a basis for reserves could be created now and that the results of the accumulated statistics over a five year period would be available for testing and credibility.

Upon motion made and seconded, the ALC-LIAA proposal was adopted with a proviso that the reserve calculation basis would be applicable for a five year period only.

The Chairman briefly reviewed the status of the hearing before the SEC and the presentation made by Commissioners Barger and Van Pelt. He stated that it was imperative that the NAIC maintain a flexible position in view of the likelihood of variable contracts. He further stated that it was most desirable that the President of the NAIC and the Chairman of its Executive Committee be provided with the authority and limited funds to respond instantly to any SEC ruling as well as appeals from such ruling and further litigation.

Upon motion made and seconded, the following resolution was unanimously adopted:

Whereas, the NAIC, through its President, has expressed the view in the SEC's variable life insurance proceedings that the SEC has no jurisdiction over variable life insurance and therefore cannot issue rules restricting or permitting its sales; and

Whereas, the SEC has not ruled on the variable life insurance issues before it and is expected to do so early in 1973;

Be it resolved that,

1. The NAIC reaffirms the position taken by the President of the NAIC in the SEC's proceedings; and

2. The NAIC hereby empowers its President and the Chairman of its Executive Committee to jointly take such actions as are necessary to assure that the NAIC position prevails, including filing of complaints, briefs, and other documents in behalf of the NAIC in any lawsuit resulting from the SEC's proceedings or initiating such a suit if they deem it appropriate; and

3. The NAIC hereby empowers its President and the Chairman of its Executive Committee to jointly obtain and agree to compensate outside counsel and actuaries if they deem such action necessary or appropriate in carrying out the directive under (2) above, but such fees should not exceed $10,000 in the fiscal year ending May 31, 1973 unless additional amounts are approved. Payment of such fees during the current fiscal year ending May, 1973, should be made from a special account drawing on the surplus of the NAIC. The budget presented for the

NAIC Central Office by the Executive Secretary for the fiscal 1974 shall provide for such fees payable in the future and for repayment to the NAIC surplus of any amounts expended through this special account.

There being no further business to come before the Subcommittee, the meeting was adjourned.

Hon. John W. Lindsay, Chairman, South Carolina; Hon. Gleeson L. Payne, California; Hon. Robert A. Short, Delaware; Hon. Edward P. Lombard, District of Columbia; Hon. Frank M. Hogerty, Jr., Maine; Hon. James P. Dalton, Missouri; Hon. James M. Jackson, Nebraska; Hon. Joe B. Hunt, Oklahoma; Hon. Lester L. Rawls, Oregon; Hon. Herbert S. Denenberg, Pennsylvania; Hon. Samuel H. Weese, West Virginia.

VARIABLE ANNUITIES AND OTHER CONTRACTS (C4) INDUSTRY ADVISORY COMMITTEE
to Establish Reserves for Minimum Death Benefit Guarantees
Under Variable Life Insurance Contracts

Report

I. Statement

This statement is submitted on behalf of the American Life Convention and the Life Insurance Association of America.

We propose that the NAIC Model Variable Contract Regulation be amended to establish a basis for the extra reserve needed under variable life insurance contracts to be held in addition to the basic reserve for the variable death benefit, such extra reserve to cover the contingency of the basic reserve being inadequate to provide for the minimum guaranteed death benefit.

The proposal was developed by a Joint ALC-LIAA Subcommittee and endorsed by the Joint ALC-LIAA Actuarial Committee and the Joint ALC—LIAA Legislative Committee.

Attached is a summary of the Joint Subcommittee's report, the proposed addition to the Model Variable Contract Regulation, and the complete text of the Subcommittee's report.

Respectfully submitted,

Life Insurance Association of America
277 Park Avenue
New York, New York 10017

American Life Convention
211 East Chicago Avenue
Chicago, Illinois 60611

II. Summary

On November 29, 1971 the ALC-LIAA submitted a petition to the SEC proposing several criteria that a variable life insurance policy must meet to be considered as primarily an insurance contract, and therefore exempt from SEC regulation, rather than as primarily an investment contract. One of these criteria was "the policy must be issued for an initial stated amount of death benefit and must guarantee payment of a death benefit at least equal to such amount.

A Task Force was appointed to study reserves for such minimum death benefit guarantees in variable life insurance contracts and to propose an addition to the Model Variable Contract Regulation, as last amended by the National Association of Insurance Commissioners in December, 1971., to provide for such reserves. Reserves for minimum

surrender and maturity value guarantees were outside the scope of the assignment. The report of the Subcommittee is the result of the Task Force's efforts.

The purpose of the reserve for the minimum death benefit guarantee (MDBG) is to accumulate funds to provide for the contingency of death occurring when the guaranteed minimum death benefit exceeds the death benefit that would have been payable in the absence of such a guarantee. The amount payable under the minimum death benefit guarantee, as referred to below, means the excess of the minimum death benefit over the death benefit that would have been payable if there were no such guarantee. The reserve for the minimum death benefit (MDBG reserve) means the reserve for such excess death benefit. The amount payable under the minimum death benefit guarantee tends to increase if the investment earnings on the assets of the separate account funding the contract are less than the assumed investment return for the contract and vice versa.

Taking into account the purpose of the MDBG reserve and the nature of the minimum death benefit guarantee, the Subcommittee concluded that the acceptable MDBG reserve system should have the following characteristics:

1. The MDBG reserve should be held in the general account of the company so that it will be backed by the general assets of the company, most of which are debt obligations valued at amortized cost and therefore are of a fixed dollar nature. It would not be proper to hold the MDBG reserve in the separate account since the reserve would not be supported by fixed dollar assets but by assets that are moving in the opposite direction from the risk, i.e., were moving downward when the risk is increasing and vice versa.

2. The MDBG reserve should be adequate to cover, under all but the most extreme circumstances, the MDBG death claims for the next year, so that the regulatory authorities can be assured the company will not run into financial trouble from this source before the next annual statement is filed.

3. The MDBG reserve should react slowly but steadily to an extended period of poor investment experience of the separate account.

4. The MDBG reserve should not overreact and cause unnecessary fluctuations in surplus by increasing too rapidly in a sharp market downswing. Also, the reserve should not decrease too rapidly in a sharp market upswing after a period of poor market experience.

5. The reserve should be subject to the same valuation standards with respect to mortality and interest as any other life insurance reserve, currently the 1958 CSO mortality table and a rate of interest not in excess of three and one half percent, and should not be discounted by rates of withdrawal because of their uncertain nature and the great variation in such rates between one company and another. Withdrawal rates are particularly uncertain for variable life insurance since no U.S. companies have yet written such insurance.

After extensively testing the operation of many proposed reserve systems against these criteria under various assumptions as to the investment performance of the separate account, the Subcommittee decided to recommend a three-part MDBG reserve system, consisting of (1) an accumulation of amounts allocated by the insurer to the MDBG reserve, less actual MDBG claims paid, subject to a two-part minimum equal to the greater of (2) a one-year term reserve to assure coverage of next year's claims and (3) a reserve designed to protect against an extended period of poor investment experience of the separate account.

The amounts allocated by the insurer to the first part of the reserve system depend upon the design characteristics of an insurer's variable life insurance contract, the insurer's judgment of the risk it has assumed and its assessment of the possible impact on its surplus of future changes in the two-part minimum.

The second part of the reserve system is a requirement that the reserve be sufficient to cover all MDBG claims of the following year if there is an immediate one-third depreciation in the value of the separate account assets.

The third part of the reserve system forces an insurer to gradually increase its reserve if this is necessary to cover MDBG claims arising from an extended period of poor investment performance. The technique used is to fund the cost of future MDBG claims by level payments over the future premium paying period of the contract.

The Subcommittee's proposal also provides that suitable approximations and estimates may be used to shorten the work of computing the reserve for the minimum death benefit guarantee.

III. Model Variable Contract Regulation, Proposed Addition
(as adopted effective January, 1973, expiring December, 1977)

Article VI:

Section 8.

A company issuing variable life insurance contracts with a stated amount of guaranteed minimum death benefit shall hold in a separate account assets at least equal to the entire reserve for the death benefit (such reserve being determined in accordance with paragraph seven above), except that additional assets supporting the reserve described in (a) below shall be maintained in the company's general account.

a. The portion of the reserve in the general account is to provide for the contingency of death occurring when the guaranteed minimum death benefit exceeds the death benefit that would have been paid in the absence of such guarantee. Such additional reserve shall be accumulated from amounts regularly allocated by the company for this purpose and shall be charged with any excess of the actual death benefits paid by the company on such variable life insurance contracts over the death benefits that would have been payable in the absence of the guaranteed minimum death benefit.

b. In no event however may the portion of the reserve maintained in the general account be less than either of the two minumum reserves described in (c) and (d) below.

c. The first minimum reserve equals the aggregate total of the term costs, if any, covering a period of one full year from the valuation date, of the guarantee on each such variable life insurance contract, assuming an immediate one-third depreciation in the current value of the assets of the separate account followed by a net investment return equal to the assumed investment increment factor.

d. The second minimum reserve equals the aggregate total of the "attained age level" reserves on each such variable life insurance contract. The "attained age level" reserve on each such variable life insurance contract shall not be less than zero and shall equal the "residue", as described in (e) below, of the prior year's "attained age level" reserve on the contract, with any such "residue" increased or decreased by a payment computed on an attained age basis as decribed in (f) below.

e. The "residue" of the prior year's "attained age level" reserve on each such variable life insurance contract shall not be less than zero and shall be determined by adding interest at the valuation interest rate to such prior year's reserve, deducting the tabular claims based on the "excess", if any, of the guaranteed minimum death benefit, over the death benefit that would be payable in the absence of such guarantee, and dividing the net result by the tabular probability of survival. The "excess" referred to in the preceding sentence shall be based on the actual level of death benefits that would have been in effect during the preceding year in the absence of the guarantee, taking appropriate account of the reserve assumptions regarding the distribution of death claim payments over the year.

f. The payment referred to in (d) above shall be computed so that the present value of a level payment of that amount each year over the future premium paying period of the contract is equal to (i) minus (ii) minus (iii), where (i) is the present value of the future guaranteed minimum death benefits, (ii) is the present value of the future death benefits that would be payable in the absence of such guarantee and (iii) is any "residue", as described in (e) above, of the prior year's "attained age level" reserve on such variable life insurance contract. If the contract is paid-up, the payment shall equal (i) minus (ii) minus (iii). The amounts of future death benefits referred to in (ii) shall be computed assuming a net investment return of the separate account which may differ from the assumed investment increment factor and/or the valuation interest rate but in no event may exceed the maximum interest rate permitted for the valuation of life insurance contracts.

g. The valuation interest rate and mortality table used in computing the two minimum reserves described in (c) and (d) above shall conform to permissible standards for the valuation of life insurance contracts. In determining such minimum reserves, the company may employ suitable approximations and estimates, including but not limited to groupings and averages.

IV. Report (Complete Text)

On November 29, 1971 the ALC-LIAA submitted a petition to the SEC proposing several criteria that a variable life insurance policy must meet to be considered as primarily an insurance contract, and therefore exempt from SEC regulation, rather than as primarily an investment contract. One of these criteria was "the policy must be issued for an initial stated amount of death benefit and must guarantee payment of a death benefit at least equal to such amount."

A Task Force was appointed to study reserves for such minimum death benefit guarantees in variable life insurance contracts and to propose an addition to the Model Variable Contract Regulation, as last amended by the National Association of Insurance Commissioners in December, 1971, to provide for such reserves. Reserves for minimum surrender and maturity value guarantees were outside the scope of the assignment. This report of the Subcommittee is the result of the Task Force's efforts.

There are three variable life insurance designs proposed to date that in their basic form meet the various criteria in the ALC-LIAA petition to the SEC. Each of these three designs has its "basic" reserve held in a separate account, the assets of which are invested primarily in common stocks, and reflects in a different way the investment experience of this separate account. We must of course, limit the specifics of our discussion to these three designs, but the principles can be extended to other designs that may be proposed. In our discussion the term "variable death benefit" will refer to the natural death benefit that would be payable under each design if there were no guaranteed minimum death benefit.

The first design is the Fully Variable design issued in the Netherlands and elsewhere. Under this design both the death benefit and the premium vary to reflect the relationship between (1) the actual net investment experience of the separate account in which the basic policy reserve is invested and (2) the assumed investment return (AIR). The actual net investment experience of the separate account consists of dividends on the stocks and any realized and unrealized capital gains or losses and is after deductions for taxes as well as asset charges to cover investment expenses and expense and mortality risks. If the separate account's actual net investment experience is exactly equal to the assumed investment return the variable death benefit and the premium remain constant; if it is more than the assumed investment return, the variable death benefit and the premium increase; if it is less than the assumed investment return, the variable death benefit and the premium decrease. Under this design the reserves per $1,000 of variable death benefit are exactly the same as for a corresponding fixed benefit policy.

The second design is that developed by New York Life. Under this design, as under the Fully Variable design, the reserve per $1,000 of variable death benefit is the same as for a corresponding fixed benefit policy but, unlike the Fully Variable design, the premium is fixed. This means that with favorable investment experience (i.e. more than the AIR) the New York Life design produces lower variable death benefits than the Fully Variable design since the premium does not increase, and with unfavorable investment experience (i.e., less than AIR) the New York Life design produces higher variable death benefits than the Fully Variable design since the premium does not decrease.

The third design is also a fixed premium design and was developed by Mr. Harry Walker of the Equitable and also, independently and from a different direction, by Mr. Guy Fairbanks of the Aetna. Under this design, which we will call the "Equitable Type" design, each year the difference between the actual net investment experience of the separate account and the assumed investment return is used to purchase a variable life paid-up addition, either positive or negative, to the initial basic death benefit. With continued favorable investment experience, this design produces variable death benefits that are lower than those under the New York Life design for a number of years and then ultimately become higher; the reverse is true with unfavorable investment experience.

Before discussing how to reserve for minimum death benefit guarantees, we should make some observations regarding such guarantees. We will also make some observations regarding the behavior of the stock market.

It is expected that the most common type of minimum death benefit guarantee will be one which guarantees that the death benefit will never be less than the initial death benefit. All of the figures in this report are based on this type of guarantee as is much of the discussion. However, the language of the proposed Model Regulation is general enough to permit other types of guarantees such as a guarantee that the death benefit will never be less than 100 percent of the initial death benefit in the first year, 103 percent in the second, 106 percent in the third, etc.

Irrespective of its form, the value of the minimum death benefit guarantee will vary widely depending on the investment experience of the separate account supporting the variable life insurance policy. If the experience has been good, the

likelihood of an extra benefit being payable because of the guarantee is small, since the variable death benefit will have risen so far above the guaranteed minimum that it is not likely to fall below it in the future. If, on the other hand, the experience has been bad, the likelihood of an extra benefit being payable because of the guarantee is great, particularly in the case of older insureds who are liable to die before the stock market recovers to the point where the variable death benefit rises above the guaranteed minimum. In any given year the additional death benefits payable because of the minimum death benefit guarantee may be significant, but on the average the extra risk should not be too great, particularly if the minimum guarantee is only the amount of the initial death benefit. In this specific case an extra benefit is payable as a result of the guarantee only in cases where the separate account has failed to earn, from both dividends on the stocks and capital gains, an after-tax rate at least equal to the sum of the assumed investment return and the asset charge. Since assumed investment returns on variable life insurance policies are expected to be in the two and one half percent to the three and one half percent range and asset charges are expected to range up to one percent, this means that the common stocks in the separate account would have to earn less than about three percent to four and one half percent after taxes for an extra benefit to be payable as a result of the guarantee. This has happened over relatively short period of time such as five or ten years but rarely over longer periods of time.

In Exhibit A we have shown the range of the effective annual rates of return on common stocks during the last century using as a measure the Cowles Commission All Stock Price Index form 1871 to 1926 and the Standard and Poor's 500 Stock Index 1927 to 1969. These effective annual rates were derived from a study made by Herbert W. Hickman in 1970 (TSA XXII) and make no direct provision for brokerage commissions or transfer taxes but do make an indirect provision by means of a one fourth percent asset charge. In interpreting the figures in Exhibit A, it must be kept in mind that on a heavily traded portfolio the brokerage commissions and transfer taxes could be higher than this. It must also be kept in mind that the income tax status of variable life insurance is as yet unsettled and the figures in Exhibit A necessarily make no provision for any such taxes.

However, even with these limitations, the figures in Exhibit A clearly show how unlikely it is for stocks in general to earn so low a rate as to keep the variable death benefit below the initial face amount for an extended period. Since relatively few insureds die during the early years after issue except at the higher issue ages, this means that on the average not too many extra benefits will be payable as a result of such a minimum death benefit guarantee.

The real risk in providing a minimum death benefit guarantee is a situation where the stock market remains so depressed, over an extended period of years such as twenty or more that the portfolio of stocks in the separate account fails to earn a net rate of even three percent to four and one half percent from dividends on the stocks and capital gains. The likelihood of this happening without an extended period of economic stagnation is quite remote. In Exhibit B we have compared the Gross National Product (GNP) with dividends on stocks and estimated stock prices for each of the years 1929 to 1971. Stock prices were estimated by dividing the stock dividends by a representative stock dividend rate, i.e., the rate on Standard and Poor's 500 Stock Index. From Exhibit B it is seen that since World War IIwhen the Government's role in the economy and the tax rate were so radically changed, the relationship between dividends on stocks and the GNP has been remarkably stable. Stock prices, however, have tended to be more volatile than stock dividends since market psychology tends to produce swings not supported by economic reality.

Nevertheless, there is always the possibility, however remote, that there will be an extended period of economic stagnation as long as twenty years or more that will cause the stock market to stay depressed for a long period or the possibility of the investment management of the separate account being so inept as to cause the same effect. Consequently, one of the properties of an acceptable minimum death benefit guarantee (MDBG) reserve system is that it permit the orderly accumulation of funds to cover the extra cost of the guarantee in the event of an extended period of poor investment experience of the separate account. To be orderly, however, it should not overreact to every downswing of the market and cause the unnecessary diversion of funds from other sources to cover an unnecessarily conservative MDBG reserve.

An acceptable MDBG reserve system should have the following properties:

1. The reserve should be held in the general account of the company so that it will be backed by the general assets of the company, most of which are debt obligations valued at amortized cost and therefore are of a fixed dollar nature. It would not be proper to hold the MDBG reserve in the separate account since the reserve would not be supported by fixed dollar assets but by assets that were moving in the opposite direction from the risk, i.e., were moving downward when the risk is increasing and vice versa.

2. The MDBG reserve should be adequate to cover, under all but the most extreme circumstances, the MDBG death claims for the next year, so that the regulatory authorities can be assured the company will not run into financial trouble from this source before the next annual statement is filed.

3. As noted above, the MDBG reserve should react slowly but steadily to an extended period of poor investment experience of the separate account.

4. As also noted above, the MDBG reserve should not overreact and cause unnecessary fluctuations in surplus by increasing too rapidly in a sharp market downswing. Also, the reserve should not decrease too rapidly in a sharp market upswing after a period of poor market experience.

5 The reserve should be subject to the same valuation standards with respect to mortality and interest as any other life insurance reserve, currently the 1958 CSO mortality table and a rate of interest not in excess of three and one half percent, and should not be discounted by rates of withdrawal because of their uncertain nature and their great variation between one company and another. Withdrawal rates are particularly uncertain for variable life insurance since we have as yet no withdrawal experience.

The Task Force studied many possible MDBG reserve systems and rejected most of them because they failed to meet one or more of the foregoing critieria. The system we finally decided to recommend is a three-part system, each part being necessary to meet one of the criteria that the other two fail to meet. Before describing our proposed system, however, we will present the results of some of our tests, including our tests of one of the more promising reserve methods that we seriously considered but finally rejected after looking at some figures for a model company.

The model company calculations were an essential part of our tests since without these calculations it would not have been possible to identify the inappropriateness of some of the reserve methods, The model company consisted of blocks of variable whole life issues on the lives of males for a typical distribution of six issue ages, age 15 (12 percent), age 25 (40 percent), age 35 (27 percent), age 45 (15 percent), age 55 (5 percent) and age 65 (1 percent). The assumed withdrawal and mortality rates used for the model company were based on recent experience in a large company on fixed benefit life insurance (we have, of course, no experience on variable life insurance). These assumed withdrawal and mortality rates are shown in Exhibit C.

Calculations were made for each year of issue beginning in July, 1915 for each of the three designs. In our presentations we will always show the New York Life design first, the Fully Variable design second and the Equitable Type design third. The investment experience of the separate account was assumed to follow the Standard and Poor's 500 Stock Index after deduction of a one half percent asset charge. No Federal income taxes on either dividends on stocks or capital gains have been deducted. It is hoped that Federal income taxes on dividends will be minor, as they are for variable annuities, after appropriate legislation regarding the Federal income taxation of variable life insurance has been enacted. With respect to any capital gains taxes that may be payable, or reserved for, our tests have indicated that any capital gains tax charges and credits would, by reducing the swings in the net investment experience, reduce the costs of the minimum death benefit guarantee. Thus, the ignoring of capital gains taxes in our figures is conservative.

After completing the calculations for each year of issue, model companies were constructed assuming commencement of business in each year beginning in 1915 and with alternative assumptions of (1) a level $100,000,000 of initial face amount issued each year and (2) $100,000,000 issued in the first year increasing ten percent each year. In this report we have shown the results only for the companies with the ten percent increasing sales and only for the companies commencing business in 1915, 1925 and 1945. However, supplemental tables showing more extensive results are available.

All of our calculations are on a policy year basis, assume a three percent AIR and assume that the guaranteed minimum death benefit is equal to the initial face amount. All calculations involving actuarial functions are on the 1958 CSO Male three percent traditional net level reserve basis. Of course, the wording of the proposed addition to the Model Regulation is general and is not limited to the foregoing.

Since some persons have suggested that the proper way to reserve for the minimum death benefit guarantee is to hold in the general account the full excess, if any, on each policy of (a) the reserve for a fixed benefit policy with a face amount equal to the initial face amount over (b) the basic reserve in the separate account, we began our studies by examing the implications of this method.

Exhibit D is a nine part exhibit showing various figures for the following model companies with ten percent increasing sales:

Exhibit	Design	Commencing Business in
D1a	New York Life	July 1915
D1b	New York Life	July 1925
D1c	New York Life	July 1945
D2a	Fully Variable	July 1915
D2b	Fully Variable	July 1925
D2c	Fully Variable	July 1945
D3a	Equitable Type	July 1915
D3b	Equitable Type	July 1925
D3c	Equitable Type	July 1945

The first column of Exhibit D shows the initial face amount in force at the end of each policy year. This is also the amount of death benefit that would be in force if all policies were fixed benefit policies so that it represents the aggregate total minimum death benefit guarantee in force. The second column shows the actual additional death benefits that would have been payable as a result of the minimum death benefit guarantee. Note that on the average these MDBG claims are quite small but in some years such as 1932, 1942 and 1970 they are significant. The third column shows the basic reserve in the separate account and the fourth column shows the aggregate total of the excess, if any, for each policy of the full reserve for the initial amount over the separate account reserve. We will discuss the remaining two columns later on.

An examination of column 4 shows the inappropriateness of holding the full excess, if any, on each policy of the reserve for a fixed benefit policy over the basic separate account reserve. For example, Exhibit D1a shows for a model company commencing business in 1915 issuing policies of the New York Life design that the extra reserve would have risen sharply from zero in 1929 to $107,000,000 in 1932, almost to the level of the $113,000,000 basic reserve, yet would have dropped to zero again four years later in 1936. The MDBG claims that actually would have been paid never justified the enormous reserve set up in 1932 under this method. This same thing, but to a lesser degree considering the increased size of the company, would have happened in 1970 where the extra reserve would have risen sharply to $512,000,000 and dropped to zero one year later. The situation is just as bad on the Equitable design and almost as bad on the Fully Variable design. Clearly, any reserve method such as this that could unnecessarily throw a company, even a large company, into technical insolvency is unacceptable.

