LIFE INSURANCE (A) COMMITTEE

Reference:
1982 Proc. I p. 343

J. Richard Barnes, Chairman – Colorado
James R. Montgomery, III, Vice-Chairman – District of Columbia

AGENDA

1. Report of joint meeting of representatives of various (A) task forces.
2. Report of the Life Cost Disclosure Task Force.
3. Report of the Manipulation, Lapsation, Dividend Practices and Annuity Disclosure Task Force.
4. Report of the Group Life and Health Insurance Task Force.
5. Report of the Home Service Life and Health Insurance Task Force.
6. Report of the Variable Life Insurance Regulation Task Force.
7. Federal taxation impact on new products.
8. Possible liberalization of fraternal life laws.
9. New product developments and resulting problems.
10. Related financial services by life companies and affiliates.
11. Any other matters brought before the committee.

CONTENTS

The Life Insurance (A) Committee met in the Canadian Ballroom of the Franklin Plaza in Philadelphia, Pennsylvania, at 1:30 p.m. on June 10, 1982. A quorum was present, consisting of: J. Richard Barnes, chairman, Colorado; James R. Montgomery III, vice-chairman, District of Columiba; Robert C. Quinn, California; Johnnie L. Caldwell, Georgia; Walter D. Weaver, Nebraska; Albert B. Lewis, New York; and Josephine M. Driscoll, Oregon. Not represented were Arkansas and Wisconsin.

The chairman reported that on Monday morning, June 7, the chairpersons of certain task forces reporting to this committee, and of the Securities and Insurance Regulation (EX) Task Force, met to discuss the problems of overlapping activities, with the objective of eliminating duplicate effort. As a result of this meeting, new directives will go to each task force which is continued, specifically outlining its mission. It will establish a reporting date of September 19 in Nashville with a final report targeted for the week of November 28 in Dallas. The chairman reported that the (A) Committee met on April 6, 1982 in Oklahoma City, Oklahoma. (Attachment One) *[Editor's Note — The Executive Committee noted that the (A) Committee report from Oklahoma City was adopted. See p. 14]*

1. Report of the Life Cost Disclosure Task Force

The Life Cost Disclosure (A) Task Force reported meeting on June 8. The chairman read a statement which referred to the historical background of the task force and its progress to date. They voted to receive a proposed revision of the NAIC Life Insurance Solicitation Model Regulation submitted by the staff of ACLI with no task force status. This proposal then begins the study of all pertinent information relative to the subject matter of cost disclosure which will, hopefully, be concluded by a task force recommendation at the November meeting in Dallas, Texas. All parties were encouraged to submit to the task force material which can be considered by it in future deliberations.

It was pointed out that the attachments to the task force report had been erroneously collated, but would be corrected before inclusion in the printed Proceedings. Pages 8 through about 47 are from a different report.

The committee received the report, and recommended continuation of the task force for the balance of 1982.

2. Report of the Manipulation, Lapsation, Dividend Practices, and Annuity Disclosure Task Force

Erma Edwards presented the report on behalf of Commissioner Redmond. Jim Montgomery of the District of Columbia questioned the recommendations of the American Council of Life Insurance as reported in the task force report. John Booth of ACLI indicated that they had a concern with obsolete rates of return which may be shown on annuity presentations.

He also indicated a serious concern that, if the rates of return were required to be shown in each instance, the SEC may well interpret that some of the annuity products are securities and subject to its regulation.

Al Alpert of New York questioned the report on lapsation material being published and made public. It was indicated that the task force did not intend that the material be used in sales presentations, but that it should be available to commissioners for their regulatory use.

The report of the task force was received, and the committee recommended the continuation of the task force through 1982.

3. Report of the Group Life and Health Insurance Task Force

Task Force Chairman, Walter D. Weaver of Nebraska indicated that there was no report from the task force pertaining to group life insurance. He moved that the task force be discharged only as it pertains to group life insurance functions, but retained for accident and health. Discussion by Irene Alpert of New York, and members of the ACLI, indicated the possible need to consider dividends and compensation to group policyholders, which would include life insurance.

The committee received the report and recommended the continuation of the task force through 1982, with the hope that any matters relating to life insurance could be promptly completed.

4. Report of the Home Service Life and Health Insurance Task Force

James Montgomery, vice-chairman of the task force, reported that there was no final report or recommendation available. He moved, and the committee adopted his motion, that the task force continue through 1982.

5. Report of the Variable Life Insurance Task Force

Chairman Robert C. Quinn, California, delivered the report which had been previously printed. The Variable Life Insurance Task Force had met and accepted the report of its advisory committee as an exposure draft, this being the ACLI draft. The task force asked that a technical actuarial group be authorized to assist them.