We next studied various other purely prospective reserve methods, i.e., methods that look only ahead and do not look at past history to see how the current situation arose. All of these methods in one way or another involve the tabular present value of differences between the future guaranteed minimum death benefits and the future variable death benefits. In our calculations these tabular present values were based on the 1958 CSO mortality table, three percent interest and traditional assumptions. In addition, for the purpose of determining future variable death benefits, we assumed a three percent AIR and that the separate account would earn this three percent AIR in the future.

The full tabular present value of these future deficiencies is shown in column 5 of Exhibit D. Note that for the two fixed premium designs, the New York Life and Equitable Type designs, this is equal to column 4, the excess of the fixed benefit reserve over the basic separate account reserve. This equivalence is apparent for the Equitable Type design since the basic reserve for the variable death benefit is determined by increasing or decreasing the reserve for the initial death benefit by the reserve for the variable life paid-up additions. For the New York Life design this equivalence is shown in Exhibit E. The instability of these amounts has already been noted and it is this instability that ultimately led us to abandon all of the purely prospective reserve methods.

One of the purely prospective methods that was, however, given serious consideration was the "Increasing Credibility" method. This method gives more credibility to the continuation of a bad situation if it existed at a later duration than if it existed at an earlier duration. It does this by reserving for the tabular present value of future deficiencies for only a limited number of years beyond the valuation date, such limited number of years being equal to the number of years already elapsed since issue. For example, if a policy were issued ten years ago at age 35 so that the insured were now age 45, the present value of future deficiencies for the next ten years, i.e., to attained age 55 of the insured, would be held. However,

as column 6 of Exhibit D indicates, even this method is too unstable. For example, in the case of a company commencing business in 1915 issuing the New York Life design, the "Increasing Credibility" reserve would have risen sharply from zero in 1929 to $31,000,000 in 1932, which would have been about 28 percent of the basic separate account reserve in that year. This would have been an unnecessary surplus strain, since the actual claims that were paid never justified a reserve of this magnitude and in fact the reserve dropped to zero four years later in 1936. Also, in 1970 the reserve increased to $108,000,000 yet dropped to zero a year later. Clearly, even the "Increasing Credibility" approach produces unrealistic fluctuations in surplus since it overreacts tremendously to stock market swings. For this reason, it too was abandoned as were all the other purely prospective methods.

Having abandoned the purely prospective reserve methods, we examined the retrospective methods and the methods that combined both retrospective and prospective elements. After considerable testing, this led us to our proposed three part MDBG reserve system, consisting of (1) a retrospective accumulation of regular amounts allocated by the company to the MDBG reserve, less actual MDBG claims paid, subject to a two part minimum equal to the greater of (2) a one year term reserve to assure coverage of next year's claims and (3) a reserve designed to protect against an extended period of poor investment experience of the separate account.

The first part of the system was suggested by the Mandatory Securities Valuation Reserve and is a purely retrospective accumulation without interest of periodic amounts allocated by the company for this purpose, less the amount of MDBG claims actually paid. However, unlike the MSVR which specifices a formula contribution, it is intended that in this part of the reserve system each company may use its own judgment as to the charges it wishes to allocate to the MDBG accumulation. We believe that this flexibility is necessary since there is no "right" charge for this benefit: no one knows what is going to happen to a portfolio of common stocks. Of course, if a company allocates too little to this MDBG reserve accumulation, it may have to pay the price of surplus instability because the minimum reserves established by the other two parts of the sytem may require a sudden transfer from surplus to the MDBG reserve. If a company allocates too much to this MDBG reserve accumulation, it is expected that it will have to justify this to its examiners on audit. No one at this point knows what "too much" amounts to, as will be evident in some of the later exhibits. Since it will take many years to accumulate large reserves under our proposed MDBG reserve system, we have not seen the necessity or desirability of specifying a maximum reserve at this time and have not done so. In a few years, after we have gained more experience as to company practices with regard to the allocation of amounts to the MDBG reserve accumulation, perhaps we will wish to propose the addition of a specified maximum if some companies appear to be accumulating excessive amounts.

The second part of the systemis designed to assure that the MDBG reserve will virtually always cover the MDBG claims of the next year. In no event may the MDBG reserve be less than the aggregate total of the tabular term costs of the minimum death benefit guarantee, covering a period of one full year from the valuation date, computed individually for each policy based on the assumption of an immediate one-third depreciation in the current value of the assets of the separate account followed by net earnings at the AIR.

The third part of the system is the most complicated part and is designed to protect against continued poor investment experience of the separate account. Under these conditions the first part of the system, the retrospective MDBG reserve accumulation, would soon become exhausted unless the company had the foresight to increase its regular allocation. Since the second part of the system, the one year term minimum, does not provide sufficiently rapid funding under these conditions, a third part of the system, another minimum, is being proposed.

This other minimum is based on the "attained age level" (AAL) method and was suggested by a method sometimes used for small pension plans, which are, of course, subject to a high degree of instability. This AAL method has both retrospective and prospective elements. While it makes use of the difference between (a) the tabular present value of the future guaranteed minimum death benefits and (b) the tabular present value of the future variable death benefits, it also takes into consideration the amount of AAL reserve at the end of the prior year.

Under the attained age level method there is computed for each policy a reserve, not less than zero, equal to any "residue" of the prior year's AAL reserve on the policy, increased or decreased by a payment computed on an attained age basis. Such payment shall be computed so that the present value of a level payment of that amount each year over the future premium paying period of the policy is equal to (a) minus (b) minus (c) where (a) is the present value of the future guaranteed minimum death benefits, (b) is the present value of the future variable death benefits and (c) is the "residue" of the prior year's AAL reserve. Of course, if a policy is paid-up, the payment equals the full amount of (a) minus (b) minus (c). The "residue" of the prior year's AAL reserve may not be less than zero and is determined by adding interest to the

prir year's AAL reserve and deducting the tabular claims based on any excess of the guaranteed minimum death benefit over the variable death benefit during the preceding year, and dividing the net result by the tabular probability of survival. This part of the proposed MDBG reserve system requires that in no event may the MDBG reserve be less than the aggregate total of the AAL reserve on each policy.

The formulas for both the one year term and AAL reserves, on a policy year basis using traditional functions, that were used in this study are set forth in Exhibit E for the special case of (a) a whole life policy (b) a minimum death benefit equal to the initial face amount and (c) where the AIR, the assumed future experience of the separate account and the valuation interest rate are all the same. Of course, the proposed wording of the Model Regulation is more general.

Exhibit F is a twelve part exhibit showing for model companies with ten percent increasing sales the determination of our porposed MDBG reserve, assuming three different levels of annual allocations to the retrospective accumulation. Nine of the twelve parts of Exhibit F are for the same nine model company situations as in Exhibit D. However, we have also added Exhibits F1d, F2d, and F3d which show for each of the three designs what would have happened for a model company commencing business in 1915 if the favorable investment experience of the 1950's had been followed not by the 1960 to 1971 experience but by the 1930 to 1941 experience once again. The purpose of these three additional exhibits is to show the dangers of imposing a maximum on the MDBG reserve accumulation and the dangers of taking too rosy a view of the future in making MDBG allocations.

The first two columns of Exhibit F show the cumulative basic valuation net premiums and MDBG claims from the comencement of business by each model company. We have used net premiums in these illustrations since they are unique to the reserve basis we have used and unlike gross premiums would be the same for all companies on this reserve basis. The next three columns show the retrospective accumulations based on each alternative level of annual allocation intended roughly to be low, medium and high levels of allocation. For the New York Life design these are alternatively one percent, two percent and four percent of basic net premiums each year. For the Fully Variable design the alternative allocations are one percent, two percent and six percent of basic net premiums. For the Equitable Type design with its lower expected MDBG cost the alternative allocations are point two percent, point four percent and two percent of basic net premiums. In all cases the retrospecitve accumulation is determined as the applicable percentage of the cumulative basic net premiums in column 1 less the full amount of the cumulative MDBG claims in column 2. The exhibit was set up in this manner to permit easy testing of any other level of annual allocation that the reader may wish to consider, since the three levels of accumulation shown are for illustrative purposes only.

The sixth column of Exhibit F shows the first part of the two-part minimum, the one year term minimum assuming a one-third immediate drop in the asset value of the separate account. If the figures in this column for the nine situations using actual investment experience are compared with the MDBG claims for the following year in column 2 of Exhibit D, it can be seen that the amount of this one year term minimum for the model companies illustrated would have always been sufficient to cover the next year's MDBG claims except in 1932 for a model company commencing business in 1915 issuing the New York Life design where the one year term minimum at the end of 1931 was about four percent below the MDBG claims for 1932, and except also for a minor deficiency in 1930 for a model company commencing business in 1925 issuing the Equitable Type design. Our more extensive results not shown in this report indicate that there are only a few rare occasions when the one year term minimum is not quite sufficient to cover the next year's MDBG claims based on historical experience of the Standard and Poor's 500 Stock Index.

The seventh column of Exhibit F shows the second part of the two part minimum, the attained age level (AAL) minimum. Note that on the Fully Varaible and Equitable Type designes the AAL minimum comes into play and exceeds the one year term minimum only during periods when the stock market has been depressed for several years which is, of course, what it is intended to do . On the New York Life design the AAL minimum almost never exceeds the one year term minimum but, as we will show later. would come into play in situations where the investment performance of the separate account had been worse than the historical performance of the Standard and Poor's 500 Stock Index.

The last three columns of Exhibit F show the actual reserve that would have been held under our proposed MDBG reserve system using the three alternative annual rates of allocation to the retrospective reserve accumulation. Naturally, the greater the rate of allocation, the less likely it is for the two part minimum to come into play. A comparison of Exhibit F1a with Exhibit F1d, Exhibit F2a with Exhibit F2d and Exhibit F3a with Exhibit F3d shows how much different the period 1960 to 1971 would have been for a model company commencing business in 1915 with ten percent increasing sales if the favorable investment experience of the 1950's had been followed by the unfavorable investment experience of the 1930's. This comparison shows the danger of overoptimism regarding the adequacy of the MDBG reserve accumulation,

particularly for a rapidly growing company. It also emphasizes the importance of the level of allocation to the retrospective MDBG accumulation.

The importance of allocation level is more clearly shown by Exhibit g, another twelve part exhibit, that shows the effect on gains of the MDBG reserves in Exhibit F. We have subdivided these gains into those attributable to the retrospective accumulation without the two part minimum (columns one, two and three), those due to the two-part minimum (columns four, five and six) and have also shown the combined total of the gains (columns seven, eight and nine). Exhibit G shows that if the company allocates relatively small amounts to the retrospective accumulation, it must pay the price of unstable gains as one or more of the two minimums come into play. It can, of course, virtually eliminate any gains instability by increasing its annual allocations to a sufficiently high level. This should be left as a matter of individual company judgment since there are many factors to be considered when attempting to determine the proper allocation to the MDBG reserve, such as the type of design, the AIR, the investment policy of the separate account, the cash value basis, the asset charge, the treatment of tax reserves, the immediate past investment experience of the separate account, etc. The regulatory authorities should permit this flexibility since the two-part minimum should be satisfactory assurance to them that not only will the company be able to pay its next year's MDBG claims because of the one year term minimum but also will make adequate advance provision because of the AAL minimum for possible future MDBG claims in the event of an extended period of poor investment experience of the separate account.

To demonstrate that the AAL minimum does this, we prepared Exhibits H and I showing what would happen if the separate account earned a constant three percent, the AIR, beginning in the eleventh policy year after having earned a negative three percent in each of the first ten policy years. Since a level market will normally earn a net of at least three percent just from dividends, our assumption is roughly equivalent to a ten year market decline followed by a level market with no recovery.

Exhibit H shows the effect of the AAL method under these assumptions for a whole life policy issued to a male age 55. Note that, except for rounding, the AAL method does in fact produce level funding if the assumed investment return is earned (in this case after the tenth policy year).

In Exhibit I we have shown what would have happened under these same assumptions as to the investment performance of the separate account for $1,000,000,000 of model issues in a single year. We have compared (a) the effect on the charges to operations of holding no MDBG reserve at all (column 2), (b) the effect of our proposed MDBG reserve system without the AAL minimum (column 3), and (c) the effect of our proposed MDBG reserve system with the AAL minimum (column 4). Note that the effect of a reserve system is simply to redistribute the MDBG claims over time. With no MDBG reserve, charges to operations rise very steeply as a percent of net premiums and become too large in the later policy years. The introduction of the MDBG reserve system without the AAL minimum improves the slope of the charges but they still are too large at the later durations. However, with the AAL minimum the MDBG reserve system produces reasonably level charges as a percent of net premiums after the first ten policy years which are manageable on the two fixed premium designs. The changes are not manageable on the Fully Variable design but keep in mind that these assumptions regarding the investment performance of the separate account are equivalent to assuming either incredibly poor investment management or a ten year market decline followed by a period of complete economic stagnation with no price inflation for the better part of a century, a situation rather unlikely to occur.

Our proposed addition to Article VI of the Model Variable Contract Regulation [(III) above, preceding this report] provides for the MDBG reserve. Note that there are three different interest rates involved in the determination of the AAL reserve, (1) the AIR (called the "assumed investment increment factor" in the Model Regulation), (2) the valuation rate used for discounting present values and (3) the rate assumed for the future performance of the separate account used in determining the future variable face amounts. We have permitted all three of these interest rates to be different provided they do not exceed the maximum interest rate permitted for the valuation of life insurance policies generally. We feel this flexibility is necessary to avoid pressure on a company to raise its AIR for the sole purpose of keeping down its MDBG reserve.

Note also that we have provided for maximum latitude in the use of approximations in determining the two-part minimums. These minimums are difficult to calculate, particularly the AAL minimums, and if the retrospective accumulation is at a high enough level, may not even be relevant. Consequently, approximations of the broadest type are in order.

And finally, because of the nature of the MDBG reserve, its aggregate nature, its subjectivity and its volatility, we believe that under no circumstances should it be required to be included in cash surrender values. It would not, of course, be possible to specify the amount of such reserve in the policy since it cannot be known in advance. Moreover, its inclusion in cash surrender values is illogical since it can increase when the separate account performance has been bad and decrease when the separate account performance has been good. This is exactly contrary to the nature of variable life insurance. The current Model Variable Contract Regulation specifically provides in Paragraph 4(c) of Article VI that cash surrender values may disregard minimum death benefit guarantees and we agree fully with this position.

Exhibit A

Effective Annual Rates of Return on Common Stocks During Period 1871 to 1969
Based on Cowles Commission All Stock Price Index from 1871 to 1926
and on Standard and Poor's 500 Stock Index 1927 to 1969
(derived from Table 3 by Herbert W. Hickman, TSA XXII, page 200)

Years Span	Lowest Rate	Rate on 10th Percentile	Rate on 20th Percentile	Median Rate
1	-42.7%	-8.4%	-3.1%	7.6%
2	-36.7	-5.1	-0.2	8.6
3	-30.3	-3.0	0.5	7.2
4	-17.9	-1.2	1.6	7.6
5	-12.3	-0.1	2.6	8.0
6	-8.7	0.4	2.8	8.6
7	-3.6	1.0	2.7	8.1
8	-2.2	1.9	3.2	7.4
9	-3.8	2.6	3.6	7.4
10	-2.5	2.7	4.4	7.3
11	-2.7	2.7	4.6	7.7
12	-2.9	3.0	4.5	7.4
13	-3.0	3.6	4.5	7.3
14	-0.8	3.3	4.9	7.4
15	0.3	3.3	5.1	6.8
20	2.4%	4.8%	5.4%	6.6%
25	4.3	5.4	5.9	6.9
30	4.4	5.6	5.9	7.1
35	5.1	5.5	6.0	6.9
40	4.8	5.6	6.2	6.9

Exhibit B

Relationship of Stock Prices and Dividends to Gross National Product
(amounts in billions of dollars)

Year	Gross National Product (1)	Stock Dividends (2)	Ratio of Stock Dividends to Prices based on S&P 500 (3)	Estimated Stock Prices (2)÷(3) (4)	Ratio of Stock Dividends to GNP = (2)÷(1) (5)	Ratio of Stock Prices to GNP = (4)÷(1) (6)
1929	$103.095	$5.801	3.47%	$167.176	5.63%	162%
1930	90.367	5.468	4.51	121.242	6.05	134
1931	75.820	4.066	6.15	66.114	5.36	87
1932	58.049	2.544	7.43	34.240	4.38	59
1933	55.601	2.038	4.21	48.409	3.67	87
1934	65.054	2.567	3.72	69.005	3.95	106
1935	72.247	2.844	3.82	74.450	3.94	103
1936	82.481	4.523	3.44	131.483	5.48	159
1937	90.446	4.660	4.86	95.885	5.15	106
1938	84.670	3.165	5.18	61.100	3.74	72
1939	90.494	3.766	4.05	92.988	4.16	103
1940	99.678	4.016	5.59	71.843	4.03	72
1941	124.540	4.431	6.82	64.971	3.56	52
1942	157.910	4.254	7.24	58.757	2.69	37
1943	191.592	4.446	4.93	90.183	2.32	47
1944	210.104	4.617	4.86	95.000	2.20	45
1945	211.945	4.600	4.17	110.312	2.17	52
1946	208.509	5.574	3.85	144.779	2.67	69
1947	231.323	6.321	4.93	128.215	2.73	55
1948	257.562	7.036	5.54	127.004	2.73	49
1949	256.484	7.238	6.59	109.833	2.82	43
1950	284.769	8.838	6.57	134.521	3.10	47
1951	328.404	8.570	6.13	139.804	2.61	43
1952	345.498	8.560	5.80	147.586	2.48	43
1953	364.593	8.886	5.80	153.207	2.44	42
1954	364.841	9.282	4.95	187.515	2.54	51
1955	397.960	10.478	4.08	256.814	2.63	65
1956	419.238	11.280	4.09	275.795	2.69	66
1957	441.134	11.742	4.35	269.931	2.66	61
1958	447.334	11.566	3.97	291.335	2.59	65
1959	483.663	12.580	3.23	389.474	2.60	81
1960	503.734	13.437	3.47	387.233	2.67	77
1961	520.097	13.770	2.98	462.081	2.65	89
1962	560.325	15.183	3.37	450.534	2.71	80
1963	590.503	16.454	3.17	519.054	2.79	88
1964	632.410	17.811	3.01	591.728	2.82	94
1965	684.884	19.808	3.00	660.267	2.89	96
1966	749.857	20.797	3.40	611.676	2.77	82
1967	793.927	21.385	3.20	668.281	2.69	84
1968	864.202	23.552	3.07	767.166	2.73	89
1969	929.095	24.444	3.24	754.444	2.63	81
1970	974.126	25.004	3.83	652.846	2.57	67
1971	1046.800	25.500	3.14	812.102	2.44	78

Exhibit C

Assumptions for Variable Life Insurance Model Office

Policy Year	Withdrawal Rates	Experience Mortality Rates per 1,000 Age 15 (12%)	Age 25 (40%)	Age 35 (27%)	Age 45 (15%)	Age 55 (5%)	Age 65 (1%)
1	17.5%	.59	.83	1.08	1.44	3.34	5.54
2	6.5	.67	.86	1.16	2.20	5.17	9.39
3	5.0	.73	.90	1.29	2.97	6.92	12.76
4	4.5	.77	.93	1.44	3.76	8.56	15.91
5	4.2	.81	.97	1.64	4.55	10.11	18.94
6	4.0	.87	1.01	1.83	5.32	11.36	21.91
7	3.8	.92	1.04	2.03	6.04	12.44	24.88
8	3.6	.95	1.08	2.25	6.73	13.48	27.92
9	3.4	.97	1.13	2.48	7.42	14.66	31.13
10	3.2	.98	1.18	2.80	8.13	16.22	34.73
11	3.0	1.00	1.25	3.14	8.96	18.44	38.90
12	2.9	1.01	1.35	3.56	9.95	21.43	43.76
13	2.8	1.02	1.47	4.00	11.12	24.91	49.30
14	2.7	1.03	1.61	4.57	12.48	28.62	55.51
15	2.6	1.05	1.78	5.15	13.95	32.46	62.43
16	2.5	1.07	1.96	5.81	15.56	36.41	70.33
17	2.4	1.10	2.16	6.51	17.26	40.69	79.71
18	2.3	1.14	2.39	7.22	19.16	45.54	90.98
19	2.2	1.17	2.64	7.97	21.30	51.00	104.09
20	2.1	1.21	2.94	8.79	23.64	56.74	119.02
21	2.0	1.28	3.32	9.69	26.21	62.46	131.71
22	2.0	1.38	3.70	10.68	29.00	67.41	141.25
23	2.0	1.49	4.15	11.72	31.92	72.66	151.32
24	2.0	1.64	4.66	12.89	34.99	78.33	162.05
25	2.0	1.80	5.25	14.18	38.28	84.30	173.67
26	2.0	1.98	5.88	15.64	41.80	90.53	186.48
27	2.0	2.18	6.54	17.30	45.36	97.54	200.89
28	2.0	2.41	7.24	19.19	49.19	105.58	217.37
29	2.0	2.65	7.99	21.32	53.25	113.93	236.38
30	2.0	2.96	8.80	23.65	57.71	122.62	258.41
31	2.0	3.32	9.69	26.21	62.46	131.71	284.85
32	2.0	3.70	10.68	29.00	67.41	141.25	322.76
33	2.0	4.15	11.72	31.92	72.66	151.32	385.20
34	2.0	4.66	12.89	34.99	78.33	162.05	491.26
35	2.0	5.25	14.18	38.28	84.30	173.67	666.04
36	2.0	5.88	15.64	41.80	90.53	186.48	1000.00
37	2.0	6.54	17.30	45.36	97.54	200.89	
38	2.0	7.24	19.19	49.19	105.58	217.37	
39	2.0	7.99	21.32	53.25	113.93	236.38	
40	2.0	8.80	23.65	57.71	122.62	258.41	
41	2.0	9.69	26.21	62.46	131.71	284.85	
42	2.0	10.68	29.00	67.41	141.25	322.76	
43	2.0	11.72	31.92	72.66	151.32	385.20	
44	2.0	12.89	34.99	78.33	162.05	491.26	
45	2.0	14.18	38.28	84.30	173.67	666.04	
46	2.0	15.64	41.80	90.53	186.48	1000.00	
47	2.0	17.30	45.36	97.54	200.89		
48	2.0	19.19	49.19	105.58	217.37		
49	2.0	21.32	53.25	113.93	236.38		
50	2.0	23.65	57.71	122.62	258.41		
51	2.0	26.21	62.46	131.71	284.85		
52	2.0	29.00	67.41	141.25	322.76		
53	2.0	31.92	72.66	151.32	385.20		
54	2.0	34.99	78.33	162.05	491.26		
55	2.0	38.28	84.30	173.67	666.04		
56	2.0	41.80	90.53	186.48	1000.00		
57	2.0	45.36	97.54	200.89			
58	2.0	49.19	105.58	217.37			
59	2.0	53.25	113.93	236.38			
60	2.0	57.71	122.62	258.41			
61	2.0	62.46	131.71	284.85			
62	2.0	67.41	141.25	322.76			
63	2.0	72.66	151.32	385.20			
64	2.0	78.33	162.05	491.26			
65	2.0	84.30	173.67	666.04			
66	2.0	90.53	186.48	1000.00			
67	2.0	97.54	200.89				
68	2.0	105.58	217.37				
69	2.0	113.93	236.38				
70	2.0	122.62	258.41				
71	2.0	131.71	284.85				
72	2.0	141.25	322.76				
73	2.0	151.32	385.20				
74	2.0	162.05	491.26				
75	2.0	173.67	666.04				
76	2.0	186.48	1000.00				
77	2.0	200.89					
78	2.0	217.37					
79	2.0	236.38					
80	2.0	258.41					
81	2.0	284.85					
82	2.0	322.76					
83	2.0	385.20					
84	2.0	491.26					
85	2.0	666.04					
86	2.0	1000.00					

Exhibit D1a

NEW YORK LIFE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1916	$ 192,407	$ 0	$ 1,290	$ 0	$ 0	$ 0
1917	288,588	2	3,404	15	15	2
1918	390,415	40	5,951	633	633	94
1919	499,003	0	13,638	0	0	0
1920	615,376	38	16,269	501	501	75
1921	740,564	175	19,807	3,922	3,922	727
1922	875,680	0	37,991	0	0	0
1923	1,021,929	6	46,000	62	62	7
1924	1,180,621	0	65,620	0	0	0
1925	1,353,177	0	97,747	0	0	0
1926	1,541,143	0	128,379	0	0	0
1927	1,746,154	0	174,527	0	0	0
1928	1,969,997	0	244,911	0	0	0
1929	2,214,632	0	386,776	0	0	0
1930	2,482,210	154	295,813	1,791	1,791	234
1931	2,775,091	883	210,117	18,481	18,481	3,476
1932	3,095,866	3,705	112,550	107,196	107,196	31,227
1933	3,447,383	591	250,862	19,899	19,899	4,949
1934	3,832,766	1,282	251,021	41,605	41,605	12,180
1935	4,255,452	40	376,359	2,013	2,013	458
1936	4,719,215	0	598,678	0	0	0
1937	5,228,169	0	685,989	0	0	0
1938	5,786,841	539	548,150	8,061	8,061	1,208
1939	6,400,209	426	593,183	8,973	8,973	1,557
1940	7,073,749	1,834	571,560	49,803	49,803	14,468
1941	7,813,485	988	671,711	30,503	30,503	9,013
1942	8,626,045	3,829	647,477	115,980	115,980	41,336
1943	9,518,717	0	1,033,181	0	0	0
1944	10,499,521	0	1,240,830	0	0	0
1945	11,577,276	0	1,556,691	0	0	0
1946	12,761,688	0	2,035,104	0	0	0
1947	14,063,429	289	1,889,333	3,110	3,110	394
1948	15,494,246	60	2,060,226	1,096	1,096	155
1949	17,067,056	243	2,141,085	4,640	4,640	762
1950	18,796,072	0	2,799,693	0	0	0
1951	20,696,930	0	3,811,880	0	0	0
1952	22,786,828	0	4,586,468	0	0	0
1953	25,084,685	23	4,699,879	187	187	21
1954	27,611,310	0	6,189,212	0	0	0
1955	30,389,599	0	9,003,424	0	0	0
1956	33,444,733	0	10,357,072	0	0	0
1957	36,804,419	129	10,199,622	1,205	1,205	142
1958	40,499,132	163	10,234,336	2,481	2,481	343
1959	44,562,399	0	13,319,719	0	0	0
1960	49,031,099	641	12,303,216	6,125	6,125	711
1961	53,945,808	0	15,023,076	0	0	0
1962	59,351,152	2,003	13,254,420	27,483	27,483	3,994
1963	65,296,223	0	16,075,213	0	0	0
1964	71,835,024	0	19,605,387	0	0	0
1965	79,026,957	0	20,239,836	0	0	0
1966	86,937,368	502	20,074,685	6,100	6,100	808
1967	95,638,139	0	23,209,552	0	0	0
1968	105,208,339	0	24,326,896	0	0	0
1969	115,734,949	2,214	23,207,567	30,401	30,401	4,326
1970	127,313,639	21,595	20,313,558	512,129	512,129	108,778
1971	140,049,666	0	26,029,736	0	0	0

Exhibit D1b

NEW YORK LIFE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1926	$ 192,407	$ 0	$ 1,273	$ 0	$ 0	$ 0
1927	288,588	0	4,188	0	0	0
1928	390,415	0	9,521	0	0	0
1929	499,003	0	20,346	0	0	0
1930	615,376	59	18,684	690	690	90
1931	740,564	326	16,923	6,807	6,807	1,229
1932	875,680	820	12,100	19,987	19,987	3,955
1933	1,021,929	172	38,654	5,756	5,756	1,271
1934	1,180,621	322	43,688	10,239	10,239	2,416
1935	1,353,177	15	73,489	776	776	177
1936	1,541,143	0	125,449	0	0	0
1937	1,746,154	0	150,209	0	0	0
1938	1,969,997	208	125,106	3,108	3,108	466
1939	2,214,632	164	143,150	3,460	3,460	600
1940	2,482,210	661	145,093	17,969	17,969	4,879
1941	2,775,091	364	179,487	11,349	11,349	3,228
1942	3,095,866	1,273	180,401	39,342	39,342	12,430
1943	3,447,383	0	300,214	0	0	0
1944	3,832,766	0	369,772	0	0	0
1945	4,255,452	0	474,060	0	0	0
1946	4,719,215	0	630,959	0	0	0
1947	5,228,169	111	594,264	1,199	1,199	152
1948	5,786,841	23	658,902	423	423	60
1949	6,400,209	94	695,668	1,789	1,789	294
1950	7,073,749	0	923,953	0	0	0
1951	7,813,485	0	1,273,522	0	0	0
1952	8,626,045	0	1,546,976	0	0	0
1953	9,518,717	9	1,598,798	72	72	8
1954	10,499,521	0	2,124,151	0	0	0
1955	11,577,276	0	3,112,488	0	0	0
1956	12,761,688	0	3,600,601	0	0	0
1957	14,063,429	50	3,565,128	464	464	55
1958	15,494,246	63	3,598,281	957	957	132
1959	17,067,056	0	4,711,820	0	0	0
1960	18,796,072	247	4,375,045	2,361	2,361	274
1961	20,696,930	0	5,373,088	0	0	0
1962	22,786,828	772	4,764,897	10,596	10,596	1,540
1963	25,084,685	0	5,812,114	0	0	0
1964	27,611,310	0	7,124,351	0	0	0
1965	30,389,599	0	7,388,011	0	0	0
1966	33,444,733	193	7,360,501	2,352	2,352	312
1967	36,804,419	0	8,548,258	0	0	0
1968	40,499,132	0	8,996,456	0	0	0
1969	44,562,399	854	8,616,373	11,721	11,721	1,668
1970	49,031,099	8,326	7,571,970	197,448	197,448	41,939
1971	53,945,808	0	9,743,165	0	0	0

Exhibit Dlc

NEW YORK LIFE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1946	$ 192,407	$ 0	$ 1,354	$ 0	$ 0	$ 0
1947	288,588	17	3,104	178	178	23
1948	390,415	3	6,590	63	63	9
1949	499,003	14	10,787	266	266	44
1950	615,376	0	20,137	0	0	0
1951	740,564	0	34,682	0	0	0
1952	875,680	0	49,073	0	0	0
1953	1,021,929	1	57,522	11	11	1
1954	1,180,621	0	86,571	0	0	0
1955	1,353,177	0	139,130	0	0	0
1956	1,541,143	0	171,457	0	0	0
1957	1,746,154	7	180,126	69	69	8
1958	1,969,997	9	194,063	142	142	20
1959	2,214,632	0	271,973	0	0	0
1960	2,482,210	37	266,169	351	351	41
1961	2,775,091	0	347,211	0	0	0
1962	3,095,866	115	323,722	1,575	1,575	229
1963	3,447,383	0	418,867	0	0	0
1964	3,832,766	0	539,132	0	0	0
1965	4,255,452	0	582,524	0	0	0
1966	4,719,215	29	604,934	350	350	46
1967	5,228,169	0	733,413	0	0	0
1968	5,786,841	0	801,736	0	0	0
1969	6,400,209	127	796,913	1,742	1,742	248
1970	7,073,749	1,238	728,390	29,349	29,349	6,234
1971	7,813,485	0	979,311	0	0	0

Exhibit D2a

FULLY VARIABLE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve On Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1916	$ 192,407	$ 0	$ 1,290	$ 0	$ 0	$ 0
1917	288,588	2	3,597	15	378	4
1918	390,415	31	6,248	426	7,516	117
1919	499,003	0	13,639	0	0	0
1920	615,376	31	17,284	406	7,454	116
1921	740,564	149	20,604	3,126	30,764	995
1922	875,680	7	37,348	148	1,322	45
1923	1,021,929	20	47,139	408	3,970	130
1924	1,180,621	0	68,338	0	0	0
1925	1,353,177	0	105,337	0	0	0
1926	1,541,143	0	146,270	0	0	0
1927	1,746,154	0	210,027	0	0	0
1928	1,969,997	0	312,804	0	0	0
1929	2,214,632	0	527,992	0	0	0
1930	2,482,210	112	437,542	1,087	28,260	286
1931	2,775,091	542	321,151	9,170	124,051	2,651
1932	3,095,866	2,307	166,709	57,772	419,718	21,669
1933	3,447,383	1,177	310,304	30,626	211,059	10,391
1934	3,832,766	1,693	303,773	48,069	277,277	17,810
1935	4,255,452	1,084	437,255	33,705	160,464	13,022
1936	4,719,215	459	697,646	15,165	63,116	6,214
1937	5,228,169	354	831,237	12,419	45,985	5,479
1938	5,786,841	1,271	687,233	37,467	202,890	17,118
1939	6,400,209	1,467	738,209	46,643	218,441	22,313
1940	7,073,749	2,539	703,208	78,771	373,032	38,844
1941	7,813,485	2,448	801,691	80,218	322,371	41,690
1942	8,626,045	4,294	757,174	135,030	568,989	71,589
1943	9,518,717	1,545	1,162,244	53,823	156,355	32,720
1944	10,499,521	1,153	1,411,402	40,233	103,063	26,908
1945	11,577,276	524	1,800,536	17,920	37,153	14,001
1946	12,761,688	224	2,414,616	7,387	14,493	6,191
1947	14,063,429	633	2,322,314	14,753	85,441	11,540
1948	15,494,246	563	2,573,187	14,686	67,861	11,332
1949	17,067,056	783	2,708,123	20,095	96,451	14,810
1950	18,796,072	175	3,559,536	5,091	8,628	5,187
1951	20,696,930	0	4,941,565	0	0	0
1952	22,786,828	0	6,143,681	0	0	0
1953	25,084,685	23	6,517,593	189	4,863	50
1954	27,611,310	0	8,810,081	0	0	0
1955	30,389,599	0	13,265,573	0	0	0
1956	33,444,733	0	15,961,457	0	0	0
1957	36,804,419	129	16,401,022	1,205	31,356	312
1958	40,499,132	234	17,020,643	3,740	56,351	1,048
1959	44,562,399	0	22,742,885	0	0	0
1960	49,031,099	641	21,696,612	6,125	159,317	1,606
1961	53,945,808	0	27,063,507	0	0	0
1962	59,351,152	1,535	24,480,484	19,565	367,681	5,483
1963	65,296,223	0	30,033,129	0	0	0
1964	71,835,024	0	37,224,942	0	0	0
1965	79,026,957	0	39,211,907	0	0	0
1966	86,937,368	349	39,494,224	3,627	86,027	962
1967	95,638,139	0	46,057,331	0	0	0
1968	105,208,339	0	48,798,075	0	0	0
1969	115,734,949	1,732	46,892,598	21,591	426,138	5,851
1970	127,313,639	14,417	40,962,074	296,670	2,991,982	94,103
1971	140,049,666	511	51,535,286	11,616	103,794	3,528

Exhibit D2b

FULLY VARIABLE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1926	$ 192,407	$ 0	$ 1,273	$ 0	$ 0	$ 0
1927	288,588	0	4,406	0	0	0
1928	390,415	0	10,719	0	0	0
1929	499,003	0	24,909	0	0	0
1930	615,376	43	25,728	419	10,896	110
1931	740,564	209	22,621	3,535	47,827	1,022
1932	875,680	777	13,929	18,159	149,365	6,121
1933	1,021,929	454	31,678	11,808	81,372	4,006
1934	1,180,621	653	36,593	18,533	106,902	6,866
1935	1,353,177	418	60,820	12,995	61,866	5,021
1936	1,541,143	177	109,185	5,847	24,334	2,396
1937	1,746,154	137	142,909	4,788	17,729	2,112
1938	1,969,997	490	127,650	14,445	78,223	6,600
1939	2,214,632	566	146,899	17,983	84,218	8,603
1940	2,482,210	979	148,876	30,370	143,820	14,976
1941	2,775,091	944	179,771	30,927	124,288	16,073
1942	3,095,866	1,656	178,944	52,060	219,370	27,601
1943	3,447,383	596	288,556	20,751	60,281	12,615
1944	3,832,766	445	365,887	15,511	39,735	10,374
1945	4,255,452	202	484,826	6,909	14,324	5,398
1946	4,719,215	86	672,121	2,848	5,588	2,387
1947	5,228,169	244	665,357	5,688	32,941	4,449
1948	5,786,841	217	756,611	5,662	26,163	4,369
1949	6,400,209	302	815,254	7,748	37,186	5,710
1950	7,073,749	68	1,094,927	1,963	3,326	2,000
1951	7,813,485	0	1,549,924	0	0	0
1952	8,626,045	0	1,960,744	0	0	0
1953	9,518,717	9	2,112,695	73	1,875	19
1954	10,499,521	0	2,896,448	0	0	0
1955	11,577,276	0	4,417,209	0	0	0
1956	12,761,688	0	5,375,981	0	0	0
1957	14,063,429	50	5,581,403	464	12,089	120
1958	15,494,246	90	5,847,336	1,442	21,726	404
1959	17,067,056	0	7,881,879	0	0	0
1960	18,796,072	247	7,580,208	2,361	61,424	619
1961	20,696,930	0	9,526,702	0	0	0
1962	22,786,828	592	8,678,013	7,543	141,757	2,114
1963	25,084,685	0	10,716,788	0	0	0
1964	27,611,310	0	13,365,329	0	0	0
1965	30,389,599	0	14,160,133	0	0	0
1966	33,444,733	135	14,339,324	1,398	33,167	371
1967	36,804,419	0	16,807,367	0	0	0
1968	40,499,132	0	17,892,538	0	0	0
1969	44,562,399	668	17,270,867	8,324	164,295	2,256
1970	49,031,099	5,558	15,150,222	114,379	1,153,539	36,281
1971	53,945,808	197	19,136,965	4,479	40,017	1,360

Exhibit D2c

FULLY VARIABLE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1946	$ 192,407	$ 0	$ 1,354	$ 0	$ 0	$ 0
1947	288,588	14	3,336	137	3,558	36
1948	390,415	12	6,764	208	2,739	59
1949	499,003	20	10,998	405	4,217	122
1950	615,376	0	20,284	0	0	0
1951	740,564	0	36,620	0	0	0
1952	875,680	0	55,925	0	0	0
1953	1,021,929	1	70,067	11	279	3
1954	1,180,621	0	109,051	0	0	0
1955	1,353,177	0	184,991	0	0	0
1956	1,541,143	0	246,078	0	0	0
1957	1,746,154	7	275,655	69	1,797	18
1958	1,969,997	13	308,868	214	3,229	60
1959	2,214,632	0	442,425	0	0	0
1960	2,482,210	37	449,372	351	9,130	92
1961	2,775,091	0	593,990	0	0	0
1962	3,095,866	88	566,790	1,121	21,071	314
1963	3,447,383	0	731,473	0	0	0
1964	3,832,766	0	950,831	0	0	0
1965	4,255,452	0	1,047,204	0	0	0
1966	4,719,215	20	1,100,172	208	4,930	55
1967	5,228,169	0	1,335,810	0	0	0
1968	5,786,841	0	1,470,707	0	0	0
1969	6,400,209	99	1,466,171	1,237	24,421	335
1970	7,073,749	826	1,327,090	17,002	171,466	5,393
1971	7,813,485	29	1,729,112	666	5,948	202

Exhibit D3a

EQUITABLE TYPE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1916	$ 192,407	$ 0	$ 1,337	$ 0	$ 0	$ 0
1917	288,588	0	3,460	19	19	0
1918	390,415	3	5,925	659	659	17
1919	499,003	0	13,891	0	0	0
1920	615,376	2	16,394	452	452	11
1921	740,564	25	19,602	4,128	4,128	217
1922	875,680	0	39,194	0	0	0
1923	1,021,929	0	46,433	74	74	1
1924	1,180,621	0	66,771	0	0	0
1925	1,353,177	0	100,702	0	0	0
1926	1,541,143	0	133,733	0	0	0
1927	1,746,154	0	183,941	0	0	0
1928	1,969,997	0	261,477	0	0	0
1929	2,214,632	0	419,582	0	0	0
1930	2,482,210	8	322,864	1,792	1,792	25
1931	2,775,091	95	226,753	17,222	17,222	733
1932	3,095,866	893	115,096	104,652	104,652	15,293
1933	3,447,383	172	255,682	22,570	22,570	2,236
1934	3,832,766	356	253,743	42,909	42,909	5,639
1935	4,255,452	52	382,162	5,703	5,703	836
1936	4,719,215	0	614,889	0	0	0
1937	5,228,169	0	711,110	0	0	0
1938	5,786,841	37	567,067	8,092	8,092	177
1939	6,400,209	52	611,667	9,520	9,520	360
1940	7,073,749	433	584,768	50,463	50,463	7,503
1941	7,813,485	317	684,354	34,291	34,291	5,658
1942	8,626,045	1,203	653,516	115,858	115,858	24,707
1943	9,518,717	0	1,048,488	0	0	0
1944	10,499,521	0	1,266,354	0	0	0
1945	11,577,276	0	1,600,631	0	0	0
1946	12,761,688	0	2,111,599	0	0	0
1947	14,063,429	14	1,967,692	3,155	3,155	38
1948	15,494,246	12	2,151,330	1,780	1,780	50
1949	17,067,056	23	2,237,530	4,980	4,980	170
1950	18,796,072	0	2,938,668	0	0	0
1951	20,696,930	0	4,032,511	0	0	0
1952	22,786,828	0	4,892,364	0	0	0
1953	25,084,685	0	5,043,782	0	0	0
1954	27,611,310	0	6,692,041	0	0	0
1955	30,389,599	0	9,835,122	0	0	0
1956	33,444,733	0	11,427,678	0	0	0
1957	36,804,419	0	11,341,407	1,456	1,456	31
1958	40,499,132	0	11,444,012	2,923	2,923	66
1959	44,562,399	0	14,990,233	0	0	0
1960	49,031,099	41	13,910,377	7,664	7,664	80
1961	53,945,808	0	17,063,510	0	0	0
1962	59,351,152	129	15,086,439	27,819	27,819	592
1963	65,296,223	0	18,335,936	0	0	0
1964	71,835,024	0	22,444,533	0	0	0
1965	79,026,957	0	23,242,328	0	0	0
1966	86,937,368	0	23,080,282	6,868	6,868	129
1967	95,638,139	0	26,716,680	0	0	0
1968	105,208,339	0	28,025,539	0	0	0
1969	115,734,949	129	26,700,749	29,452	29,452	538
1970	127,313,639	2,933	23,241,755	472,143	472,143	28,052
1971	140,049,666	0	29,665,267	0	0	0

Exhibit D3b

EQUITABLE TYPE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1926	$ 192,407	0	$ 1,309	$ 0	$ 0	$ 0
1927	288,588	0	4,378	0	0	0
1928	390,415	0	10,095	0	0	0
1929	499,003	0	22,038	0	0	0
1930	615,376	3	19,907	691	691	10
1931	740,564	37	17,090	6,640	6,640	283
1932	875,680	137	10,780	21,308	21,308	1,367
1933	1,021,929	57	36,755	7,578	7,578	684
1934	1,180,621	98	41,667	12,528	12,528	1,320
1935	1,353,177	20	71,614	2,199	2,199	322
1936	1,541,143	0	125,269	0	0	0
1937	1,746,154	0	152,262	0	0	0
1938	1,969,997	14	126,502	3,120	3,120	68
1939	2,214,632	20	144,396	3,670	3,670	139
1940	2,482,210	160	145,168	18,932	18,932	2,694
1941	2,775,091	120	179,192	13,074	13,074	2,127
1942	3,095,866	404	178,491	41,253	41,253	7,779
1943	3,447,383	0	300,030	0	0	0
1944	3,832,766	0	372,616	0	0	0
1945	4,255,452	0	482,396	0	0	0
1946	4,719,215	0	649,145	0	0	0
1947	5,228,169	6	614,027	1,217	1,217	15
1948	5,786,841	5	682,942	686	686	19
1949	6,400,209	9	721,765	1,920	1,920	66
1950	7,073,749	0	963,536	0	0	0
1951	7,813,485	0	1,339,734	0	0	0
1952	8,626,045	0	1,642,157	0	0	0
1953	9,518,717	0	1,708,074	0	0	0
1954	10,499,521	0	2,287,495	0	0	0
1955	11,577,276	0	3,388,510	0	0	0
1956	12,761,688	0	3,961,296	0	0	0
1957	14,063,429	0	3,953,696	561	561	12
1958	15,494,246	0	4,013,140	1,127	1,127	25
1959	17,067,056	0	5,289,753	0	0	0
1960	18,796,072	16	4,934,374	2,955	2,955	31
1961	20,696,930	0	6,087,993	0	0	0
1962	22,786,828	50	5,409,575	10,725	10,725	228
1963	25,084,685	0	6,612,090	0	0	0
1964	27,611,310	0	8,135,054	0	0	0
1965	30,389,599	0	8,462,349	0	0	0
1966	33,444,733	0	8,440,581	2,648	2,648	50
1967	36,804,419	0	9,814,521	0	0	0
1968	40,499,132	0	10,337,609	0	0	0
1969	44,562,399	50	9,887,483	11,355	11,355	207
1970	49,021,099	1,131	8,639,902	182,032	182,032	10,815
1971	53,945,808	0	11,074,271	0	0	0

Exhibit D3c

EQUITABLE TYPE DESIGN

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Initial Face Amount in Force (1)	Actual MDBG Claims (2)	Separate Account Reserve (3)	Extra Reserve So Total Not Less Than Reserve on Initial (4)	Full Tabular Present Value of Future Deficiencies (5)	Increasing Credibility Reserve (6)
1946	$ 192,407	$ 0	$ 1,408	$ 0	$ 0	$ 0
1947	288,588	1	3,105	181	181	2
1948	390,415	1	6,598	102	102	3
1949	499,003	1	10,768	285	285	10
1950	615,376	0	20,436	0	0	0
1951	740,564	0	35,855	0	0	0
1952	875,680	0	51,404	0	0	0
1953	1,021,929	0	60,507	0	0	0
1954	1,180,621	0	91,866	0	0	0
1955	1,353,177	0	149,802	0	0	0
1956	1,541,143	0	186,827	0	0	0
1957	1,746,154	0	197,412	83	83	2
1958	1,969,997	0	212,992	167	167	4
1959	2,214,632	0	299,883	0	0	0
1960	2,482,210	2	293,703	439	439	5
1961	2,775,091	0	383,934	0	0	0
1962	3,095,866	7	357,043	1,594	1,594	34
1963	3,447,383	0	461,707	0	0	0
1964	3,832,766	0	595,976	0	0	0
1965	4,255,452	0	645,151	0	0	0
1966	4,719,215	0	669,438	394	394	7
1967	5,228,169	0	811,860	0	0	0
1968	5,786,841	0	887,445	0	0	0
1969	6,400,209	7	879,597	1,688	1,688	31
1970	7,073,749	168	797,343	27,058	27,058	1,608
1971	7,813,485	0	1,068,107	0	0	0

Exhibit E

ACTUARIAL FORMULAS FOR MINIMUM RESERVE USED IN STUDY

Formulas are on a Policy Year Basis Using Traditional Functions Assuming the Special Case of (a) a Whole Life Policy, (b) a Minimum Death Benefit Equal to the Initial Amount and (c) Where the AIR, the Assumed Future Performance of the Separate Account and the Valuation Interest Rate Are All the Same

(* means zero if negative)

A. One Year Term Minimum End of tth Policy Year

This is simply $vq_{x+t}(1000 - F'_{t+1})^*$ per $1,000 of initial amount where F'_{t+1}, the assumed face amount per $1,000 at the end of the $(t+1)$st policy year is derived from F_t, the face amount per $1,000 at the end of the tth policy year, assuming an immediate one-third drop in the value of the separate account followed by earnings at the valuation interest rate.