The report was received along with the committee's recommendation for the continuation of the task force through 1982.

6. Report of Federal Tax Impact on New Products

Chairman Barnes reported that this subject is being considered by the Securities and Insurance Regulation Task Force which reports to the Executive Committee. Therefore, no action will be taken by the Life Insurance (A) Committee.

7. Possible Liberalization of Fraternal Life Insurance Laws

The chairman indicated that he had information indicating that the National Fraternal Congress is considering making a recommendation for possible changes in the model fraternal law which would permit fraternal insurance organizations to become more competitive with other life insurance companies. Since their report is not yet available, this subject will be carried forward to a future meeting.

8. New Product Developments and Resulting Problems

Jim Jackson of Transamerica/Occidental Life gave a brief expression of the background and concern of the new so-called "Universal Life" products. He reported that several states have prepared regulations or guidelines, and that the industry feels a strong need for uniformity between states.

Chairman Barnes proposed a recommendation to the Executive Committee that a task force with an industry advisory committee be appointed. He presented a written recommendation, which included the issues to be covered by such task force if approved by the Executive Committee. The (A) Committe unanimously adopted the recommendation, a copy of which is attached to this report. (Attachment Two)

9. Related Financial Services by Life Companies and Affiliates

The chairman indicated that Arkansas had asked that this subject be placed on the agenda. No one was present from Arkansas to make their presentation. However, the chairman reported that some insurance companies are considering getting into other fields, either directly or through affiliated companies. Some of these included the marketing of money market certificates and other types of financial instruments not considered insurance products. This subject will be carried over to the next meeting with an invitation to all interested to present written comments to the (A) Committee.

10. Other Matters

Ted Becker, actuary with the Texas State Board of Insurance and speaker for the Life, Accident and Health Technical Staff Actuarial Group, recommended that the (A) Committee take the following actions:

a. Adoption of a new actuarial guideline entitled "Interpretation of the Standard Nonforfeiture Law for Life Insurance with Respect to the Operative Date of Section 5-c."

b. Adoption of certain changes in existing Actuarial Guideline II entitled "Valuation of Active Life Funds held Relative to Group Annuity Contracts."

c. Adoption of a new individual annuity mortality table, the 1983 Table "a", for use in computing minimum reserves for individual annuities.

These recommendations are explained in more detail in the group's long report *(See Attachment Four)* in attachments No. 9 and No. 11. Commissioner Fletcher Bell of Kansas wrote a letter to Chairman Barnes urging that the (A) Committee adopt the first recommendation. Commissioner Barnes read the letter into the record, and it is attached to this report. (Attachment Three)

After considerable discussion, with input from several in the audience, the (A) Committee adopted a motion to defer action on the first recommendation until December, and to assign the matter back to the group for further discussion. The committee did adopt the second and third recommendations. As a follow-up to the adoption of the third recommendation, the (A) Committee adopted a motion requesting the Technical Staff Actuarial

Group to develop a model regulation which commissioners could use to approve the 1983 Table "a" in their individual states. The committee also adopted a motion to receive the long paper and two-page update presented by Mr. Becker. Moreover, the committee adopted a motion to table discussion of the Life, A & H Technical Staff Actuarial Group's role in working on matters related to universal life insurance. Pursuant to the motion of Acting Superintendent Montgomery, the (A) Committee adopted a motion requesting the group to study current mortality rates under industrial insurance and to make recommendations as to the continued use of separate mortality tables. Finally, in response to Mr. Becker's request that the (A) Committee take the proper steps to extend the group's existence beyond June 1982, Chairman Barnes stated that this matter would be taken up later in the Executive Committee meeting.

Having no further business, the Life Insurance (A) Committee adjourned at 3:00 p.m.

J. Richard Barnes, chairman, Colorado; James R. Montgomery, III vice-chairman, District of Columbia; William H. L. Woodyard, III, Arkansas; Robert C. Quinn, California; Johnnie L. Caldwell, Georgia; Walter D. Weaver, Nebraska; Albert B. Lewis, New York; Josephine M. Driscoll, Oregon; Susan Mitchell, Wisconsin.

ATTACHMENT ONE

LIFE INSURANCE (A) COMMITTEE

Oklahoma City, Oklahoma
April 6, 1982

The Life Insurance (A) Committee met in the 20th Century Room of the Sheraton in Oklahoma City, Oklahoma at 9:00 a.m. on April 6, 1982. A quorum was present. J. Richard Barnes chaired the meeting. The following committee members or their designees were present: J. Richard Barnes, chairman (Colorado); William H. L. Woodyard, III (Arkansas); Johnnie L. Caldwell (Georgia); Walter D. Weaver (Nebraska); Albert B. Lewis (New York); Josephine M. Driscoll (Oregon); Susan Mitchell (Wisconsin).