New York Life $$F'_{t+1} = \tfrac{2}{3} F_t \left(\frac{{}_tV_x + \frac{1000 P_x}{\frac{2}{3} F_t}}{{}_tV_x + P_x} \right)$$

Fully Variable $$F'_{t+1} = \tfrac{2}{3} F_t$$

Equitable Type $$F'_{t+1} = \tfrac{2}{3} F_t + \tfrac{1}{3}(1000) \frac{P_x}{p_{x+t}}$$

B. Attained Age Level Minimum End of tth Policy Year

If R_{t-1} and R_t are the attained age level reserves per $1,000 of initial amount at the beginning and end of the tth policy year, respectively, then

$$R_t = B_t^* + \frac{PV - B_t^*}{\ddot{a}_{x+t}}$$, not less than zero, where the "residue"

$$B_t = \frac{R_{t-1}(1+i) - q_{x+t-1}(1000 - F_t)^*}{p_{x+t-1}}$$

The expression PV refers to the present value of future differences between $1,000 and the values of F_t and equals $(1000 - F_t)\,{}_tV_x$ for the New York Life design and $(1000 - F_t)A_{x+t}$ for the other designs.

The New York Life design uses ${}_tV_x$ instead of A_{x+t} because under this design, unlike the other designs, a face amount deficiency tends to decrease with time if the AIR is earned. From Equation (40) of the Fraser-Miller-Sternhell paper we know that the present value of future face amounts for the New York Life design if the AIR is earned is

$$F_t A_{x+t} + (1000 - F_t) P_x \ddot{a}_{x+t}$$

so that the present value of future deficiencies is

$$1000 A_{x+t} - (F_t A_{x+t} + (1000 - F_t) P_x \ddot{a}_{x+t})$$

$$= (1000 - F_t)(A_{x+t} - P_x \ddot{a}_{x+t}) = (1000 - F_t)\,{}_tV_x$$ (1)

Exhibit F1a

Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy	Cumulative		Retrospective Accumulation Where Annual Allocations are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations are		
Year Ending July	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premiums (3)	2% of Net Premiums (4)	4% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	1% of Net Premiums (8)	2% of Net Premiums (9)	4% of Net Premiums (10)
1916	$ 1,620	$ 0	$ 16	$ 32	$ 64	$ 148	$ 0	$ 148	$ 148	$ 148
1917	4,736	2	46	93	188	232	0	232	232	232
1918	9,408	42	52	146	334	367	32	367	367	367
1919	15,727	42	116	273	588	305	0	305	305	588
1920	23,800	80	158	396	872	595	26	595	595	872
1921	33,752	255	82	420	1,095	879	206	879	879	1,095
1922	45,724	255	202	659	1,573	609	0	609	659	1,573
1923	59,874	261	337	936	2,133	903	0	903	936	2,133
1924	76,379	261	583	1,267	2,795	819	0	819	1,267	2,795
1925	95,438	261	694	1,648	3,557	436	0	694	1,648	3,557
1926	117,273	261	911	2,084	4,429	494	0	911	2,084	4,429
1927	142,129	261	1,161	2,582	5,425	492	0	1,161	2,582	5,425
1928	170,277	261	1,442	3,145	6,551	463	0	1,442	3,145	6,551
1929	202,018	261	1,759	3,779	7,819	421	0	1,759	3,779	7,819
1930	237,633	419	1,962	4,339	9,093	1,363	93	1,962	4,339	9,093
1931	277,638	1,298	1,479	4,255	9,308	3,549	983	3,549	4,255	9,308
1932	322,285	5,003	-1,780	1,443	7,889	7,738	6,159	7,738	7,738	7,889
1933	372,068	5,594	-1,874	1,847	9,288	4,615	5,032	5,032	5,032	9,288
1934	427,476	6,876	-2,601	1,674	10,224	6,432	5,160	6,432	6,432	10,224
1935	489,048	6,916	-2,025	2,865	12,646	4,350	3,607	4,350	4,350	12,646
1936	557,377	6,916	-1,342	4,232	15,380	1,098	147	1,098	4,232	15,380
1937	633,217	6,916	-585	5,746	18,408	1,439	0	1,439	5,746	18,408
1938	716,986	7,455	-285	6,885	21,225	6,953	417	6,953	6,953	21,225
1939	809,776	7,881	217	8,315	24,511	8,362	470	8,362	8,362	24,511
1940	912,357	9,715	-592	8,532	26,779	12,145	2,870	12,145	12,145	26,779
1941	1,025,688	10,703	-446	9,811	30,325	12,386	2,826	12,386	12,386	30,325
1942	1,150,822	14,532	-3,024	8,484	31,500	17,007	7,182	17,007	17,007	31,500
1943	1,288,919	14,532	-1,643	11,246	37,024	8,914	925	8,914	11,246	37,024
1944	1,441,255	14,532	-120	14,293	43,118	7,696	0	7,696	14,293	43,118
1945	1,609,233	14,532	1,561	17,653	49,838	4,328	0	4,328	17,653	49,838
1946	1,794,399	14,532	3,412	21,356	57,244	3,046	0	3,412	21,356	57,244
1947	1,998,452	14,821	5,163	25,148	65,117	8,104	155	8,104	25,148	65,117
1948	2,223,262	14,881	7,351	29,584	74,049	9,999	69	9,999	29,584	74,049
1949	2,470,886	15,124	9,585	34,294	83,712	14,357	238	14,357	34,294	83,712
1950	2,743,988	15,124	12,312	39,748	94,620	8,671	0	12,312	39,748	94,620
1951	3,043,858	15,124	15,314	45,753	106,630	4,413	0	15,314	45,753	106,630
1952	3,374,436	15,124	18,621	52,365	119,854	5,381	0	18,621	52,365	119,854
1953	3,738,336	15,147	22,237	59,620	134,387	9,611	18	22,237	59,620	134,387
1954	4,138,874	15,147	26,241	67,630	150,407	7,153	0	26,241	67,630	150,407
1955	4,579,698	15,147	30,650	76,447	168,041	5,234	18	30,650	76,447	168,041
1956	5,064,822	15,147	35,501	86,149	187,445	7,546	25	35,501	86,149	187,445
1957	5,598,661	15,276	40,710	96,697	208,670	13,350	41	40,710	96,697	208,670
1958	6,186,073	15,439	46,421	108,282	232,003	19,717	130	46,421	108,282	232,003
1959	6,832,401	15,439	52,885	121,209	257,857	13,565	0	52,885	121,209	257,857
1960	7,543,524	16,080	59,355	134,790	285,660	27,425	317	59,355	134,790	285,660
1961	8,325,909	16,080	67,179	150,438	316,956	21,618	0	67,179	150,438	316,956
1962	9,186,670	18,083	73,783	165,650	349,383	44,551	1,427	73,783	165,650	349,383
1963	10,133,634	18,083	83,254	184,590	387,263	34,877	0	83,254	184,590	387,263
1964	11,175,410	18,083	93,671	205,425	428,933	25,004	0	93,671	205,425	428,933
1965	12,321,470	18,083	105,131	228,346	474,775	37,741	17	105,131	228,346	474,775
1966	13,582,232	18,585	117,238	253,060	524,705	57,198	313	117,238	253,060	524,705
1967	14,969,157	18,585	131,106	280,798	580,181	49,291	11	131,106	280,798	580,181
1968	16,494,853	18,585	146,363	311,312	641,209	62,310	0	146,363	311,312	641,209
1969	18,173,189	20,799	160,933	342,665	706,179	99,423	1,584	160,933	342,665	706,179
1970	20,019,421	42,394	[illegible]	357,964	758,382	164,797	27,350	164,797	357,964	758,382
1971	22,050,332	42,394	176,110	398,613	839,620	114,777	5,138	176,110	398,613	839,620

Exhibit F1b

Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations Are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations Are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premium (3)	2% of Net Premium (4)	4% of Net Premium (5)	One Year Term 1/2 Drop (6)	Attained Age Level (7)	1% of Net Premium (8)	2% of Net Premium (9)	4% of Net Premium (10)
1926	$ 1,620	$ 0	$ 16	$ 32	$ 64	$ 150	$ 0	$ 150	$ 150	$ 150
1927	4,736	0	48	95	190	182	0	182	182	190
1928	9,408	0	94	188	376	179	0	179	188	376
1929	15,727	0	157	315	630	162	0	162	315	630
1930	23,800	59	179	417	893	520	36	520	520	893
1931	33,752	385	-48	290	965	1,023	358	1,023	1,023	1,023
1932	45,724	1,205	-748	-291	623	1,678	1,060	1,678	1,678	1,678
1933	59,874	1,377	-779	-180	1,017	1,079	951	1,079	1,079	1,079
1934	76,379	1,699	-935	-171	1,357	1,546	965	1,546	1,546	1,546
1935	95,438	1,714	-759	195	2,104	1,133	807	1,133	1,133	2,104
1936	117,273	1,714	-542	631	2,976	409	54	409	631	2,976
1937	142,129	1,714	-292	1,129	3,972	555	0	555	1,129	3,972
1938	170,277	1,922	-219	1,484	4,890	2,241	161	2,241	2,241	4,890
1939	202,018	2,086	-66	1,954	5,994	2,685	181	2,685	2,685	5,994
1940	237,681	2,747	-370	2,007	6,761	3,781	1,016	3,781	3,781	6,761
1941	277,638	3,111	-334	2,442	7,995	3,920	1,001	3,920	3,920	7,995
1942	322,285	4,384	-1,161	2,062	8,508	5,335	2,360	5,335	5,335	8,508
1943	372,068	4,384	-664	3,057	10,498	3,003	356	3,003	3,057	10,498
1944	427,476	4,384	-109	4,166	12,716	2,754	0	2,754	4,166	12,716
1945	489,048	4,384	507	5,397	15,178	1,660	0	1,660	5,397	15,178
1946	557,377	4,384	1,190	6,764	17,912	1,174	0	1,190	6,764	17,912
1947	633,117	4,495	1,836	8,167	20,829	3,124	60	3,124	8,167	20,829
1948	716,986	4,518	2,652	9,822	24,162	3,855	26	3,855	9,822	24,162
1949	809,776	4,612	3,486	11,584	27,780	5,529	92	5,529	11,584	27,780
1950	912,357	4,612	4,511	13,635	31,882	3,343	0	4,511	13,635	31,882
1951	1,025,688	4,612	5,645	15,902	36,416	1,701	0	5,645	15,902	36,416
1952	1,150,822	4,612	6,896	18,404	41,420	2,075	0	6,896	18,404	41,420
1953	1,288,919	4,621	8,268	21,157	46,935	3,705	7	8,268	21,157	46,935
1954	1,441,255	4,621	9,791	24,204	53,029	2,758	0	9,791	24,204	53,029
1955	1,609,233	4,621	11,472	27,564	59,749	2,018	7	11,472	27,564	59,749
1956	1,794,399	4,621	13,323	31,267	67,155	2,909	10	13,323	31,267	67,155
1957	1,998,452	4,671	15,313	35,298	75,267	5,147	16	15,313	32,298	75,267
1958	2,223,262	4,734	17,498	39,731	84,196	7,602	50	17,498	39,731	84,196
1959	2,470,886	4,734	19,975	44,684	94,102	5,230	0	19,975	44,684	94,102
1960	2,743,388	4,981	22,455	49,891	104,763	10,574	122	22,455	49,891	104,763
1961	3,043,858	4,981	25,457	55,896	116,773	8,335	0	25,457	55,896	116,773
1962	3,374,436	5,753	27,992	61,736	129,225	17,176	550	27,992	61,736	129,225
1963	3,738,136	5,753	31,631	69,014	143,781	13,447	0	31,631	69,014	143,781
1964	4,138,874	5,753	35,635	77,024	159,801	9,640	0	35,635	77,024	159,801
1965	4,579,693	5,753	40,044	85,841	177,435	14,531	7	40,044	85,841	177,435
1966	5,064,822	5,946	44,702	95,350	196,646	22,052	121	44,702	95,350	196,646
1967	5,598,661	5,946	50,040	106,027	218,000	19,004	0	50,040	106,027	218,000
1968	6,186,073	5,946	55,914	117,775	241,496	24,023	0	55,914	117,775	241,496
1969	6,832,401	6,800	61,524	129,848	266,496	38,332	611	61,524	129,848	266,496
1970	7,543,524	15,126	60,309	135,744	286,614	63,536	10,737	63,536	135,744	286,614
1971	8,325,909	15,126	68,133	151,392	317,910	44,251	1,981	68,133	151,392	317,910

Exhibit Flc

Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations Are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations Are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premium (3)	2% of Net Premium (4)	4% of Net Premium (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	1% of Net Premium (8)	2% of Net Premium (9)	4% of Net Premium (10)
1946	$ 1,620	$ 0	$ 16	$ 32	$ 64	$ 144	$ 0	$ 144	$ 144	$ 144
1947	4,736	17	31	78	173	251	9	251	251	251
1948	9,408	20	74	168	356	330	0	330	330	356
1949	15,727	34	124	281	596	452	14	452	452	596
1950	23,800	34	204	442	918	405	0	405	442	918
1951	33,752	34	303	641	1,316	253	0	303	641	1,316
1952	45,724	34	423	880	1,794	308	0	423	880	1,794
1953	59,874	35	563	1,162	2,359	551	0	563	1,162	2,359
1954	76,379	35	729	1,493	3,021	410	0	729	1,493	3,021
1955	95,438	35	920	1,874	3,783	300	0	920	1,874	3,783
1956	117,273	35	1,137	2,310	4,655	432	0	1,137	2,310	4,655
1957	142,129	42	1,380	2,801	5,644	765	0	1,380	2,801	5,644
1958	170,277	51	1,652	3,355	6,761	1,130	8	1,652	3,355	6,761
1959	202,018	51	1,969	3,989	8,029	777	0	1,969	3,989	8,029
1960	237,683	88	2,289	4,666	9,420	1,572	18	2,289	4,666	9,420
1961	277,638	88	2,689	5,465	11,018	1,239	0	2,689	5,465	11,018
1962	322,285	203	3,020	6,243	12,689	2,553	82	3,020	6,243	12,689
1963	372,068	203	3,517	7,238	14,679	1,999	0	3,517	7,238	14,679
1964	427,476	203	4,072	8,347	16,897	1,433	0	4,072	8,347	16,897
1965	489,048	203	4,688	9,578	19,359	2,163	0	4,688	9,578	19,359
1966	557,377	232	5,342	10,916	22,064	3,278	18	5,342	10,916	22,064
1967	633,117	232	6,099	12,430	25,092	2,825	0	6,099	12,430	25,092
1968	716,986	232	6,938	14,108	28,448	3,571	0	6,938	14,108	28,448
1969	809,776	359	7,739	15,837	32,033	5,698	91	7,739	15,837	32,033
1970	912,357	1,597	7,526	16,650	34,897	9,444	1,596	9,444	16,650	34,897
1971	1,025,688	1,597	8,660	18,917	39,431	6,578	295	8,660	18,917	39,431

Exhibit F1d

Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
ASSUMES 1960 TO 1971 INVESTMENT EXPERIENCE SAME AS 1930 TO 1941

(amounts in thousands of dollars)

Policy Year Ending July	Cumulative: Basic Net Premiums (1)	Cumulative: Actual MDBG Claims (2)	Retrospective Accumulation Where Annual Allocations are: 1% of Net Premiums (3)	2% of Net Premiums (4)	4% of Net Premiums (5)	Two Part Minimum Reserve: One Year Term 1/3 Drop (6)	Attained Age Level (7)	Actual MDBG Reserve Where Annual Allocations are: 1% of Net Premiums (8)	2% of Net Premiums (9)	4% of Net Premiums (10)
1916	$ 1,620	$ 0	$ 16	$ 32	$ 64	$ 148	$ 0	$ 148	$ 148	$ 148
1917	4,736	2	46	93	188	232	0	232	232	232
1918	9,408	42	52	146	334	367	32	367	367	367
1919	15,727	42	116	273	588	305	0	305	305	588
1920	23,800	80	158	396	872	595	26	595	595	872
1921	33,752	255	82	420	1,095	879	206	879	879	1,095
1922	45,724	255	202	659	1,573	609	0	609	659	1,573
1923	59,874	261	337	936	2,133	903	0	903	936	2,133
1924	76,379	261	503	1,267	2,795	819	0	819	1,267	2,795
1925	95,438	261	694	1,648	3,557	436	0	694	1,648	3,557
1926	117,273	261	911	2,084	4,429	494	0	911	2,084	4,429
1927	142,129	261	1,161	2,582	5,425	492	0	1,161	2,582	5,425
1928	170,277	261	1,442	3,145	6,551	463	0	1,442	3,145	6,551
1929	202,018	261	1,759	3,779	7,819	421	0	1,759	3,779	7,819
1930	237,683	415	1,962	4,339	9,093	1,363	93	1,962	4,339	9,093
1931	277,638	1,298	1,479	4,255	9,808	3,549	983	3,549	4,255	9,808
1932	322,285	5,003	-1,780	1,443	7,889	7,738	6,159	7,738	7,738	7,889
1933	372,068	5,594	-1,874	1,847	9,288	4,615	5,032	5,032	5,032	9,288
1934	427,476	6,876	-2,601	1,674	10,224	6,432	5,160	6,432	6,432	10,224
1935	489,048	6,916	-2,025	2,865	12,646	4,350	3,607	4,350	4,350	12,646
1936	557,377	6,916	-1,342	4,232	15,380	1,098	147	1,098	4,232	15,380
1937	633,117	6,916	-585	5,746	18,408	1,439	0	1,439	5,746	18,408
1938	716,986	7,455	-285	6,885	21,225	6,953	417	6,953	6,953	21,225
1939	809,776	7,881	217	8,315	24,511	8,362	470	8,362	8,362	24,511
1940	912,357	9,715	-592	8,532	26,779	12,145	2,870	12,145	12,145	26,779
1941	1,025,688	10,703	-446	9,811	30,325	12,386	2,826	12,386	12,386	30,325
1942	1,150,822	14,532	-3,024	8,484	31,500	17,007	7,152	17,007	17,007	31,500
1943	1,288,919	14,532	-1,643	11,246	37,024	8,914	925	8,914	11,246	37,024
1944	1,441,255	14,532	-120	14,293	43,118	7,696	0	7,696	14,293	43,118
1945	1,609,233	14,532	1,561	17,653	49,838	4,328	0	4,328	17,653	49,838
1946	1,794,399	14,532	3,412	21,356	57,244	3,046	0	3,412	21,356	57,244
1947	1,998,452	14,821	5,163	25,148	65,117	8,104	155	8,104	25,148	65,117
1948	2,223,262	14,851	7,351	29,554	74,049	9,999	69	9,999	29,554	74,049
1949	2,470,856	15,124	9,585	34,294	83,712	14,357	238	14,357	34,294	83,712
1950	2,743,588	15,124	12,312	39,748	94,620	8,671	0	12,312	39,748	94,620
1951	3,043,858	15,124	15,314	45,753	106,630	4,413	0	15,314	45,753	106,630
1952	3,374,436	15,124	18,621	52,365	119,854	5,381	0	18,621	52,365	119,854
1953	3,738,336	15,147	22,237	59,620	134,357	9,611	18	22,237	59,620	134,357
1954	4,138,374	15,147	26,241	67,630	150,407	7,153	0	26,241	67,630	150,407
1955	4,579,698	15,147	30,650	76,447	168,041	5,234	18	30,650	76,447	168,041
1956	5,064,822	15,147	35,501	86,149	187,445	7,546	25	35,501	86,149	187,445
1957	5,598,661	15,276	40,710	96,697	208,670	13,350	41	40,710	96,697	208,670
1958	6,186,073	15,439	46,421	108,282	232,003	19,717	130	46,421	108,282	232,003
1959	6,832,401	15,439	52,885	121,209	257,857	13,565	0	52,885	121,209	257,857
1960	7,543,534	21,299	54,136	129,571	280,441	42,085	5,567	54,136	129,571	280,441
1961	8,309,810	48,437	34,902	118,081	284,599	87,423	38,951	87,423	118,081	284,599
1962	9,186,670	133,809	-41,963	49,004	233,637	180,386	150,017	180,386	180,386	233,637
1963	10,123,634	156,680	-55,393	45,093	248,666	104,372	135,946	135,946	135,946	248,666
1964	11,175,410	193,798	-82,044	29,710	253,218	140,231	148,111	148,111	148,111	253,218
1965	12,321,470	201,229	-78,044	45,201	291,630	96,909	131,023	131,023	131,023	291,630
1966	13,597,230	201,229	-65,409	70,417	342,062	31,774	42,400	42,400	70,417	342,062
1967	14,969,147	201,228	-51,597	98,155	397,538	34,668	4,325	34,668	98,155	397,538
1968	16,494,893	211,579	-46,491	112,298	446,195	141,107	13,326	141,107	141,107	446,195
1969	18,173,180	221,398	-39,036	143,106	505,570	165,787	17,817	165,787	165,787	505,570
1970	20,019,421	263,679	-63,485	136,709	537,097	234,721	75,761	234,721	234,721	537,097
1971	22,050,332	289,554	-69,050	151,453	592,460	238,020	82,288	238,020	238,020	592,460

Exhibit F2a

Proposed MDBG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations Are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations Are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premiums (3)	2% of Net Premiums (4)	6% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	1% of Net Premiums (8)	2% of Net Premiums (9)	6% of Net Premiums (10)
1916	$ 1,620	$ 0	$ 16	$ 32	$ 97	$ 183	$ 0	$ 183	$ 183	$ 183
1917	4,966	2	47	97	296	306	18	306	306	306
1918	9,818	33	65	163	556	510	368	510	510	556
1919	15,826	33	126	284	917	400	0	400	400	917
1920	25,231	64	189	441	1,450	768	365	768	768	1,450
1921	35,169	213	138	490	1,897	1,179	1,707	1,707	1,707	1,897
1922	45,766	220	237	695	2,526	829	877	877	877	2,526
1923	61,856	240	378	997	3,471	1,127	844	1,127	1,127	3,471
1924	79,768	240	557	1,355	4,546	926	569	926	1,355	4,546
1925	102,626	240	787	1,813	5,918	507	0	787	1,813	5,918
1926	133,462	240	1,094	2,429	7,767	507	0	1,094	2,429	7,767
1927	171,430	240	1,475	3,189	10,046	540	0	1,475	3,189	10,046
1928	219,974	240	1,959	4,159	12,958	507	0	1,959	4,159	12,958
1929	284,422	240	2,604	5,448	16,825	427	0	2,604	5,448	16,825
1930	380,854	352	3,456	7,265	22,499	1,332	1,371	3,456	7,265	22,499
1931	455,232	894	3,659	8,211	26,420	3,089	6,863	6,863	8,211	26,420
1932	509,138	3,201	1,891	6,982	27,348	8,123	25,373	25,373	25,373	27,348
1933	541,029	4,378	1,033	6,443	28,084	4,915	30,401	30,401	30,401	30,401
1934	598,742	6,071	-83	5,904	29,854	6,718	39,979	39,979	39,979	39,979
1935	655,665	7,155	-599	5,958	32,185	5,315	42,692	42,692	42,692	42,692
1936	734,587	7,614	-268	7,078	36,461	3,222	38,297	38,297	38,297	38,297
1937	852,064	7,968	552	9,073	43,156	3,527	34,276	34,276	34,276	43,156
1938	984,092	9,239	602	10,443	49,807	7,435	41,508	41,508	41,508	49,807
1939	1,092,002	10,706	214	11,134	54,814	8,870	48,139	48,139	48,139	54,814
1940	1,206,886	13,245	-1,176	10,893	59,168	12,319	61,309	61,309	61,309	61,309
1941	1,317,857	15,693	-2,515	10,664	63,378	13,123	71,044	71,044	71,044	71,044
1942	1,444,735	19,987	-5,539	8,908	66,697	17,877	91,736	91,736	91,736	91,736
1943	1,567,876	21,532	-5,853	9,826	72,541	11,578	85,661	85,661	85,661	85,661
1944	1,751,085	22,685	-5,174	12,337	82,380	10,505	79,265	79,265	79,265	82,380
1945	1,966,627	23,209	-3,542	16,124	94,789	8,200	69,692	69,692	69,692	94,789
1946	2,230,759	23,433	-1,126	21,182	110,412	5,534	56,594	56,594	56,594	110,412
1947	2,567,616	24,066	1,610	27,286	129,991	10,510	53,827	53,827	53,827	129,991
1948	2,883,573	24,629	4,206	33,042	148,385	12,148	49,497	49,497	49,497	148,385
1949	3,225,975	25,412	6,848	39,108	168,147	15,741	48,390	48,390	48,390	168,147
1950	3,581,741	25,587	10,231	46,048	189,318	11,085	36,965	36,965	46,048	189,318
1951	4,035,386	25,587	14,767	55,121	216,536	5,416	23,030	23,030	55,121	216,536
1952	4,637,770	25,587	20,790	67,168	252,679	5,988	15,112	20,790	67,168	252,679
1953	5,354,047	25,610	27,931	81,471	295,633	9,740	11,284	27,931	81,471	295,633
1954	6,088,951	25,610	35,279	96,169	339,727	7,871	6,599	35,279	96,169	339,727
1955	7,039,368	25,610	44,783	115,177	396,752	5,582	774	44,783	115,177	396,752
1956	8,392,656	25,610	58,316	142,243	477,949	8,569	0	58,316	142,243	477,949
1957	9,939,759	25,739	73,658	173,056	570,646	14,330	1,537	73,658	173,056	570,646
1958	11,466,788	25,973	88,695	203,363	662,035	20,518	3,778	88,695	203,363	662,035
1959	13,001,800	25,973	104,045	234,063	754,135	15,563	9	104,045	234,063	754,135
1960	14,972,665	26,614	123,112	272,839	871,746	28,330	7,752	123,112	272,839	871,746
1961	16,805,837	26,614	141,445	309,503	981,736	21,735	0	141,445	309,503	981,736
1962	19,022,931	28,149	162,081	352,310	1,113,227	43,811	17,990	162,081	352,310	1,113,227
1963	21,001,423	28,149	181,865	391,879	1,231,936	33,995	9,476	181,865	391,879	1,231,936
1964	23,178,824	28,149	205,639	439,427	1,374,580	24,879	62	205,639	439,427	1,374,580
1965	26,252,541	28,149	234,377	496,902	1,547,004	34,164	6	234,377	496,902	1,547,004
1966	29,224,171	28,498	263,743	555,985	1,724,952	50,248	4,153	263,743	555,985	1,724,952
1967	32,186,155	28,498	293,363	615,225	1,902,671	45,853	0	293,363	615,225	1,902,671
1968	35,593,172	28,498	327,433	683,365	2,107,092	56,686	17	327,433	683,365	2,107,092
1969	39,170,526	30,230	361,476	753,181	2,320,002	86,730	20,752	361,476	753,181	2,320,002
1970	42,616,132	44,647	381,515	807,676	2,512,321	147,993	154,916	381,515	807,676	2,512,321
1971	45,691,927	45,158	411,762	868,681	2,696,358	110,113	103,274	411,762	868,681	2,696,358

Exhibit F2b

Proposed MDBG Reserve System for FULLY VARIABLE Design

Modal Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1935 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 2½% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premiums (3)	2% of Net Premiums (4)	6% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	1% of Net Premiums (8)	2% of Net Premiums (9)	6% of Net Premiums (10)
1926	$ 1,620	$ 0	$ 16	$ 32	$ 97	$ 187	$ 0	$ 187	$ 187	$ 187
1927	4,945	0	50	99	297	208	0	208	208	297
1928	10,455	0	104	209	627	195	0	195	209	627
1929	18,994	0	190	380	1,140	165	0	190	380	1,140
1930	32,947	43	287	616	1,934	513	529	529	616	1,934
1931	45,116	252	199	650	2,455	1,191	2,646	2,646	2,646	2,646
1932	55,406	1,029	-475	79	2,295	2,274	9,072	9,072	9,072	9,072
1933	62,971	1,483	-854	-224	2,295	1,816	11,721	11,721	11,721	11,721
1934	77,676	2,136	-1,359	-582	2,525	2,326	15,414	15,414	15,414	15,414
1935	93,274	2,554	-1,622	-689	3,042	2,036	16,459	16,459	16,459	16,459
1936	115,853	2,731	-1,573	-414	4,220	1,242	14,765	14,765	14,765	14,765
1937	150,343	2,868	-1,364	139	6,153	1,360	13,215	13,215	13,215	13,215
1938	190,057	3,358	-1,458	443	8,045	2,867	16,003	16,003	16,003	16,003
1939	223,568	3,924	-1,689	547	9,490	3,420	18,560	18,560	18,560	18,560
1940	260,244	4,903	-2,300	302	10,712	4,724	23,637	23,637	23,637	23,637
1941	296,665	5,847	-2,881	86	11,953	5,048	27,391	27,391	27,391	27,391
1942	339,230	7,503	-4,110	-718	12,851	6,746	35,368	35,368	35,368	35,368
1943	381,457	8,099	-4,285	-470	14,788	4,464	33,026	33,026	33,026	33,026
1944	445,065	8,544	-4,094	357	18,160	4,050	30,560	30,560	30,560	30,560
1945	520,708	8,746	-3,539	1,668	22,496	3,161	26,869	26,869	26,869	26,869
1946	614,209	8,832	-2,690	3,452	28,020	2,134	21,819	21,819	21,819	28,020
1947	734,261	9,076	-1,734	5,609	34,979	4,052	20,753	20,753	20,753	34,979
1948	847,745	9,293	-815	7,662	41,572	4,683	19,083	19,083	19,083	41,572
1949	971,601	9,595	121	9,837	48,701	6,069	18,656	18,656	18,656	48,701
1950	1,101,176	9,663	1,349	12,361	56,408	4,274	14,251	14,251	14,251	56,408
1951	1,267,256	9,663	3,009	15,682	66,372	2,088	8,879	8,879	15,682	66,372
1952	1,488,661	9,663	5,223	20,110	79,656	2,309	5,826	5,826	20,110	79,656
1953	1,752,857	9,672	7,856	25,385	95,499	3,755	4,351	7,856	25,385	95,499
1954	2,024,909	9,672	10,577	30,826	111,822	3,035	2,544	10,577	30,826	111,822
1955	2,377,750	9,672	14,106	37,883	132,993	2,152	298	14,106	37,883	132,993
1956	2,881,247	9,672	19,141	47,953	163,203	3,304	0	19,141	47,953	163,203
1957	3,458,074	9,722	24,858	59,439	197,762	5,525	593	24,858	59,439	197,762
1958	4,028,712	9,812	30,475	70,762	231,910	7,911	1,456	30,475	70,762	231,910
1959	4,603,670	9,812	36,224	82,261	266,408	6,000	0	36,224	82,261	266,408
1960	5,343,303	10,059	43,374	96,807	310,539	10,922	2,989	43,374	96,807	310,539
1961	6,032,739	10,059	50,269	110,596	351,906	8,380	0	50,269	110,596	351,906
1962	6,868,107	10,651	58,030	126,711	401,435	16,891	6,936	58,030	126,711	401,435
1963	7,615,127	10,651	65,501	141,652	446,257	13,107	3,653	65,501	141,652	446,257
1964	8,514,358	10,651	74,492	159,636	500,210	9,592	24	74,492	159,636	500,210
1965	9,603,015	10,651	85,379	181,409	565,530	13,172	0	85,379	181,409	565,530
1966	10,730,513	10,786	96,519	203,824	633,045	19,373	1,601	96,519	203,824	633,045
1967	11,856,094	10,786	107,775	226,336	700,580	17,678	0	107,775	226,336	700,580
1968	13,152,576	10,786	120,740	252,266	778,369	21,855	6	120,740	252,266	778,369
1969	14,515,678	11,454	133,703	278,860	859,487	33,438	8,001	133,703	278,860	859,487
1970	15,830,326	17,012	141,292	299,595	932,808	57,058	59,727	141,292	299,595	932,808
1971	17,005,498	17,209	152,846	322,901	1,003,121	42,453	39,817	152,846	322,901	1,003,121

Exhibit V2c

Proposed MDBG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ¼ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations Are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations Are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premiums (3)	2% of Net Premiums (4)	6% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	1% of Net Premiums (8)	2% of Net Premiums (9)	6% of Net Premiums (10)
1946	$ 1,620	$ 0	$ 16	$ 32	$ 97	$ 172	$ 0	$ 172	$ 172	$ 172
1947	5,044	14	37	87	289	341	172	341	341	341
1948	9,665	26	70	167	554	455	267	455	455	554
1949	16,040	46	115	275	917	623	425	623	623	917
1950	24,027	46	193	435	1,396	526	237	526	526	1,396
1951	35,496	46	309	664	2,084	282	0	309	664	2,084
1952	51,981	46	474	994	3,073	329	0	474	994	3,073
1953	72,890	47	682	1,411	4,327	543	14	682	1,411	4,327
1954	95,740	47	911	1,868	5,698	451	0	911	1,868	5,698
1955	126,652	47	1,219	2,486	7,552	320	0	1,219	2,486	7,552
1956	172,018	47	1,673	3,393	10,274	491	0	1,673	3,393	10,274
1957	225,391	54	2,200	4,454	13,470	821	88	2,200	4,454	13,470
1958	279,748	67	2,731	5,528	16,718	1,176	216	2,731	5,528	16,718
1959	336,179	67	3,295	6,657	20,104	892	0	3,295	6,657	20,104
1960	410,426	104	4,001	8,105	24,522	1,624	444	4,001	8,105	24,522
1961	481,505	104	4,711	9,526	28,786	1,246	0	4,711	9,526	28,786
1962	569,510	192	5,503	11,198	33,978	2,511	1,031	5,503	11,198	33,978
1963	650,298	192	6,311	12,814	38,826	1,948	543	6,311	12,814	38,826
1964	749,631	192	7,305	14,801	44,786	1,426	0	7,305	14,801	44,786
1965	872,064	192	8,528	17,249	52,132	1,958	0	8,528	17,249	52,132
1966	1,001,224	212	9,800	19,812	59,861	2,880	238	9,800	19,812	59,861
1967	1,132,665	212	11,114	22,441	67,748	2,628	0	11,114	22,441	67,748
1968	1,286,628	212	12,655	25,521	76,986	3,249	0	12,655	25,521	76,986
1969	1,451,214	311	14,201	28,713	86,762	4,970	1,189	14,201	28,713	86,762
1970	1,612,790	1,137	14,991	31,119	95,631	8,481	8,878	14,991	31,119	95,631
1971	1,760,131	1,166	16,436	34,037	104,442	6,310	5,919	16,436	34,037	104,442

Exhibit F2d

Proposed MDBG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
ASSUMES 1960 TO 1971 INVESTMENT EXPERIENCE SAME AS 1930 to 1941
(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations Are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations Are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	1% of Net Premiums (3)	2% of Net Premiums (4)	6% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	1% of Net Premiums (8)	2% of Net Premiums (9)	6% of Net Premiums (10)
1916	$ 1,620	$ 0	$ 16	$ 32	$ 97	$ 183	$ 0	$ 183	$ 183	$ 183
1917	4,966	2	47	97	296	306	18	306	306	306
1918	9,818	33	65	163	556	510	368	510	510	556
1919	15,826	33	126	284	917	400	0	400	400	917
1920	25,231	64	189	441	1,450	768	365	768	768	1,450
1921	35,169	213	138	490	1,897	1,179	1,707	1,707	1,707	1,897
1922	45,766	220	237	695	2,526	829	877	877	877	2,526
1923	61,856	240	378	997	3,471	1,127	844	1,127	1,127	3,471
1924	79,768	240	557	1,355	4,546	926	569	926	1,355	4,546
1925	102,626	240	787	1,813	5,918	507	0	787	1,813	5,918
1926	133,462	240	1,094	2,429	7,767	507	0	1,094	2,429	7,767
1927	171,430	240	1,475	3,189	10,046	540	0	1,475	3,189	10,046
1928	219,974	240	1,959	4,159	12,958	507	0	1,959	4,159	12,958
1929	284,422	240	2,604	5,448	16,825	427	0	2,604	5,448	16,825
1930	380,854	352	3,456	7,265	22,499	1,332	1,371	3,456	7,265	22,499
1931	455,232	894	3,659	8,211	26,420	3,089	6,863	6,863	8,211	26,420
1932	509,138	3,201	1,891	6,982	27,348	8,123	25,373	25,373	25,373	27,348
1933	541,029	4,378	1,033	6,443	28,084	4,915	30,401	30,401	30,401	30,401
1934	598,742	6,071	-83	5,904	29,854	6,718	39,979	39,979	39,979	39,979
1935	655,665	7,155	-599	5,958	32,185	5,315	42,692	42,692	42,692	42,692
1936	734,587	7,614	-268	7,078	36,461	3,222	38,297	38,297	38,297	38,297
1937	852,064	7,968	552	9,073	43,156	3,527	34,276	34,276	34,276	43,156
1938	984,092	9,239	602	10,443	49,807	7,435	41,508	41,508	41,508	49,807
1939	1,092,002	10,706	214	11,134	54,814	8,870	48,139	48,139	48,139	54,814
1940	1,206,886	13,245	-1,176	10,893	59,168	12,319	61,309	61,309	61,309	61,309
1941	1,317,857	15,693	-2,515	10,664	63,378	13,123	71,044	71,044	71,044	71,044
1942	1,444,735	19,987	-5,539	8,908	66,697	17,877	91,736	91,736	91,736	91,736
1943	1,567,876	21,532	-5,853	9,826	72,541	11,578	85,661	85,661	85,661	85,661
1944	1,751,085	22,685	-5,174	12,337	82,380	10,505	79,265	79,265	79,265	82,380
1945	1,966,627	23,209	-3,542	16,124	94,789	8,200	69,692	69,692	69,692	94,789
1946	2,230,759	23,433	-1,126	21,182	110,412	5,534	56,594	56,594	56,594	110,412
1947	2,567,616	24,066	1,610	27,286	129,991	10,510	53,827	53,827	53,827	129,991
1948	2,883,573	24,629	4,206	33,042	148,385	12,148	49,497	49,497	49,497	148,385
1949	3,225,975	25,412	6,848	39,108	168,147	15,741	48,390	48,390	48,390	168,147
1950	3,581,741	25,587	10,231	46,048	189,318	11,085	36,965	36,965	46,048	189,318
1951	4,035,386	25,587	14,767	55,121	216,536	5,416	23,030	23,030	55,121	216,536
1952	4,637,770	25,587	20,790	67,168	252,679	5,988	15,112	20,790	67,168	252,679
1953	5,354,047	25,610	27,931	81,471	295,633	9,740	11,284	27,931	81,471	295,633
1954	6,088,951	25,610	35,279	96,169	339,727	7,871	6,599	35,279	96,169	339,727
1955	7,039,368	25,610	44,783	115,177	396,752	5,582	774	44,783	115,177	396,752
1956	8,392,656	25,610	58,316	142,243	477,949	8,569	0	58,316	142,243	477,949
1957	9,939,759	25,739	73,658	173,056	570,646	14,330	1,537	73,658	173,056	570,646
1958	11,466,788	25,973	88,695	203,363	662,035	20,518	3,778	88,695	203,363	662,035
1959	13,001,800	25,973	104,045	234,063	754,135	15,563	9	104,045	234,063	754,135
1960	14,972,665	29,368	120,358	270,085	868,992	40,102	38,335	120,358	270,085	868,992
1961	16,476,179	47,741	117,021	281,783	940,830	78,888	196,438	196,438	281,783	940,830
1962	17,547,309	102,944	72,529	248,002	949,894	164,780	502,794	502,794	502,794	949,894
1963	18,162,158	136,496	45,125	226,747	953,233	115,061	764,179	764,179	764,179	953,233
1964	19,261,197	181,383	11,229	203,841	974,289	144,340	996,758	996,758	996,758	996,758
1965	20,330,556	213,489	-10,184	193,122	1,006,344	124,094	1,087,911	1,087,911	1,087,911	1,087,911
1966	21,799,832	229,252	-11,253	206,745	1,078,738	80,630	1,034,991	1,034,991	1,034,991	1,078,738
1967	23,973,310	241,810	-2,077	237,656	1,196,588	85,871	985,168	985,168	985,168	1,196,588
1968	26,401,313	277,136	-13,123	250,890	1,306,943	161,367	1,146,518	1,146,518	1,146,518	1,306,943
1969	28,371,072	317,383	-33,673	250,038	1,384,881	188,441	1,296,845	1,296,845	1,296,845	1,384,881
1970	30,454,301	380,155	-75,612	228,931	1,447,103	253,377	1,567,277	1,567,277	1,567,277	1,567,277
1971	32,453,544	442,291	-117,755	206,780	1,504,922	268,443	1,774,463	1,774,463	1,774,463	1,774,463

Exhibit F3a

Proposed MDBG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	0.2% of Net Premiums (3)	0.4% of Net Premiums (4)	2% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	0.2% of Net Premiums (8)	0.4% of Net Premiums (9)	2% of Net Premiums (10)
1916	$ 1,620	$ 0	$ 3	$ 6	$ 32	$ 2	$ 0	$ 3	$ 6	$ 32
1917	4,736	0	10	19	95	11	0	11	19	95
1918	9,408	3	16	35	186	30	34	34	35	186
1919	15,727	3	29	60	312	21	0	29	60	312
1920	23,800	5	42	90	471	70	24	70	90	471
1921	33,752	30	37	105	645	133	224	224	224	645
1922	45,724	30	62	153	885	84	11	84	153	885
1923	59,874	30	89	209	1,167	142	0	142	209	1,167
1924	76,379	30	123	276	1,498	114	0	123	276	1,498
1925	95,438	30	161	352	1,879	10	0	161	352	1,879
1926	117,273	30	204	439	2,315	10	0	204	439	2,315
1927	142,129	30	255	539	2,813	9	0	255	539	2,813
1928	170,277	30	310	651	3,375	3	0	310	651	3,375
1929	202,018	30	374	778	4,010	0	0	374	778	4,010
1930	237,683	38	438	913	4,716	101	91	438	913	4,716
1931	277,638	133	423	978	5,420	551	920	920	978	5,420
1932	322,285	1,026	-382	263	5,420	2,259	6,256	6,256	6,256	6,256
1933	372,068	1,198	-454	290	6,243	1,292	5,607	5,607	5,607	6,243
1934	427,476	1,554	-699	156	6,996	1,967	7,074	7,074	7,074	7,074
1935	489,048	1,606	-628	350	8,175	1,208	5,926	5,926	5,926	8,175
1936	557,377	1,606	-491	624	9,542	158	1,727	1,727	1,727	9,542
1937	633,117	1,606	-340	926	11,056	111	0	111	926	11,056
1938	716,986	1,643	-209	1,225	12,697	1,609	415	1,609	1,609	12,697
1939	809,776	1,695	-76	1,544	14,500	2,146	781	2,146	2,146	14,500
1940	912,357	2,128	-304	1,521	16,119	3,787	3,350	3,787	3,787	16,119
1941	1,025,688	2,445	-393	1,658	18,069	3,967	4,613	4,613	4,613	18,069
1942	1,150,822	3,648	-1,347	955	19,368	6,074	9,717	9,717	9,717	19,368
1943	1,288,919	3,648	-1,070	1,508	22,131	2,734	3,938	3,938	3,938	22,131
1944	1,441,255	3,648	-766	2,117	25,177	1,976	590	1,976	2,117	25,117
1945	1,609,233	3,648	-429	2,789	28,537	489	0	489	2,789	28,537
1946	1,794,399	3,648	-59	3,530	32,240	62	0	62	3,530	32,240
1947	1,998,452	3,662	335	4,332	36,307	746	166	746	4,332	36,307
1948	2,223,262	3,674	772	5,219	40,791	1,106	211	1,106	5,219	40,791
1949	2,470,886	3,697	1,245	6,187	45,721	2,190	408	2,190	6,187	45,721
1950	2,743,588	3,697	1,790	7,277	51,174	888	0	1,790	7,277	51,174
1951	3,043,858	3,697	2,390	8,478	57,180	25	0	2,390	8,478	57,180
1952	3,374,436	3,697	3,052	9,801	63,792	109	0	3,052	9,801	63,792
1953	3,738,336	3,697	3,779	11,256	71,069	510	0	3,779	11,256	71,069
1954	4,138,874	3,697	4,580	12,858	79,080	225	0	4,580	12,858	79,080
1955	4,579,698	3,697	5,463	14,622	87,897	0	0	5,463	14,622	87,897
1956	5,064,822	3,697	6,432	16,562	97,599	111	0	6,432	16,562	97,599
1957	5,598,661	3,697	7,501	18,698	108,277	703	79	7,501	18,698	108,277
1958	6,186,073	3,697	8,675	21,047	120,024	1,610	198	8,675	21,047	120,024
1959	6,832,401	3,697	9,968	23,633	132,951	681	0	9,968	23,633	132,951
1960	7,543,524	3,738	11,349	26,436	147,132	2,827	414	11,349	26,436	147,132
1961	8,325,909	3,738	12,914	29,566	162,781	1,712	6	12,914	29,566	162,781
1962	9,186,670	3,867	14,507	32,880	179,867	6,215	1,424	14,507	32,880	179,867
1963	10,133,634	3,867	16,401	36,668	198,806	4,140	0	16,401	36,668	198,806
1964	11,175,410	3,867	18,484	40,835	219,642	1,451	0	18,484	40,835	219,642
1965	12,321,470	3,867	20,776	45,419	242,563	3,249	0	20,776	45,419	242,563
1966	13,582,232	3,867	23,298	50,462	267,778	7,213	358	23,298	50,462	267,778
1967	14,969,157	3,867	26,072	56,010	295,517	4,976	21	26,072	56,010	295,517
1968	16,494,853	3,867	29,122	62,112	326,030	7,173	0	29,122	62,112	326,030
1969	18,173,189	3,996	32,351	68,697	359,468	16,157	1,533	32,351	68,697	359,468
1970	20,019,421	6,929	33,110	73,149	393,460	37,144	25,182	37,144	73,149	393,460
1971	22,050,332	6,929	37,171	81,272	434,077	21,762	5,791	37,171	81,272	434,077