The following committee members were absent: James R. Montgomery, III, vice-chairman (District of Columbia); Robert C. Quinn (California).

1. Objectives of the New (A) Committee

The chairman indicated that he had conducted a survey of the committee members asking for suggestions and the order of priority of the top five subjects each felt needed to be handled. He had also asked for the suggested priority to be applied to the task forces, and for other comments the committee members may have. Without placing the compilation in any order of priority, the following were included in the responses:

a. Simple disclosure form for universal type life products, as well as other simplified cost disclosure methods.

b. Review of Replacement Regulation along with discussion of problems of mass replacements.

c. Manipulation, Lapsation, Dividend Practices and Annuity Disclosure.

d. Prompt completion of the model Group Life and Health Law.

e. Impact of possible IRS Tax Rulings relating to the new universal life type products.

f. Life insurance companies entering into other financial areas and the problems relating as a result.

g. Improved policy form approval system.

The chairman indicated his philosophy as being one of committee members' involvement, not just receiving of task force reports. He expects the committee and its members to perform an active roll and not a passive roll. Each committee member must become involved and contribute to the solving of problems and arriving at solutions. He expressed the urgent need to coordinate the activities of the task forces, establishing field of responsibility of each, eliminating duplication, even if it means merging of task forces. Full coordination with other task forces must be had where appropriate.

2. Life Cost Disclosure–Emphasis on New "Universal Life" Type Products

Michael J. Sabbagh, Massachusetts commissioner and chairman of the Life Cost Disclosure Task Force indicated his concern and his task force's concern about overlapping responsibilities and the need for coordination. His task force had met on April 5, 1982. To date, they had no recommendation for action. Their written report was received to be an attachment to the (A) Committee report.

3. Manipulation, Lapsation, Dividend Practices and Annuity Disclosure

Erma Edwards, Nevada, representing Commissioner Patsy Redmond, reported that this task force will be meeting at 2:00 p.m. today. Thus they had no full report. There had previously been an exposure draft of a Model Annuity Regulation, an actuarial report, and recommendations relating to the consumer guide prepared. She further indicated that the lapsation study has been completed and distributed as found in Vol. II of the 1981 Proceedings.

Keith Sloan, Kentucky Department, indicated that the persistency study provides a way of triggering attention to problems resulting from high lapses. Al Alpert, of the New York Department, reported briefly on New York's efforts in studying and applying their findings on the impact of lapsation.

4. Revision of Replacement Regulations

The chairman indicated having received numerous comments of concern from various states indicating the need for updating and revising the Model Replacement Regulation. He called on Bob Demichelis of ACLI to give a report on the status of states having adopted or amended the model regulation.

16 states have adopted the 1978 model

7 additional states adopted that model, eliminating the comparison illustration

3 states have adopted it with other modifications

13 additional states have the old 1969 model

Florida has a regulation unique unto itself, and 11 jurisdictions have no regulation. South Dakota currently has legislation addressing the privacy questions brought out by the Colorado Supreme Court decision.

It was pointed out that the Life Cost Disclosure Task Force has the assignment to cover the replacement regulation and make recommendations for changes. The ACLI urges the coordination of replacement and cost disclosure regulations.

Keith Sloan stated that the replacement and disclosure regulations have never adequately addressed the needs of the public. Jay Applebaum of TIAA expressed the concern that none of the disclosure forms to-date had properly or adequately handled annuity policies.

5. Regulatory Concerns Relating to the Trend Toward Full Financial Service Companies

Commissioner Woodyard expressed the concern of many regulators on how we should approach the treatment of companies moving into the full financial services field. This committee should coordinate with the Securities and Insurance Regulation Task Force in developing a comprehensive approach. There are problems relating to conflicting and overlapping responsibility for regulation between different regulatory authorities. Jack Blaine of ACLI indicated that they have a working task force from among their directors preparing a report on this subject with recommendations. He does not know when, or if, it will become a public document. He also indicated that New York has a study underway on this subject.

6. Other Matters

The following additional items were discussed:

It is indicated that the Fraternal Congress is concerned about the need for amending laws relating to their activities in order to give them the flexibility to better compete in the new product market.

Bill White, chief actuary, New Jersey, reported on their special project pertaining to universal life. Their commissioner, on June 25, 1982, declared an 81-day moratorium on "Universal-Flexible Factor" type of policies. His staff was directed to (1) study the matter and issue a position paper on the subject; (2) conduct public hearings on March 10-11; (3) terminate the moratorium April 16 with the publishing of a set of guidelines. Reports and results have been mailed to each insurance department.