Exhibit F3b

Proposed MDBG Reserve System for EQUITABLE TYPE Design

Modal Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations Are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations Are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	0.2% of Net Premiums (3)	0.4% of Net Premiums (4)	2% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	0.2% of Net Premiums (8)	0.4% of Net Premiums (9)	2% of Net Premiums (10)
1926	$ 1,620	$ 0	$ 3	$ 6	$ 32	$ 2	$ 0	$ 3	$ 6	$ 32
1927	4,736	0	10	19	95	4	0	10	19	95
1928	9,408	0	19	38	189	1	0	19	38	189
1929	15,727	0	32	63	315	0	0	32	63	315
1930	23,800	3	44	92	473	39	35	44	92	473
1931	33,752	40	27	95	635	153	355	355	355	635
1932	45,724	177	-85	6	738	322	1,264	1,264	1,264	1,264
1933	59,874	234	-115	5	963	242	1,466	1,466	1,466	1,466
1934	76,379	332	-179	-26	1,196	353	1,909	1,909	1,909	1,909
1935	95,438	352	-161	30	1,557	271	1,794	1,794	1,794	1,794
1936	117,273	352	-118	117	1,993	58	654	654	654	1,993
1937	142,129	352	-67	217	2,491	43	0	43	217	2,491
1938	170,277	366	-26	315	3,039	484	160	484	484	3,039
1939	202,018	386	18	422	3,654	642	301	642	642	3,654
1940	237,683	546	-70	405	4,208	1,028	1,258	1,258	1,258	4,208
1941	277,638	666	-110	445	4,887	1,121	1,742	1,742	1,742	4,887
1942	322,285	1,070	-426	219	5,376	1,651	3,502	3,502	3,502	5,376
1943	372,068	1,070	-326	411	6,371	897	1,518	1,518	1,518	6,371
1944	427,476	1,070	-215	641	7,480	696	227	696	696	7,480
1945	489,048	1,070	-92	886	8,711	189	0	189	886	8,711
1946	557,377	1,070	45	1,160	10,078	24	0	45	1,160	10,078
1947	633,117	1,076	190	1,456	11,586	288	64	288	1,456	11,586
1948	716,986	1,081	353	1,787	13,259	426	81	426	1,787	13,259
1949	809,776	1,090	529	2,149	15,105	844	158	844	2,149	15,105
1950	912,357	1,090	734	2,559	17,157	342	0	734	2,559	17,157
1951	1,025,688	1,090	962	3,013	19,424	10	0	962	3,013	19,424
1952	1,150,821	1,090	1,211	3,513	21,926	42	0	1,211	3,513	21,926
1953	1,288,919	1,090	1,488	4,066	24,689	197	0	1,488	4,066	24,689
1954	1,441,255	1,090	1,792	4,675	27,735	87	0	1,792	4,675	27,735
1955	1,609,233	1,090	2,129	5,347	31,095	0	0	2,129	5,347	31,095
1956	1,794,399	1,090	2,499	6,088	34,798	43	0	2,499	6,088	34,798
1957	1,998,452	1,090	2,907	6,904	38,879	271	30	2,907	6,904	38,879
1958	2,223,262	1,090	3,356	7,803	43,375	621	76	3,356	7,803	43,375
1959	2,470,886	1,090	3,852	8,794	48,328	263	0	3,852	8,794	48,128
1960	2,743,588	1,106	4,381	9,868	53,765	1,090	160	4,381	9,868	53,765
1961	3,043,858	1,106	4,981	11,069	59,771	660	0	4,981	11,069	59,771
1962	3,374,436	1,156	5,593	12,342	66,333	2,396	549	5,593	12,342	66,333
1963	3,738,336	1,156	6,320	13,797	73,610	1,596	0	6,320	13,797	73,610
1964	4,138,874	1,156	7,121	15,399	81,621	559	0	7,121	15,399	81,621
1965	4,579,698	1,156	8,004	17,163	90,438	1,253	0	8,004	17,163	90,438
1966	5,064,822	1,156	8,973	19,103	100,140	2,781	138	8,973	19,103	100,140
1967	5,598,661	1,156	10,042	21,239	110,818	1,919	8	10,042	21,239	110,818
1968	6,186,073	1,156	11,216	23,588	122,565	2,766	0	11,216	23,588	122,565
1969	6,832,401	1,206	12,459	26,124	135,442	6,229	591	12,459	26,124	135,442
1970	7,543,524	2,337	12,750	27,837	148,533	14,321	9,709	14,321	27,837	148,533
1971	8,325,909	2,337	14,315	30,967	164,182	8,390	2,233	14,315	30,967	164,182

Exhibit F3c

Proposed MDBG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Cumulative Basic Net Premiums (1)	Cumulative Actual MDBG Claims (2)	Retrospective Accumulation Where Annual Allocations are 0.2% of Net Premium (3)	0.4% of Net Premium (4)	2% of Net Premium (5)	Two Part Minimum Reserve One Year Term 1/3 Drop (6)	Attained Age Level (7)	Actual MDBG Reserve Where Annual Allocations are 0.2% of Net Premium (8)	0.4% of Net Premium (9)	2% of Net Premium (10)
1946	$ 1,620	$ 0	$ 3	$ 6	$ 32	$ 2	$ 0	$ 3	$ 6	$ 32
1947	4,736	1	9	18	94	13	9	13	18	94
1948	9,408	2	17	36	187	25	12	25	36	187
1949	15,727	3	29	60	312	45	23	45	60	312
1950	23,800	3	44	92	473	37	0	44	92	473
1951	33,752	3	64	132	672	1	0	64	132	672
1952	45,724	3	89	180	912	6	0	89	180	912
1953	59,874	3	116	236	1,194	29	0	116	236	1,194
1954	76,379	3	150	303	1,525	13	0	150	303	1,525
1955	95,438	3	188	379	1,906	0	0	188	379	1,906
1956	117,273	3	231	466	2,342	6	0	231	466	2,342
1957	142,129	3	282	566	2,840	40	5	282	566	2,840
1958	170,277	3	337	678	3,402	92	12	337	678	3,402
1959	202,018	3	401	805	4,037	39	0	401	805	4,037
1960	237,683	5	471	946	4,749	162	24	471	946	4,749
1961	277,638	5	551	1,106	5,548	98	0	551	1,106	5,548
1962	322,285	12	632	1,277	6,434	356	81	632	1,277	6,434
1963	372,068	12	732	1,476	7,429	237	0	732	1,476	7,429
1964	427,476	12	843	1,698	8,538	83	0	843	1,698	8,538
1965	489,048	12	966	1,944	9,769	186	0	966	1,944	9,769
1966	557,377	12	1,103	2,218	11,136	413	21	1,103	2,218	11,136
1967	633,117	12	1,254	2,520	12,650	285	0	1,254	2,520	12,650
1968	716,986	12	1,422	2,856	14,328	411	0	1,422	2,856	14,328
1969	809,776	19	1,600	3,220	16,176	926	88	1,600	3,220	16,176
1970	912,357	187	1,637	3,462	18,060	2,129	1,443	2,129	3,462	18,060
1971	1,025,688	187	1,865	3,916	20,327	1,247	331	1,865	3,916	20,327

Exhibit F3d

Proposed MDBG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
ASSUMES 1960 TO 1971 INVESTMENT EXPERIENCE SAME AS 1930 to 1941

(amounts in thousands of dollars)

Policy Year Ending July	Cumulative		Retrospective Accumulation Where Annual Allocations are			Two Part Minimum Reserve		Actual MDBG Reserve Where Annual Allocations are		
	Basic Net Premiums (1)	Actual MDBG Claims (2)	0.2% of Net Premiums (3)	0.4% of Net Premiums (4)	2% of Net Premiums (5)	One Year Term 1/3 Drop (6)	Attained Age Level (7)	0.2% of Net Premiums (8)	0.4% of Net Premiums (9)	2% of Net Premiums (10)
1916	$ 1,620	$ 0	$ 3	$ 6	$ 32	$ 2	$ 0	$ 3	$ 6	$ 32
1917	4,736	0	10	19	95	11	0	11	19	95
1918	9,408	3	16	35	186	30	34	34	35	186
1919	15,727	3	29	60	312	21	0	29	60	312
1920	23,800	5	42	90	471	70	24	70	90	471
1921	33,752	30	37	105	645	133	224	224	224	645
1922	45,724	30	62	153	885	84	11	84	153	885
1923	59,874	30	89	209	1,167	142	0	142	209	1,167
1924	76,379	30	123	276	1,498	114	0	123	276	1,498
1925	95,438	30	161	352	1,879	10	0	161	352	1,879
1926	117,273	30	204	439	2,315	10	0	204	439	2,315
1927	142,129	30	255	539	2,813	9	0	255	539	2,813
1928	170,277	30	310	651	3,375	3	0	310	651	3,375
1929	202,018	30	374	778	4,010	0	0	374	778	4,010
1930	237,683	38	438	913	4,716	101	91	438	913	4,716
1931	277,638	133	423	978	5,420	551	920	920	978	5,420
1932	322,285	1,026	-382	263	5,420	2,259	6,256	6,256	6,256	6,256
1933	372,068	1,198	-464	290	6,243	1,292	5,607	5,607	5,607	6,243
1934	427,476	1,554	-699	156	6,996	1,967	7,074	7,074	7,074	7,074
1935	489,048	1,606	-628	350	8,175	1,208	5,926	5,926	5,926	8,175
1936	557,377	1,606	-491	624	9,542	158	1,727	1,727	1,727	9,542
1937	633,117	1,606	-340	926	11,056	111	0	111	926	11,056
1938	716,986	1,643	-209	1,225	12,697	1,609	415	1,609	1,609	12,697
1939	809,776	1,695	-76	1,544	14,500	2,146	781	2,146	2,146	14,500
1940	912,357	2,128	-304	1,521	16,119	3,787	3,350	3,787	3,787	16,119
1941	1,025,688	2,445	-393	1,658	18,069	3,967	4,613	4,613	4,613	18,069
1942	1,150,822	3,648	-1,347	955	19,368	6,074	9,717	9,717	9,717	19,368
1943	1,288,919	3,648	-1,070	1,508	22,131	2,734	3,938	3,938	3,938	22,131
1944	1,441,255	3,648	-766	2,117	25,177	1,976	590	1,976	2,117	25,117
1945	1,609,233	3,648	-429	2,789	28,537	489	0	489	2,789	28,537
1946	1,794,399	3,648	-59	3,530	32,240	62	0	62	3,530	32,240
1947	1,998,492	3,662	335	4,332	36,307	746	166	746	4,332	36,307
1948	2,223,268	3,674	772	5,219	40,791	1,106	211	1,106	5,219	40,791
1949	2,470,386	3,697	1,245	6,187	45,721	2,190	408	2,190	6,187	45,721
1950	2,743,588	3,697	1,790	7,277	51,174	888	0	1,790	7,277	51,174
1951	3,043,898	3,697	2,390	8,478	57,180	25	0	2,390	8,478	57,180
1952	3,374,436	3,697	3,052	9,801	63,792	109	0	3,052	9,801	63,792
1953	3,738,336	3,697	3,779	11,256	71,069	510	0	3,779	11,256	71,069
1954	4,138,874	3,697	4,580	12,858	79,080	225	0	4,580	12,858	79,080
1955	4,579,698	3,697	5,463	14,622	87,897	0	0	5,463	14,622	87,897
1956	5,064,822	3,697	6,432	16,562	97,599	111	0	6,432	16,562	97,599
1957	5,598,661	3,697	7,501	18,698	108,277	703	79	7,501	18,698	108,277
1958	6,186,073	3,697	8,675	21,047	120,084	1,610	198	8,675	21,047	120,084
1959	6,832,401	3,697	9,968	23,633	132,951	681	0	9,968	23,633	132,951
1960	7,543,524	4,249	10,838	25,925	146,621	5,983	5,344	10,838	25,925	146,621
1961	8,325,909	8,788	7,884	24,536	157,751	18,791	36,871	36,871	36,871	157,751
1962	9,190,670	31,209	-12,835	5,538	152,525	60,709	153,931	153,931	153,931	153,931
1963	10,133,634	83,836	-18,968	1,699	163,837	33,167	168,502	168,502	168,502	168,502
1964	11,175,410	91,599	-29,233	-6,887	171,920	46,490	215,056	215,056	215,056	215,056
1965	12,321,470	96,063	-31,420	-6,777	190,367	32,751	206,122	206,122	206,122	206,122
1966	13,582,232	96,063	-28,898	-1,734	215,582	9,751	116,208	116,208	116,208	215,582
1967	14,969,157	96,063	-26,124	3,814	243,321	7,815	44,780	44,780	44,780	243,321
1968	16,494,853	98,314	-25,383	7,665	271,583	41,254	54,676	54,676	54,676	271,583
1969	18,173,189	61,771	-25,424	40,922	301,693	51,601	66,582	66,582	66,582	301,693
1970	20,019,421	75,969	-35,830	4,109	324,420	80,815	125,466	125,466	125,466	324,420
1971	22,050,332	87,602	-43,502	599	353,404	84,522	159,510	159,510	159,510	353,404

Exhibit Gla

Effect on Gains of Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	4% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	4% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	4% of Net Premiums (9)
1916	$ 16	$ 32	$ 64	$ 132	$ 116	$ 84	$ 148	$ 148	$ 148
1917	32	63	126	54	23	-40	86	86	86
1918	46	93	186	129	82	-11	175	175	175
1919	64	127	254	-126	-189	-33	-62	-62	221
1920	80	161	322	248	167	0	328	328	322
1921	99	199	398	360	260	0	459	459	398
1922	120	239	478	-390	-459	0	-270	-220	478
1923	141	283	566	159	0	0	300	283	566
1924	166	331	662	-250	0	0	-84	331	662
1925	191	381	762	-316	0	0	-125	381	762
1926	217	436	872	0	0	0	217	436	872
1927	250	498	996	0	0	0	250	498	996
1928	281	563	1,126	0	0	0	281	563	1,126
1929	317	634	1,268	0	0	0	317	634	1,268
1930	357	714	1,428	0	0	0	357	714	1,428
1931	400	799	1,598	2,070	0	0	2,470	799	1,598
1932	2,226	893	1,786	5,668	6,295	0	7,894	7,188	1,786
1933	591	995	1,990	-2,706	-3,110	0	-2,115	-2,115	1,990
1934	1,282	1,109	2,218	1,400	1,573	0	2,682	2,682	2,218
1935	40	1,231	2,462	-2,082	-3,273	0	-2,042	-2,042	2,462
1936	0	1,367	2,734	-3,252	-1,485	0	-3,252	-118	2,734
1937	0	1,514	3,028	341	0	0	341	1,514	3,028
1938	539	1,678	3,356	5,514	68	0	6,053	1,746	3,356
1939	643	1,856	3,712	1,192	-21	0	1,835	1,835	3,712
1940	1,617	2,051	4,102	4,000	3,566	0	5,617	5,617	4,102
1941	988	2,267	4,534	241	-1,038	0	1,229	1,229	4,534
1942	3,829	2,502	5,004	4,621	5,948	0	8,450	8,450	5,004
1943	0	2,762	5,524	-8,093	-8,523	0	-8,093	-5,761	5,524
1944	0	3,047	6,094	-1,218	0	0	-1,218	3,047	6,094
1945	1,561	3,360	6,720	-4,929	0	0	-3,368	3,360	6,720
1946	1,851	3,703	7,406	-2,767	0	0	-916	3,703	7,406
1947	2,040	4,081	8,162	2,941	0	0	4,981	4,081	8,162
1948	2,248	4,496	8,992	-293	0	0	1,955	4,496	8,992
1949	2,477	4,953	9,906	2,124	0	0	4,601	4,953	9,906
1950	2,727	5,454	10,908	-4,772	0	0	-2,045	5,454	10,908
1951	3,002	6,005	12,010	0	0	0	3,002	6,005	12,010
1952	3,307	6,612	13,224	0	0	0	3,307	6,612	13,224
1953	3,639	7,278	14,556	0	0	0	3,639	7,278	14,556
1954	4,004	8,010	16,020	0	0	0	4,004	8,010	16,020
1955	4,409	8,817	17,634	0	0	0	4,409	8,817	17,634
1956	4,851	9,702	19,404	0	0	0	4,851	9,702	19,404
1957	5,338	10,677	21,354	0	0	0	5,338	10,677	21,354
1958	5,874	11,748	23,496	0	0	0	5,874	11,748	23,496
1959	6,464	12,927	25,854	0	0	0	6,464	12,927	25,854
1960	7,111	14,222	28,444	0	0	0	7,111	14,222	28,444
1961	7,824	15,648	31,296	0	0	0	7,824	15,648	31,296
1962	8,607	17,215	34,430	0	0	0	8,607	17,215	34,430
1963	9,471	18,940	37,880	0	0	0	9,471	18,940	37,880
1964	10,417	20,835	41,670	0	0	0	10,417	20,835	41,670
1965	11,460	22,921	45,842	0	0	0	11,460	22,921	45,842
1966	12,609	25,216	50,432	0	0	0	12,609	25,216	50,432
1967	13,868	27,738	55,476	0	0	0	13,868	27,738	55,476
1968	15,257	30,514	61,028	0	0	0	15,257	30,514	61,028
1969	16,784	33,567	67,134	0	0	0	16,784	33,567	67,134
1970	18,462	36,924	73,848	7,017	0	0	25,459	36,924	73,848
1971	20,310	40,619	81,238	-7,017	0	0	13,313	40,619	81,238

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G1b

Effect on Gains of Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index, Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted, on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	4% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	4% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	4% of Net Premiums (9)
1926	$ 16	$ 32	$ 64	$ 134	$ 118	$ 86	$ 150	$ 150	$ 150
1927	32	63	126	0	-31	-86	32	32	40
1928	46	93	186	-49	-87	0	-3	6	186
1929	64	127	254	-81	0	0	-17	127	254
1930	80	161	322	337	103	0	417	264	322
1931	147	199	398	682	630	58	829	829	456
1932	820	530	478	655	945	997	1,475	1,475	1,475
1933	172	172	566	-599	-599	-993	-427	-427	-427
1934	322	322	662	467	467	127	789	789	789
1935	15	210	762	-413	-608	-189	-398	-398	573
1936	0	436	872	-724	-938	0	-724	-502	872
1937	0	498	996	146	0	0	146	498	996
1938	208	563	1,126	1,686	757	0	1,894	1,320	1,126
1939	164	634	1,268	444	-26	0	608	608	1,268
1940	661	714	1,428	1,096	1,043	0	1,757	1,757	1,428
1941	364	799	1,598	139	-296	0	503	503	1,598
1942	1,273	893	1,786	1,415	1,795	0	2,688	2,688	1,786
1943	0	995	1,990	-2,332	-3,273	0	-2,332	-2,278	1,990
1944	0	1,109	2,218	-249	0	0	-249	1,109	2,218
1945	507	1,231	2,462	-1,601	0	0	-1,094	1,231	2,462
1946	683	1,367	2,734	-1,153	0	0	-470	1,367	2,734
1947	757	1,514	3,028	1,288	0	0	2,045	1,514	3,028
1948	839	1,678	3,356	-85	0	0	754	1,678	3,356
1949	928	1,856	3,712	840	0	0	1,768	1,856	3,712
1950	1,025	2,051	4,102	-2,043	0	0	-1,018	2,051	4,102
1951	1,134	2,267	4,534	0	0	0	1,134	2,267	4,534
1952	1,251	2,502	5,004	0	0	0	1,251	2,502	5,004
1953	1,381	2,762	5,524	0	0	0	1,381	2,762	5,524
1954	1,523	3,047	6,094	0	0	0	1,523	3,047	6,094
1955	1,681	3,360	6,720	0	0	0	1,681	3,360	6,720
1956	1,851	3,703	7,406	0	0	0	1,851	3,703	7,406
1957	2,040	4,081	8,162	0	0	0	2,040	4,081	8,162
1958	2,248	4,496	8,992	0	0	0	2,248	4,496	8,992
1959	2,477	4,953	9,906	0	0	0	2,477	4,953	9,906
1960	2,727	5,454	10,908	0	0	0	2,727	5,454	10,908
1961	3,002	6,005	12,010	0	0	0	3,002	6,005	12,010
1962	3,307	6,612	13,224	0	0	0	3,307	6,612	13,224
1963	3,639	7,278	14,556	0	0	0	3,639	7,278	14,556
1964	4,004	8,010	16,020	0	0	0	4,004	8,010	16,020
1965	4,409	8,817	17,634	0	0	0	4,409	8,817	17,634
1966	4,851	9,702	19,404	0	0	0	4,851	9,702	19,404
1967	5,338	10,677	21,354	0	0	0	5,338	10,677	21,354
1968	5,874	11,748	23,496	0	0	0	5,874	11,748	23,496
1969	6,464	12,927	25,854	0	0	0	6,464	12,927	25,854
1970	7,111	14,222	28,444	3,227	0	0	10,338	14,222	28,444
1971	7,824	15,648	31,296	-3,227	0	0	-19,285	15,648	31,296

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit GIc

Effect on Gains of Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are 1% of Net Premiums (1)	2% of Net Premiums (2)	4% of Net Premiums (3)	Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are 1% of Net Premiums (4)	2% of Net Premiums (5)	4% of Net Premiums (6)	Total Charge (+) or Credit (-) Where Annual Allocations Are 1% of Net Premiums (7)	2% of Net Premiums (8)	4% of Net Premiums (9)
1946	$ 16	$ 32	$ 64	$128	$112	$ 80	$ 144	$ 144	$ 144
1947	32	63	126	92	61	-2	124	124	124
1948	46	93	186	36	-11	-78	82	82	108
1949	64	127	254	72	9	0	136	136	254
1950	80	161	322	-127	-171	0	-47	-10	322
1951	99	199	398	-201	0	0	-102	199	398
1952	120	239	478	0	0	0	120	239	478
1953	141	283	566	0	0	0	141	283	566
1954	166	331	662	0	0	0	166	331	662
1955	191	381	762	0	0	0	191	381	762
1956	217	436	872	0	0	0	217	436	872
1957	250	498	996	0	0	0	250	498	996
1958	281	563	1,126	0	0	0	281	563	1,126
1959	317	634	1,268	0	0	0	317	634	1,268
1960	357	714	1,428	0	0	0	357	714	1,428
1961	400	799	1,598	0	0	0	400	799	1,598
1962	446	893	1,786	0	0	0	446	893	1,786
1963	497	995	1,990	0	0	0	497	995	1,990
1964	555	1,109	2,218	0	0	0	555	1,109	2,218
1965	616	1,231	2,462	0	0	0	616	1,231	2,462
1966	683	1,367	2,734	0	0	0	683	1,367	2,734
1967	757	1,514	3,028	0	0	0	757	1,514	3,028
1968	839	1,678	3,356	0	0	0	839	1,678	3,356
1969	928	1,856	3,712	0	0	0	928	1,856	3,712
1970	1,025	2,051	4,102	1,918	0	0	2,943	2,051	4,102
1971	1,134	2,267	4,534	-1,918	0	0	-784	2,267	4,534