Some of the questions New Jersey conveyed included: (1) are these policies participting or non-participating; (2) the "Bait and Switch" potential; (3) disclosure; (4) Federal Income Tax aspects; (5) non-forfeiture values; (6) replacement problems. The concern was not just with the "twisting" replacements, but was the impact of justified replacements on the solvency of replaced companies.

New York reports that they have determined that Section 216 and 208, (a) and (b), and perhaps other sections of their law, prohibit the issuance of universal life type products. Their law is currently being amended to permit such policies.

Walter Weaver, director of Nebraska, reported that the Group Life and Health Task Force is waiting for a trade association position paper. The task force will meet May 19 to finalize their report for submission in June.

The chairman reported that an article in today's Wall Street Journal announces new products based on money market rates being introduced by Penn Mutual.

Ted Becker of the Texas Department reported that the technical task force, made up of staff actuarial persons, was progressing well with their work. He submitted a brief oral summary. A copy of his remarks are included as Attachment One.

The chairman asked for the task force chairmen of the Cost Disclosure, Manipulation, and Variable Life Task Forces to meet immediately following this meeting to arrange a joint work session between now and June. The objective will be to coordinate all activities and eliminate duplicate efforts. Following this meeting that group did decide on a closed meeting in San Francisco, at the California Department offices, on Tuesday, May 18, 1982. Details will be distributed. This is not an open meeting.

Having no further business to come before the committee, the committee adjourned at 10:20 a.m.

J. Richard Barnes, chairman, Colorado; James R. Montgomery, III, vice-chairman, District of Columbia; William H. L. Woodyard, III, Arkansas; Robert C. Quinn, California; Johnnie L. Caldwell, Georgia; Walter D. Weaver, Nebraska; Albert B. Lewis, New York; Josephine M. Driscoll, Oregon; Susan Mitchell, Wisconsin.

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ATTACHMENT ONE-A

Report to the Life Insurance (A) Committee
by Ted Becker

I am reporting on behalf of the NAIC Life, Accident and Health Technical Staff Actuarial Group. This is an informal group consisting mainly of state insurance department actuaries. It consists of essentially the same individuals who were members of the former (C4) group prior to the reorganization of the NAIC last June.

In accordance with the decision made at the NAIC meeting in New Orleans last December, our Staff Actuarial Group is working on six different topics in the life insurance area:

1. Standard Valuation Law and the Standard Nonforfeiture Law

2. Minimum Surplus

3. Universal Life and Related Plans

4. Other Special Plans Including Indeterminate Premium Plans

5. Variable Life Insurance and Variable Annuities

6. Mortality and Morbidity Studies

Our Staff Actuarial Group is also working on several accident and health topics, as directed by the Accident and Health (B) Committee.

The Staff Actuarial Group met at the Hyatt Regency Hotel in Houston last Saturday, April 3, and considered all of these topics. Five states were present.

We have the following specific recommendations for adoption by the (A) Committee at your June 1982 meeting in Philadelphia:

1. A new Actuarial Guideline in the Financial Condition Examiners Handbook which would specifically permit "plan-by-plan" election of an operative date under the 1980 amendments to the Standard Nonforfeiture Law. This operative date refers to the 1980 CSO Mortality Table, and would also trigger a dynamic interest rate and a new formula for calculation of the adjusted premiums.

2. Amending the manner of calculating the interest rate for the existing Actuarial Guideline II, dealing with reserves for active funds under group annuity contracts.

3. Adopting a new mortality table for individual annuities, the 1983 Table "a". This table was recently developed by a Society of Actuaries Committee.

The two actuarial guidelines are considered under the topic heading, "Standard Valuation Law and the Standard Nonforfeiture Law." The new mortality table was considered under the topic "Mortality and Morbidity Studies." There was discussion and progress on the other topics at our Houston meeting, but these are the only specific recommendations for the (A) Committee at your June 1982 meeting.

Our Staff Actuarial Group plans to meet again in Philadelphia on the weekend prior to the regular NAIC meeting. This would probably be Saturday, June 5, and Sunday, June 6.

Our Staff Actuarial Group would also like to request that we be specifically listed in the agenda for the Life Insurance (A) Committee meeting in June 1982.

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ATTACHMENT TWO

The, Life Insurance (A) Committee recommends to the Executive Committee that a task force with an industry advisory committee be appointed to be known as the "Universal Life Insurance Task Force."