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit C1d

Effect on Gains of Proposed MDBG Reserve System for NEW YORK LIFE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
ASSUMES 1960 TO 1971 INVESTMENT EXPERIENCE SAME AS 1930 TO 1941
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	4% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	4% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	4% of Net Premiums (9)
1916	$ 16	$ 32	$ 64	$ 132	$ 116	$ 84	$ 148	$ 148	$ 148
1917	32	63	126	54	23	-40	86	86	86
1918	46	93	186	129	82	-11	175	175	175
1919	64	127	254	-126	-189	-33	-62	-62	221
1920	80	161	322	248	167	0	328	328	322
1921	99	199	398	360	260	0	459	459	398
1922	120	239	478	-390	-459	0	-270	-220	478
1923	141	283	566	159	0	0	300	283	566
1924	166	331	662	-250	0	0	-84	331	662
1925	191	381	762	-316	0	0	-125	381	762
1926	217	436	872	0	0	0	217	436	872
1927	250	498	996	0	0	0	250	498	996
1928	281	563	1,126	0	0	0	281	563	1,126
1929	317	634	1,268	0	0	0	317	634	1,268
1930	357	714	1,428	0	0	0	357	714	1,428
1931	400	799	1,598	2,070	0	0	2,470	799	1,598
1932	2,226	893	1,786	5,668	6,295	0	7,894	7,188	1,786
1933	591	995	1,990	-2,706	-3,110	0	-2,115	-2,115	1,990
1934	1,282	1,109	2,218	1,400	1,573	0	2,682	2,682	2,218
1935	40	1,231	2,462	-2,082	-3,273	0	-2,042	-2,042	2,462
1936	0	1,367	2,734	-3,252	-1,485	0	-3,252	-118	2,734
1937	0	1,514	3,028	341	0	0	341	1,514	3,028
1938	539	1,678	3,356	5,514	68	0	6,053	1,746	3,356
1939	643	1,856	3,712	1,192	-21	0	1,835	1,835	3,712
1940	1,617	2,051	4,102	4,000	3,566	0	5,617	5,617	4,102
1941	988	2,267	4,534	241	-1,038	0	1,229	1,229	4,534
1942	3,829	2,502	5,004	4,621	5,948	0	8,450	8,450	5,004
1943	0	2,762	5,524	-8,093	-8,523	0	-8,093	-5,761	5,524
1944	0	3,047	6,094	-1,218	0	0	-1,218	3,047	6,094
1945	1,561	3,360	6,720	-4,929	0	0	-3,368	3,360	6,720
1946	1,851	3,703	7,406	-2,767	0	0	-916	3,703	7,406
1947	2,040	4,081	8,162	2,941	0	0	4,981	4,081	8,162
1948	2,248	4,496	8,992	-293	0	0	1,955	4,496	8,992
1949	2,477	4,953	9,906	2,124	0	0	4,601	4,953	9,906
1950	2,727	5,454	10,908	-4,772	0	0	-2,045	5,454	10,908
1951	3,002	6,005	12,010	0	0	0	3,002	6,005	12,010
1952	3,307	6,612	13,224	0	0	0	3,307	6,612	13,224
1953	3,639	7,278	14,556	0	0	0	3,639	7,278	14,556
1954	4,004	8,010	16,020	0	0	0	4,004	8,010	16,020
1955	4,409	8,817	17,634	0	0	0	4,409	8,817	17,634
1956	4,851	9,702	19,404	0	0	0	4,851	9,702	19,404
1957	5,338	10,677	21,354	0	0	0	5,338	10,677	21,354
1958	5,874	11,748	23,496	0	0	0	5,874	11,748	23,496
1959	6,464	12,927	25,854	0	0	0	6,464	12,927	25,854
1960	7,111	14,222	28,444	0	0	0	7,111	14,222	28,444
1961	7,824	15,648	31,296	52,601	0	0	60,425	15,648	31,296
1962	50,570	17,215	34,430	127,785	130,482	0	178,355	147,697	34,430
1963	22,851	18,940	37,880	-44,440	-40,529	0	-21,589	-21,589	37,880
1964	37,118	20,835	41,670	12,165	28,448	0	49,283	49,283	41,670
1965	7,430	22,921	45,842	-17,088	-32,579	0	-9,658	-9,658	45,842
1966	0	25,216	50,432	-88,621	-85,822	0	-88,621	-60,606	50,432
1967	0	27,738	55,476	-7,734	0	0	-7,734	27,738	55,476
1968	10,371	30,514	61,028	106,439	22,809	0	116,810	53,323	61,028
1969	9,759	33,567	67,134	24,680	872	0	34,439	34,439	67,134
1970	42,321	36,924	73,848	68,934	74,331	0	111,255	111,255	73,848
1971	25,875	40,619	81,238	3,299	-11,445	0	29,174	29,174	81,238

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G2a

Effect on Gains of Proposed MDBG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	6% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	6% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	6% of Net Premiums (9)
1916	$ 16	$ 32	$ 97	$ 167	$ 151	$ 86	$ 183	$ 183	$ 183
1917	33	67	201	92	58	-76	125	125	125
1918	49	97	291	186	138	-10	235	235	281
1919	61	121	361	-171	-231	0	-110	-110	361
1920	94	186	564	305	211	0	399	399	564
1921	98	198	598	990	890	0	1,088	1,088	596
1922	106	213	636	-929	-1,035	0	-823	-823	636
1923	161	323	965	109	-52	0	270	270	965
1924	179	358	1,075	-380	-130	0	-201	228	1,075
1925	230	458	1,372	-369	0	0	-139	458	1,372
1926	307	616	1,849	0	0	0	307	616	1,849
1927	381	760	2,279	0	0	0	381	760	2,279
1928	484	970	2,912	0	0	0	484	970	2,912
1929	645	1,289	3,867	0	0	0	645	1,289	3,867
1930	964	1,929	5,786	0	0	0	964	1,929	5,786
1931	745	1,488	4,463	3,204	0	0	3,949	1,488	4,463
1932	839	1,678	3,235	20,278	18,391	0	20,817	19,469	3,235
1933	339	678	1,913	5,886	5,567	2,317	6,205	6,205	4,230
1934	668	1,336	3,463	10,611	10,117	7,808	11,271	11,271	11,271
1935	1,084	1,418	3,415	2,713	2,659	382	3,797	3,797	3,797
1936	459	1,579	4,735	-4,395	-5,515	-8,671	-3,936	-3,936	-3,936
1937	986	2,349	7,049	-4,573	-6,016	-1,836	-3,667	-3,667	5,213
1938	1,321	2,641	7,922	7,182	5,862	0	8,503	8,503	7,922
1939	1,079	2,158	6,474	7,019	5,940	0	8,098	8,098	6,474
1940	2,325	2,298	6,893	13,384	13,411	2,141	15,709	15,709	9,034
1941	2,448	2,219	6,658	9,735	9,964	5,525	12,183	12,183	12,183
1942	4,294	2,518	7,613	20,692	22,448	17,373	24,986	24,986	24,986
1943	1,545	2,463	7,389	-6,075	-6,993	-11,919	-4,530	-4,530	-4,530
1944	1,153	3,664	10,992	-6,396	-8,907	-13,120	-5,243	-5,243	-2,128
1945	524	4,311	12,933	-9,573	-13,360	0	-9,049	-9,049	12,933
1946	224	5,282	15,847	-13,098	-18,156	0	-12,874	-12,874	15,847
1947	2,243	6,737	20,212	-4,377	-8,871	0	-2,134	-2,134	20,212
1948	3,159	6,319	18,957	-6,926	-10,086	0	-3,767	-3,767	18,957
1949	3,425	6,849	20,545	-3,749	-7,173	0	-324	-324	20,545
1950	3,958	7,115	21,346	-14,808	-9,282	0	-11,250	-2,167	21,346
1951	4,536	9,073	27,218	-18,471	0	0	-13,935	9,073	27,218
1952	6,023	12,047	36,143	-8,263	0	0	-2,240	12,047	36,143
1953	7,164	14,326	42,977	0	0	0	7,164	14,326	42,977
1954	7,348	14,698	44,094	0	0	0	7,348	14,698	44,094
1955	9,504	19,008	57,025	0	0	0	9,504	19,008	57,025
1956	13,533	27,066	81,197	0	0	0	13,533	27,066	81,197
1957	15,471	30,942	92,826	0	0	0	15,471	30,942	92,826
1958	15,271	30,541	91,623	0	0	0	15,271	30,541	91,623
1959	15,350	30,700	92,100	0	0	0	15,350	30,700	92,100
1960	19,708	39,417	118,252	0	0	0	19,708	39,417	118,252
1961	18,333	36,664	109,990	0	0	0	18,333	36,664	109,990
1962	22,171	44,342	133,026	0	0	0	22,171	44,342	133,026
1963	19,784	39,569	118,709	0	0	0	19,784	39,569	118,709
1964	23,774	47,548	142,644	0	0	0	23,774	47,548	142,644
1965	32,738	57,475	156,424	0	0	0	32,738	57,475	156,424
1966	29,715	59,432	178,297	0	0	0	29,715	59,432	178,297
1967	29,620	59,240	177,719	0	0	0	29,620	59,240	177,719
1968	34,070	68,140	204,421	0	0	0	34,070	68,140	204,421
1969	35,775	71,548	214,642	0	0	0	35,775	71,548	214,642
1970	34,456	68,912	206,736	0	0	0	34,456	68,912	206,736
1971	30,758	61,516	184,548	0	0	0	30,758	61,516	184,548

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G2b

Effect on Gains of Proposed MDBG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	6% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	6% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	6% of Net Premiums (9)
1926	$ 16	$ 32	$ 97	$ 171	$ 155	$ 90	$ 187	$ 187	$ 187
1927	34	67	200	-13	-46	-90	21	21	110
1928	54	110	330	-67	-109	0	-13	1	330
1929	86	171	513	-91	0	0	-5	171	513
1930	140	279	837	242	0	0	382	279	837
1931	121	243	730	2,205	1,996	191	2,326	2,239	921
1932	578	206	617	6,625	6,997	6,586	7,203	7,203	7,203
1933	454	375	454	2,649	2,728	2,649	3,103	3,103	3,103
1934	653	653	883	3,693	3,693	3,463	4,346	4,346	4,346
1935	418	418	935	1,045	1,045	528	1,463	1,463	1,463
1936	177	177	1,355	-1,694	-1,694	-2,872	-1,517	-1,517	-1,517
1937	137	276	2,070	-1,550	-1,689	-3,483	-1,413	-1,413	-1,413
1938	490	794	2,382	2,788	2,484	896	3,278	3,278	3,278
1939	566	670	2,011	2,557	2,453	1,112	3,123	3,123	3,123
1940	979	734	2,201	5,077	5,322	3,855	6,056	6,056	6,056
1941	944	728	2,185	3,754	3,970	2,513	4,698	4,698	4,698
1942	1,656	1,570	2,554	7,977	8,063	7,079	9,633	9,633	9,633
1943	596	596	2,533	-2,342	-2,342	-4,279	-1,746	-1,746	-1,746
1944	445	802	3,817	-2,466	-2,823	-5,838	-2,021	-2,021	-2,021
1945	202	1,513	4,538	-3,691	-5,002	-8,027	-3,489	-3,489	-3,489
1946	86	1,870	5,610	-5,050	-6,834	-4,373	-4,964	-4,964	1,237
1947	244	2,401	7,203	-1,066	-3,223	0	-822	-822	7,203
1948	217	2,270	6,810	-1,670	-3,723	0	-1,453	-1,453	6,810
1949	423	2,477	7,431	-548	-2,602	0	-125	-125	7,431
1950	1,296	2,592	7,775	-5,633	-6,929	0	-4,337	-4,337	7,775
1951	1,660	3,321	9,964	-7,032	-1,890	0	-5,372	1,431	9,964
1952	2,214	4,428	13,284	-5,267	0	0	-3,053	4,428	13,284
1953	2,642	5,284	15,852	-603	0	0	2,039	5,284	15,852
1954	2,721	5,441	16,323	0	0	0	2,721	5,441	16,323
1955	3,529	7,057	21,171	0	0	0	3,529	7,057	21,171
1956	5,035	10,070	30,210	0	0	0	5,035	10,070	30,210
1957	5,767	11,536	34,609	0	0	0	5,767	11,536	34,609
1958	5,707	11,413	34,238	0	0	0	5,707	11,413	34,238
1959	5,749	11,499	34,498	0	0	0	5,749	11,499	34,498
1960	7,397	14,793	44,378	0	0	0	7,397	14,793	44,378
1961	6,895	13,789	41,367	0	0	0	6,895	13,789	41,367
1962	8,353	16,707	50,121	0	0	0	8,353	16,707	50,121
1963	7,471	14,941	44,822	0	0	0	7,471	14,941	44,822
1964	8,991	17,984	53,953	0	0	0	8,991	17,984	53,953
1965	10,887	21,773	65,320	0	0	0	10,887	21,773	65,320
1966	11,275	22,550	67,650	0	0	0	11,275	22,550	67,650
1967	11,256	22,512	67,535	0	0	0	11,256	22,512	67,535
1968	12,965	25,930	77,789	0	0	0	12,965	25,930	77,789
1969	13,631	27,262	81,786	0	0	0	13,631	27,262	81,786
1970	13,147	26,293	78,879	0	0	0	13,147	26,293	78,879
1971	11,751	23,503	70,510	0	0	0	11,751	23,503	70,510

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G2c

Effect on Gains of Proposed MDBG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	6% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	6% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	6% of Net Premiums (9)
1946	$ 16	$ 32	$ 97	$156	$140	$ 75	$ 172	$ 172	$ 172
1947	35	69	206	148	114	-23	183	183	183
1948	45	92	277	81	34	-52	126	126	225
1949	65	128	383	123	60	0	188	188	383
1950	80	160	479	-177	-257	0	-97	-97	479
1951	114	229	688	-331	-91	0	-217	138	688
1952	165	330	989	0	0	0	165	330	989
1953	209	418	1,255	0	0	0	209	418	1,255
1954	229	457	1,371	0	0	0	229	457	1,371
1955	308	618	1,854	0	0	0	308	618	1,854
1956	454	407	2,722	0	0	0	454	907	2,722
1957	534	1,068	3,203	0	0	0	534	1,068	3,203
1958	544	1,087	3,261	0	0	0	544	1,087	3,261
1959	564	1,129	3,386	0	0	0	564	1,129	3,386
1960	743	1,485	4,455	0	0	0	743	1,485	4,455
1961	710	1,421	4,264	0	0	0	710	1,421	4,264
1962	880	1,760	5,280	0	0	0	880	1,760	5,280
1963	808	1,616	4,848	0	0	0	808	1,616	4,848
1964	994	1,987	5,960	0	0	0	994	1,987	5,960
1965	1,223	2,448	7,346	0	0	0	1,223	2,448	7,346
1966	1,292	2,583	7,749	0	0	0	1,292	2,583	7,749
1967	1,314	2,629	7,887	0	0	0	1,314	2,629	7,887
1968	1,541	3,080	9,238	0	0	0	1,541	3,080	9,238
1969	1,645	3,291	9,875	0	0	0	1,645	3,291	9,875
1970	1,616	3,232	9,695	0	0	0	1,616	3,232	9,695
1971	1,474	2,947	8,840	0	0	0	1,474	2,947	8,840

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G2d

Effect on Gains of Proposed MDRG Reserve System for FULLY VARIABLE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
ASSUMES 1960 TO 1971 INVESTMENT EXPERIENCE SAME AS 1930 TO 1941
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	1% of Net Premiums (1)	2% of Net Premiums (2)	6% of Net Premiums (3)	1% of Net Premiums (4)	2% of Net Premiums (5)	6% of Net Premiums (6)	1% of Net Premiums (7)	2% of Net Premiums (8)	6% of Net Premiums (9)
1916	$ 16	$ 32	$ 97	$ 167	$ 151	$ 86	$ 183	$ 183	$ 183
1917	33	67	201	92	58	-76	125	125	125
1918	49	97	291	186	138	-10	235	235	281
1919	61	121	361	-171	-231	0	-110	-110	361
1920	94	188	564	305	211	0	399	399	564
1921	98	198	596	990	890	0	1,088	1,088	596
1922	106	212	636	-929	-1,035	0	-823	-823	636
1923	161	322	965	109	-52	0	270	270	965
1924	179	358	1,075	-380	-130	0	-201	228	1,075
1925	230	458	1,372	-369	0	0	-139	458	1,372
1926	307	616	1,849	0	0	0	307	616	1,849
1927	381	760	2,279	0	0	0	381	760	2,279
1928	484	970	2,912	0	0	0	484	970	2,912
1929	645	1,289	3,867	0	0	0	645	1,289	3,867
1930	964	1,929	5,786	0	0	0	964	1,929	5,786
1931	745	1,488	4,463	3,204	0	0	3,949	1,488	4,463
1932	539	1,078	3,235	20,278	18,391	0	20,817	19,469	3,235
1933	319	638	1,913	5,886	5,567	2,317	6,205	6,205	4,230
1934	660	1,154	3,463	10,611	10,117	7,808	11,271	11,271	11,271
1935	1,084	1,138	3,415	2,713	2,659	382	3,797	3,797	3,797
1936	459	1,579	4,735	-4,395	-5,515	-8,671	-3,936	-3,936	-3,936
1937	906	2,349	7,049	-4,573	-6,016	-1,836	-3,667	-3,667	5,213
1938	1,321	2,641	7,922	7,182	5,862	0	8,503	8,503	7,922
1939	1,079	2,158	6,474	7,019	5,940	0	8,098	8,098	6,474
1940	2,325	2,298	6,893	13,384	12,411	2,141	15,709	15,709	9,034
1941	2,448	2,219	6,658	9,735	9,964	5,525	12,183	12,183	12,183
1942	4,294	2,538	7,613	20,692	22,448	17,373	24,986	24,986	24,986
1943	1,545	2,463	7,389	-6,075	-6,993	-11,919	-4,530	-4,530	-4,530
1944	1,153	3,664	10,992	-6,396	-8,907	-13,120	-5,243	-5,243	-2,128
1945	524	4,311	12,933	-9,573	-13,360	0	-9,049	-9,049	12,933
1946	224	5,282	15,847	-13,098	-18,156	0	-12,874	-12,874	15,847
1947	2,243	6,737	20,212	-4,377	-8,871	0	-2,134	-2,134	20,212
1948	3,159	6,319	18,957	-6,926	-10,086	0	-3,767	-3,767	18,957
1949	3,425	6,849	20,545	-3,749	-7,173	0	-324	-324	20,545
1950	3,558	7,115	21,346	-14,808	-9,282	0	-11,250	-2,167	21,346
1951	4,536	9,073	27,218	-18,471	0	0	-13,935	9,073	27,218
1952	6,023	12,047	36,143	-8,263	0	0	-2,240	12,047	36,143
1953	7,164	14,326	42,977	0	0	0	7,164	14,326	42,977
1954	7,348	14,698	44,094	0	0	0	7,348	14,698	44,094
1955	9,504	19,008	57,025	0	0	0	9,504	19,008	57,075
1956	13,533	27,066	81,197	0	0	0	13,533	27,066	81,197
1957	15,471	30,942	92,826	0	0	0	15,471	30,942	92,896
1958	15,271	30,541	91,623	0	0	0	15,271	30,541	91,673
1959	15,350	30,700	92,100	0	0	0	15,350	30,700	92,100
1960	19,708	39,417	118,252	0	0	0	19,708	39,417	118,252
1961	15,036	30,071	90,211	79,417	0	0	94,453	30,071	90,211
1962	10,711	21,422	64,267	440,848	344,792	0	451,559	366,214	64,767
1963	6,148	12,297	36,891	198,789	192,640	0	204,937	204,937	36,891
1964	10,991	21,981	65,943	266,475	255,485	22,469	277,466	277,466	88,412
1965	20,877	21,387	64,161	102,382	101,872	59,098	123,259	123,259	123,259
1966	15,763	29,386	88,157	-52,920	-66,543	-81,567	-81,567	-37,157	6,590
1967	12,558	43,469	130,408	-49,823	-80,734	0	-37,265	-37,265	130,408
1968	35,326	48,560	145,681	161,350	148,116	0	196,676	196,676	145,681
1969	40,247	39,395	118,185	150,327	151,179	0	190,574	190,574	118,185
1970	62,772	41,665	124,994	270,432	291,539	120,174	333,204	333,204	245,168
1971	62,136	39,985	119,955	207,186	229,337	149,367	269,322	269,322	269,322

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDRG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDRG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit 03a

Effect on Gains of Proposed MDBG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Charges (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	0.2% of Net Premiums (1)	0.4% of Net Premiums (2)	2% of Net Premiums (3)	0.2% of Net Premiums (4)	0.4% of Net Premiums (5)	2% of Net Premiums (6)	0.2% of Net Premiums (7)	0.4% of Net Premiums (8)	2% of Net Premiums (9)
1916	$ 3	$ 6	$ 32	$ 0	$ 0	$ 0	$ 3	$ 6	$ 32
1917	7	13	63	1	0	0	8	13	63
1918	9	19	94	17	0	0	26	19	94
1919	13	25	126	-18	0	0	-5	25	126
1920	15	32	161	28	0	0	43	32	161
1921	20	40	199	159	119	0	179	159	199
1922	25	48	240	-165	-119	0	-140	-71	240
1923	27	56	282	31	0	0	58	56	282
1924	34	67	331	-53	0	0	-19	67	331
1925	38	76	381	0	0	0	38	76	381
1926	43	87	436	0	0	0	43	87	436
1927	51	100	498	0	0	0	51	100	498
1928	55	112	562	0	0	0	55	112	562
1929	64	127	635	0	0	0	64	127	635
1930	72	143	714	0	0	0	72	143	714
1931	80	160	799	497	0	0	577	160	799
1932	470	178	893	5,759	5,993	836	6,229	6,171	1,729
1933	172	199	995	-649	-676	-836	-477	-477	159
1934	356	222	1,110	1,467	1,601	78	1,823	1,823	1,188
1935	52	246	1,231	-1,148	-1,342	-78	-1,096	-1,096	1,153
1936	0	274	1,367	-4,199	-4,473	0	-4,199	-4,199	1,367
1937	0	302	1,514	-1,616	-1,103	0	-1,616	-801	1,514
1938	37	336	1,678	1,498	384	0	1,535	720	1,678
1939	52	371	1,855	537	218	0	589	589	1,855
1940	433	410	2,052	1,641	1,664	0	2,074	2,074	2,052
1941	317	454	2,267	826	689	0	1,143	1,143	2,267
1942	1,203	500	2,502	5,104	5,807	0	6,307	6,307	2,502
1943	0	553	2,763	-5,779	-6,332	0	-5,779	-5,779	2,763
1944	0	609	3,046	-1,962	-2,430	-60	-1,962	-1,821	2,986
1945	0	672	3,360	-1,487	0	60	-1,487	672	3,420
1946	0	741	3,703	-427	0	0	-427	741	3,703
1947	349	816	4,081	349	0	0	698	816	4,081
1948	449	899	4,496	-77	0	0	372	899	4,496
1949	496	991	4,953	611	0	0	1,107	991	4,953
1950	545	1,090	5,453	-945	0	0	-400	1,090	5,453
1951	600	1,201	6,006	0	0	0	600	1,201	6,006
1952	662	1,323	6,612	0	0	0	662	1,323	6,612
1953	727	1,455	7,277	0	0	0	727	1,455	7,277
1954	801	1,602	8,011	0	0	0	801	1,602	8,011
1955	883	1,764	8,817	0	0	0	883	1,764	8,817
1956	969	1,940	9,702	0	0	0	969	1,940	9,702
1957	1,069	2,136	10,678	0	0	0	1,069	2,136	10,678
1958	1,174	2,349	11,747	0	0	0	1,174	2,349	11,747
1959	1,293	2,586	12,927	0	0	0	1,293	2,586	12,927
1960	1,422	2,844	14,222	0	0	0	1,422	2,844	14,222
1961	1,565	3,130	15,649	0	0	0	1,565	3,130	15,649
1962	1,722	3,443	17,215	0	0	0	1,722	3,443	17,215
1963	1,894	3,788	18,939	0	0	0	1,894	3,788	18,939
1964	2,083	4,167	20,836	0	0	0	2,083	4,167	20,836
1965	2,292	4,584	22,921	0	0	0	2,292	4,584	22,921
1966	2,522	5,043	25,215	0	0	0	2,522	5,043	25,215
1967	2,774	5,548	27,739	0	0	0	2,774	5,548	27,739
1968	3,050	6,102	30,513	0	0	0	3,050	6,102	30,513
1969	3,358	6,714	33,567	0	0	0	3,358	6,714	33,567
1970	3,692	7,385	36,925	4,034	0	0	7,726	7,385	36,925
1971	4,061	8,123	40,617	-4,034	0	0	27	8,123	40,617

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G3b

Effect on Gains of Proposed MDBG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1925 with $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis

(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	0.2% of Net Premiums (1)	0.4% of Net Premiums (2)	2% of Net Premiums (3)	0.2% of Net Premiums (4)	0.4% of Net Premiums (5)	2% of Net Premiums (6)	0.2% of Net Premiums (7)	0.4% of Net Premiums (8)	2% of Net Premiums (9)
1926	$ 3	$ 6	$ 32	$ 0	$ 0	$ 0	$ 3	$ 6	$ 32
1927	7	13	63	0	0	0	7	13	63
1928	9	19	94	0	0	0	9	19	94
1929	13	25	126	0	0	0	13	25	126
1930	15	32	161	0	0	0	15	32	161
1931	20	40	199	328	260	0	348	300	199
1932	110	48	240	936	998	526	1,046	1,046	766
1933	57	56	282	202	203	-23	259	259	259
1934	98	93	331	443	448	210	541	541	541
1935	20	50	381	-115	-145	-476	-95	-95	-95
1936	0	87	436	-1,140	-1,227	-237	-1,140	-1,140	199
1937	0	100	498	-611	-537	0	-611	-437	498
1938	14	112	562	441	169	0	455	281	562
1939	38	127	635	140	51	0	178	178	635
1940	142	143	714	634	633	0	776	776	714
1941	120	160	799	484	444	0	604	604	799
1942	404	178	893	1,760	1,986	0	2,164	2,164	893
1943	0	199	995	-1,984	-2,183	0	-1,984	-1,984	995
1944	0	222	1,109	-822	-1,044	0	-822	-822	1,109
1945	0	246	1,231	-507	-56	0	-507	190	1,231
1946	45	274	1,367	-189	0	0	-144	274	1,367
1947	151	302	1,514	98	0	0	249	302	1,514
1948	168	336	1,678	-25	0	0	143	336	1,678
1949	185	371	1,855	242	0	0	427	371	1,855
1950	205	410	2,052	-315	0	0	-110	410	2,052
1951	228	454	2,267	0	0	0	228	454	2,267
1952	249	500	2,502	0	0	0	249	500	2,502
1953	277	553	2,763	0	0	0	277	553	2,763
1954	304	609	3,046	0	0	0	304	609	3,046
1955	337	672	3,360	0	0	0	337	672	3,360
1956	370	741	3,703	0	0	0	370	741	3,703
1957	408	816	4,081	0	0	0	408	816	4,081
1958	449	899	4,496	0	0	0	449	899	4,496
1959	496	991	4,953	0	0	0	496	991	4,953
1960	545	1,090	5,453	0	0	0	545	1,090	5,453
1961	600	1,201	6,006	0	0	0	600	1,201	6,006
1962	662	1,323	6,612	0	0	0	662	1,323	6,612
1963	727	1,455	7,277	0	0	0	727	1,455	7,277
1964	801	1,602	8,011	0	0	0	801	1,602	8,011
1965	883	1,764	8,817	0	0	0	883	1,764	8,817
1966	969	1,940	9,702	0	0	0	969	1,940	9,702
1967	1,069	2,136	10,678	0	0	0	1,069	2,136	10,678
1968	1,174	2,349	11,747	0	0	0	1,174	2,349	11,747
1969	1,293	2,586	12,927	0	0	0	1,293	2,586	12,927
1970	1,422	2,844	14,222	1,571	0	0	2,993	2,844	14,222
1971	1,565	3,130	15,649	-1,571	0	0	-6	3,130	15,649

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G3c

Effect on Gains of Proposed MDBG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1945 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
(amounts in thousands of dollars)

Policy Year Ending July	Charge (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations Are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	0.2% of Net Premiums (1)	0.4% of Net Premiums (2)	2% of Net Premiums (3)	0.2% of Net Premiums (4)	0.4% of Net Premiums (5)	2% of Net Premiums (6)	0.2% of Net Premiums (7)	0.4% of Net Premiums (8)	2% of Net Premiums (9)
1946	$ 3	$ 6	$ 32	$ 0	$ 0	$ 0	$ 3	$ 6	$ 32
1947	7	13	63	4	0	0	11	13	63
1948	9	19	94	4	0	0	13	19	94
1949	13	25	126	8	0	0	21	25	126
1950	15	32	161	-16	0	0	-1	32	161
1951	20	40	199	0	0	0	20	40	199
1952	25	48	240	0	0	0	25	48	240
1953	27	56	282	0	0	0	27	56	282
1954	34	67	331	0	0	0	34	67	331
1955	38	76	381	0	0	0	38	76	381
1956	43	87	436	0	0	0	43	87	436
1957	51	100	498	0	0	0	51	100	498
1958	55	112	562	0	0	0	55	112	562
1959	64	127	635	0	0	0	64	127	635
1960	72	143	714	0	0	0	72	143	714
1961	80	160	799	0	0	0	80	160	799
1962	88	178	893	0	0	0	88	178	893
1963	100	199	995	0	0	0	100	199	995
1964	111	222	1,109	0	0	0	111	222	1,109
1965	123	246	1,231	0	0	0	123	246	1,231
1966	137	274	1,367	0	0	0	137	274	1,367
1967	151	302	1,514	0	0	0	151	302	1,514
1968	168	336	1,678	0	0	0	168	336	1,678
1969	185	371	1,855	0	0	0	185	371	1,855
1970	205	410	2,052	492	0	0	697	410	2,052
1971	228	454	2,267	-492	0	0	-264	454	2,267

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDBG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDBG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit G3d

Effect on Gains of Proposed MDRG Reserve System for EQUITABLE TYPE Design

Model Company Issuing Variable Whole Life Policies to Males
Commencing Business in July 1915 With $100 Million of Issues Increasing 10% Per Year
Where Investment Experience of Separate Account Follows Standard and Poor's 500 Stock Index,
Dividends Reinvested, ½ Percent Annual Charge, No Federal Tax Deducted,
on 1958 CSO Male 3% Traditional Net Level Reserve Basis
ASSUMES 1960 TO 1971 INVESTMENT EXPERIENCE SAME AS 1930 TO 1941
(amounts in thousands of dollars)

Policy Year Ending July	Charges (+) or Credit (-) Due to Retrospective Accumulation Where Annual Allocations Are			Additional Charge (+) or Credit (-) Due to Two Part Minimum Reserve Where Annual Allocations are			Total Charge (+) or Credit (-) Where Annual Allocations Are		
	0.2% of Net Premiums (1)	0.4% of Net Premiums (2)	2% of Net Premiums (3)	0.2% of Net Premiums (4)	0.4% of Net Premiums (5)	2% of Net Premium (6)	0.2% of Net Premiums (7)	0.4% of Net Premiums (8)	2% of Net Premiums (9)
1916	$ 3	$ 6	$ 32	$ 0	$ 0	$ 0	$ 3	$ 6	$ 32
1917	7	13	63	1	0	0	8	13	63
1918	9	19	94	17	0	0	26	19	94
1919	13	25	126	-18	0	0	-5	25	126
1920	15	32	161	28	0	0	43	32	161
1921	20	40	199	159	119	0	179	159	199
1922	25	48	260	-165	-119	0	-140	-71	260
1923	27	56	282	31	0	0	58	56	282
1924	34	67	331	-53	0	0	-19	67	331
1925	38	76	381	0	0	0	38	76	381
1926	43	87	436	0	0	0	43	87	436
1927	51	100	498	0	0	0	51	100	498
1928	55	112	562	0	0	0	55	112	562
1929	64	127	635	0	0	0	64	127	635
1930	72	143	714	0	0	0	72	143	714
1931	80	160	799	497	0	0	577	160	799
1932	470	178	893	5,759	5,993	836	6,229	6,171	1,729
1933	172	199	995	-649	-676	-836	-477	-477	159
1934	356	222	1,110	1,467	1,601	78	1,823	1,823	1,188
1935	52	246	1,231	-1,148	-1,342	-78	-1,096	-1,096	1,153
1936	0	274	1,367	-4,199	-4,473	0	-4,199	-4,199	1,367
1937	0	302	1,514	-1,616	-1,103	0	-1,616	-801	1,514
1938	37	336	1,678	1,498	384	0	1,535	720	1,678
1939	52	371	1,855	537	218	0	589	589	1,855
1940	433	410	2,052	1,641	1,664	0	2,074	2,074	2,052
1941	317	454	2,267	826	689	0	1,143	1,143	2,267
1942	1,203	500	2,502	5,104	5,807	0	6,307	6,307	2,502
1943	0	553	2,763	-5,779	-6,332	0	-5,779	-5,779	2,763
1944	0	609	3,046	-1,962	-2,430	-60	-1,962	-1,821	2,986
1945	0	672	3,360	-1,487	0	60	-1,487	672	3,420
1946	0	741	3,703	-427	0	0	-427	741	3,703
1947	349	816	4,081	349	0	0	698	816	4,081
1948	449	899	4,496	-77	0	0	372	899	4,496
1949	496	991	4,953	611	0	0	1,107	991	4,953
1950	545	1,090	5,453	-945	0	0	-400	1,090	5,453
1951	600	1,201	6,006	0	0	0	600	1,201	6,006
1952	662	1,323	6,612	0	0	0	662	1,323	6,612
1953	727	1,455	7,277	0	0	0	727	1,455	7,277
1954	801	1,602	8,011	0	0	0	801	1,602	8,011
1955	883	1,764	8,817	0	0	0	883	1,764	8,817
1956	969	1,940	9,702	0	0	0	969	1,940	9,702
1957	1,069	2,136	10,678	0	0	0	1,069	2,136	10,678
1958	1,174	2,349	11,747	0	0	0	1,174	2,349	11,747
1959	1,293	2,586	12,927	0	0	0	1,293	2,586	12,927
1960	1,422	2,844	14,222	0	0	0	1,422	2,844	14,222
1961	1,565	3,130	15,649	28,987	12,335	0	30,552	15,465	15,649
1962	14,557	3,643	17,215	124,944	136,058	1,406	139,501	139,501	18,621
1963	7,627	3,788	18,939	14,571	18,416	3,259	22,198	22,198	22,198
1964	12,753	11,054	20,836	46,554	48,253	38,471	59,307	59,307	59,307
1965	4,474	4,474	22,921	-8,934	-8,934	-27,381	4,460	-4,460	-4,460
1966	0	0	25,215	-89,914	-89,914	-15,755	-89,914	-89,914	9,460
1967	0	3,814	27,739	-71,428	-75,242	0	-71,428	-71,428	27,739
1968	2,251	6,102	30,513	9,896	6,045	0	12,147	12,147	30,513
1969	3,457	6,714	33,567	11,906	8,649	0	15,363	15,363	33,567
1970	14,198	7,385	36,925	58,884	65,697	0	73,082	73,082	36,925
1971	11,633	8,123	40,617	34,044	37,554	0	45,677	45,677	40,617

Note: In subdividing charges and credits between those due to the retrospective accumulation and those due to the two part minimum reserve, we have assumed that even without the two part minimum reserve, the retrospective accumulation would not be permitted to be negative. Therefore, the charge or credit due to the retrospective accumulation equals the year's MDRG claims plus the year's increase or decrease in the retrospective accumulation with any negative accumulation taken as zero for this purpose. The total charge or credit equals the year's MDRG claims plus the year's increase or decrease in the actual reserve held so that the additional charge or credit due to the two part minimum is the difference.

Exhibit H

Illustration of Attained Age Level Method per $1,000 for a Whole Life Policy Issued to a Male Age 55 Where The Separate Account Earns a Constant 3% Beginning in The Eleventh Policy Year After Having Earned a Negative 3% in Each of The First Ten Policy Years

(1958 CSO 3% Traditional Net Level Reserve Basis)

	New York Life Design				Fully Variable Design				Equitable Type Design			
Policy Year	Deficiency in Face Amount (1)	Residue of Prior Reserve (2)	AAL Payment (3)	Current Reserve (2)+(3) (4)	Deficiency in Face Amount (5)	Residue of Prior Reserve (6)	AAL Payment (7)	Current Reserve (6)+(7) (8)	Deficiency in Face Amount (9)	Residue of Prior Reserve (10)	AAL Payment (11)	Current Reserve (10)+(11) (12)
1	$ 58	$ 0	$ .11	$ .11	$ 58	$ 0	$ 2.39	$ 2.39	$ 4	$ 0	$ .16	$ .16
2	81	0	.32	.32	113	.87	4.81	5.68	10	.02	.45	.47
3	103	0	.63	.63	165	3.34	7.21	10.55	19	.19	.85	1.04
4	124	0	1.05	1.05	213	7.36	9.59	16.95	30	.57	1.36	1.93
5	145	0	1.58	1.58	259	12.87	11.95	24.82	42	1.24	2.00	3.24
6	164	0	2.23	2.23	302	19.82	14.29	34.11	56	2.24	2.75	4.99
7	184	0	2.99	2.99	343	28.13	16.62	44.75	71	3.65	3.63	7.28
8	202	0	3.88	3.88	381	37.74	18.93	56.67	88	5.50	4.62	10.12
9	220	0	4.91	4.91	417	48.58	21.24	69.82	105	7.84	5.74	13.58
10	237	0	6.08	6.08	451	60.56	23.53	84.09	123	10.72	6.99	17.71
11	207	0	6.05	6.05	451	74.66	23.53	98.19	123	14.79	6.99	21.78
12	183	0	6.03	6.03	451	88.54	23.53	112.07	123	18.79	6.99	25.78
13	164	0	6.03	6.03	451	102.15	23.53	125.68	123	22.72	6.99	29.71
14	147	.08	6.03	6.11	451	115.45	23.53	138.98	123	26.56	6.99	33.55
15	133	.22	6.03	6.25	451	128.43	23.53	151.96	123	30.31	6.99	37.30
16	121	.40	6.03	6.43	451	141.08	23.53	164.61	123	33.96	6.99	40.95
17	111	.64	6.03	6.67	451	153.42	23.53	176.95	123	37.52	6.99	44.51
18	102	.93	6.03	6.96	451	165.50	23.53	189.03	123	41.01	6.99	48.00
19	94	1.28	6.03	7.31	451	177.38	23.53	200.91	123	44.43	6.99	51.42
20	87	1.69	6.03	7.72	451	189.08	23.53	212.61	123	47.81	6.99	54.80
21	81	2.15	6.03	8.18	451	200.60	23.53	224.13	123	51.14	6.99	58.13
22	76	2.64	6.03	8.67	451	211.91	23.53	235.44	123	54.40	6.99	61.39
23	71	3.14	6.03	9.17	451	222.94	23.53	246.47	123	57.58	6.99	64.57
24	66	3.62	6.03	9.65	451	233.61	23.53	257.14	123	60.66	6.99	67.65
25	62	4.06	6.03	10.09	451	243.87	23.53	267.40	123	63.63	6.99	70.62
26	58	4.46	6.03	10.49	451	253.70	23.53	277.23	123	66.46	6.99	73.45
27	55	4.82	6.03	10.85	451	263.08	23.53	286.61	123	69.17	6.99	76.16
28	52	5.13	6.03	11.16	451	272.06	23.53	295.59	123	71.76	6.99	78.75
29	49	5.42	6.03	11.45	451	280.69	23.54	304.23	123	74.25	6.99	81.24
30	46	5.70	6.03	11.73	451	289.01	23.54	312.55	123	76.65	6.99	83.64
31	44	5.97	6.03	12.00	451	297.09	23.54	320.63	123	78.98	6.99	85.97
32	42	6.24	6.03	12.27	451	304.96	23.53	328.49	123	81.26	6.99	88.25
33	39	6.54	6.03	12.57	451	312.69	23.54	336.23	123	83.49	6.99	90.48
34	38	6.87	6.03	12.90	451	320.36	23.54	343.90	123	85.70	6.99	92.69
35	36	7.24	6.03	13.27	451	328.03	23.53	351.56	123	87.91	6.99	94.90
36	34	7.68	6.03	13.71	451	335.75	23.54	359.29	123	90.15	6.99	97.14
37	32	8.18	6.03	14.21	451	343.61	23.55	367.16	123	92.41	6.99	99.40
38	31	8.76	6.03	14.79	451	351.69	23.55	375.24	123	94.75	6.99	101.74
39	29	9.46	6.03	15.49	451	360.13	23.55	383.68	123	97.18	6.99	104.17
40	28	10.33	6.03	16.36	451	369.19	23.55	392.74	123	99.80	6.99	106.79
41	27	11.42	6.03	17.45	451	379.21	23.55	402.76	123	102.69	6.99	109.68
42	26	12.81	6.03	18.84	451	390.49	23.53	414.02	123	105.95	6.99	112.94
43	25	14.43	6.03	20.46	451	402.75	23.56	426.31	123	109.48	7.00	116.48
44	24	15.97	6.03	22.00	451	414.58	23.54	438.12	123	112.90	6.99	119.89
45	23	-.34*			451	.26*			123	.49*		

* equals reserve end of 44th year increased with interest, less deficiency in face amount at end of 45th year. Result would be zero except for rounding.

Exhibit I

$1 Billion of Model Issues of Variable Whole Life Policies on Males Where the Separate Account Earns a Constant 3% Beginning in the Eleventh Policy Year After Having Earned a Negative 3% in Each of the First Ten Policy Years
(1958 CSO 3% Traditional Net Level Reserve Basis-Amounts in Thousands)

Policy Years	Basic Net Premiums (1)	No Reserve System i.e. Actual MDBG Claims (2)	Total MDBG Charges to Operations Without AAL Minimum (3)	Total MDBG Charges to Operations With AAL Minimum (4)	MDBG Claims as Percent of Premiums Claims (2)÷(1) (5)	MDBG Charges as Percent of Premiums Without AAL (3)÷(1) (6)	MDBG Charges as Percent of Premiums With AAL (4)÷(1) (7)
			NEW YORK LIFE DESIGN				
1 to 10	$114,213	$ 2,725	$ 4,300	$ 4,300	2.4%	3.8%	3.8%
11 to 20	74,027	4,500	4,938	7,471	6.1	6.7	10.1
21 to 30	50,289	4,371	4,941	5,647	8.7	9.8	11.2
31 to 40	30,840	4,364	4,593	3,527	14.2	14.9	11.4
41 to 50	15,816	3,904	3,473	1,895	24.7	22.0	12.0
51 & Over	7,930	3,833	1,452	857	48.3	18.3	10.8
Total	$293,115	$ 23,697	$ 23,697	$ 23,697	8.1%	8.1%	8.1%
			FULLY VARIABLE DESIGN				
1 to 10	$ 91,049	$ 4,719	$ 6,966	$ 27,857	5.2%	7.7%	30.6%
11 to 20	40,567	13,604	14,663	37,487	33.5	36.1	92.4
21 to 30	27,558	22,044	23,132	28,792	80.0	83.9	104.5
31 to 40	16,901	27,969	28,423	18,712	165.5	168.2	110.7
41 to 50	8,669	28,219	27,484	10,206	325.5	317.0	117.7
51 & Over	4,345	31,738	27,625	5,239	730.4	635.8	120.6
Total	$189,089	$128,293	$128,293	$128,293	67.8%	67.8%	67.8%
			EQUITABLE TYPE DESIGN				
1 to 10	$114,213	$ 859	$ 1,538	$ 4,695	0.8%	1.3%	4.1%
11 to 20	74,027	3,270	4,005	8,899	4.4	5.4	12.0
21 to 30	50,289	5,117	5,906	6,580	10.2	11.7	13.1
31 to 40	30,840	6,148	6,585	4,104	19.9	21.4	13.3
41 to 50	15,816	5,879	5,586	2,143	37.2	35.3	13.5
51 & Over	7,930	6,190	3,843	1,042	78.1	48.5	13.1
Total	$293,115	$ 27,463	$ 27,463	$ 27,463	9.4%	9.4%	9.4%

PROPERTY AND LIABILITY (D) COMMITTEE

Reference:
1972 Proc. Vol. I p. 609
1972 Proc. Vol. II p. 488

John A. Durkin, Chairman - New Hampshire
John W. Lindsay, Vice-Chairman - South Carolina

AGENDA

1. Receive report of Rates and Rating Organizations (D1) Subcommittee.
2. Receive report of Availability of Essential Insurance (D2) Subcommittee.
3. Receive report of Automobile Insurance Problems (D3) Subcommittee.
4. Receive report of Mass Marketing in P & L Insurance (D5) Subcommittee.
5. Receive report of Prepaid Legal Expense (D6) Subcommittee.
6. Any other matters brought before the Committee.

The Property and Liability (D) Committee met in the Lancaster Room at 3:45 p.m., December 7, 1972 at the Hyatt Regency Hotel, Atlanta, Georgia. A quorum was present.

The report of the Rates and Rating Organizations (D1) Subcommittee was presented by the Chairman, Hon. Dick L. Rottman of Nevada.

Mr. William McCaskill expressed his belief that the field examinations task force should be continued in an effort to provide uniformity in field rating examinations.

In executive session the (D) Committee adopted the report of the (D1) Subcommittee.

The report of the Availability of Essential Insurance (D2) Subcommittee was submitted by Mr. Ken Ellis, Ohio Department. In executive session the (D) Committee unanimously adopted the report.

The Automobile Insurance Problems (D3) Subcommittee report was given by the Hon. Samuel H. Weese of West Virginia. In executive session the (D) Committee unanimously adopted the (D3) Subcommittee report.

The Mass Marketing in Property and Liability Insurance (D5) Subcommittee report was given by the Chairman, Hon. Samuel H. Weese. In executive session the (D) Committee unanimously adopted the (D5) Subcommittee report.

The report of the Prepaid Legal Expense (D6) Subcommittee was presented by Hon. John G. Ryan of Massachusetts. In executive session the (D) Committee unanimously adopted the (D6) Subcommittee report.

Mr. Robert Rowe of Michigan reported on behalf of the task force on title insurance. There is progress being made; however, it was not likely that action could be taken until the June,

1973 NAIC meeting. Following discussion of this area, the following resolution was proposed by Hon. J. Richard Barnes of Colorado and adopted by the (D) Committee:

WHEREAS: there has been growing interest in legislation to regulate title insurance, including attempted action by agencies of the federal government; and

WHEREAS: a task force of the NAIC Property and Liability Insurance (D) Committee has been developing model legislation for the regulation of title insurance; now, therefore, be it

RESOLVED: by the National Association of Insurance Commissioners, December 7, 1972 that the supervision and regulation of the business of title insurance is and should continue to be the responsibility of the respective states; and be it further

RESOLVED: that a Subcommittee of the Laws, Legislation and Regulation (B) Committee be designated to proceed with dispatch in drafting a model title insurance law for adoption by the NAIC as a means towards promoting uniformity of the operation and regulation of title insurance.

There being no further business, the Property and Liability (D) Committee adjourned.

Hon. John A. Durkin, Chairman, New Hampshire; Hon. John W. Lindsay, Vice-Chairman, South Carolina; Hon. Edward P. Lombard, D. C.; Hon. Joaquin G. Blaz, Guam; Hon. Edwin H. Honda, Hawaii; Hon. Thomas J. Hatem, Maryland; Hon. John G. Ryan, Massachusetts; Hon. Elmer V. Omholt, Montana; Hon. Ralph F. Apodaca, New Mexico; Hon. Benjamin R. Schenck, New York; Hon. Joe B. Hunt, Oklahoma; Hon. Herbert S. Denenberg, Pennsylvania; Hon. Ralph A. Nauman, South Dakota; Hon. Charles F. Black, Vermont; Hon. Karl V. Herrmann, Washington; Hon. Samuel H. Weese, West Virginia.

RATES AND RATING ORGANIZATIONS (D1) SUBCOMMITTEE

Reference:
1972 Proc. Vol. I p. 611
1972 Proc. Vol. II p. 505

Dick L. Rottman, Chairman - Nevada
Berton W. Heaton, Vice-Chairman - Minnesota

AGENDA

1. Report of the Task Force on the Establishment of Uniform Procedure and Reports for Field Examination.
2. Discussion of the new Fire Grading Schedule for Cities and Towns - Mr. Edwin Searl of ISO.
3. Consideration of urban fire rating problems with emphasis on availability of coverage at affordable rates.
4. ISO capability to perform their intended functions (Washington, D. C.)
5. Problems regarding frequency and timing of rate filings (South Carolina).
6. Any other matters brought before the Subcommittee.