The Universal Life Insurance (A) Task Force would be composed of five to seven members of the NAIC or their designees, with the advisory committee having a like number of individuals from the insurance industry who are knowledgeable of universal life products. The task force would be charged with gathering appropriate information and recommendations, holding hearings and developing a Model Universal Life Insurance Regulation. The regulation should address appropriate issues of regulatory concerns, including the following:

1. The manner in which "universal life insurance" plans, as defined, may comply with the standard nonforfeiture and standard valuation laws or the equivalent thereof.

2. The manner in which "universal life insurance" plans and the companies issuing such plans may appropriately anticipate future liabilities to assure the financial integrity of such companies to the extent such anticipation differs from number one above.

3. Any mandatory or prohibited policy design features of such policies.

4. The manner in which prospective purchasers of such plans are fairly and accurately appraised of the nature of such plans and the manner in which existing policyholders under such plans are informed of the nature and status of their purchase.

5. Any other legitimate regulatory concerns affecting the fair and accurate development, marketing and distribution (including replacement) of such life insurance plans; the administration of such life insurance plans; and the reasonable assurance of the financial integrity of those companies issuing such plans.

The task force would be charged to begin its deliberations at the earliest practicable date, to proceed with all due reasonable and prudent speed, and to report back on its progress to the parent Life Insurance (A) Committee at the September 19-22 Quarterly Meeting of the NAIC in Nashville, Tennessee.

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ATTACHMENT THREE

May 28, 1982

The Honorable J. Richard Barnes
Commissioner of Insurance
106 State Office Building
Denver, CO 80203

Re: Recommendations of the NAIC Life, A&H Technical Staff Actuarial Group June, 1982 Meeting of the NAIC

Dear Commissioner Barnes:

I urge the Life Insurance (A) Committee of the NAIC to adopt recommendation number one of the Life, A&H Technical Staff Actuarial Group at its meeting in Philadelphia in June. This recommendation calls for inclusion of a new actuarial guideline in the Financial Condition Examiners Handbook which would specifically permit "plan-by-plan" election of an operative date under Section 5-c of the Standard Nonforfeiture Law for Life Insurance (as amended in December, 1980).

The long and the short of this recommendation is that it will allow consumers to reap the benefits of the 1980 amendments, in the form of lower life insurance premiums, several years sooner than would be the case if the recommendation were not adopted. Some companies are ready to start writing insurance on the new basis as of right now. I think consumers have a right to start buying those new contracts right now.

I believe that adoption of this recommendation would be consistent with interpretations of earlier amendments to the Standard Nonforfeiture Law. It certainly would be consistent with the promises that were made by the industry when the current amendments were discussed at the NAIC and in the Kansas legislature. The NAIC should do everything in its power to assure that this promise to consumers is not broken.

I ask that this letter be included in the formal record of the Philadelphia meeting of the NAIC in June of 1982.

Very truly yours,

Fletcher Bell
Commissioner of Insurance

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ATTACHMENT FOUR

LIFE, ACCIDENT AND HEALTH INSURANCE TECHNICAL STAFF ACTUARIAL GROUP

SEMI-ANNUAL REPORT
June 1982

Table of Contents and Synopsis:

(2) Adoption of certain changes in existing Actuarial Guideline II entitled "Valuation of Active Life Funds Held Relative to Group Annuity Contracts."

(3) Adoption of a new individual annuity mortality table, the 1983 Table "a," for use in computing minimum reserves for individual annuities.

Attachments

No. 1 Agenda for the June 1982 meeting of the group *(See Attachment Four-A).*

No. 2 Draft copy of the minutes for the December 1981 meeting of the group *(See Attachment Four-B).*

No. 3 Draft copy of the minutes for the April 1982 meeting of the group *(See Attachment Four-C).*

No. 4 A brief report which was presented on behalf of the group to the Life Insurance (A) Committee at its April meeting *(See Attachment Four-D).*

No. 5 Package of papers relating to the work of the Technical Advisory Committee on Dynamic Interest and Related Matters. (Minutes for its December 3, 1981 meeting and five brief reports to the Group.) *(See Attachment Four-E).*

No. 6 Two instruments prepared by Harold B. Leff and dated April 19, 1982, which also relate to the work of this Technical Advisory Committee *(See Attachment Four-F).*

No. 7 "Actuarial Opinions of Reserve Adequacy and Tests of Minimum Surplus" - a brief report by the same Technical Advisory Committee to the Group, dated April 3, 1982 *(See Attachment Four-G).*

No. 8 Robert M. Chmely's memorandum dated December 10, 1981, and a supplementary memorandum, relating to progress on the study of mortality under group annuities *(See Attachment Four-H).*

No. 9 A letter from Ted Becker to Commissioner J. Richard Barnes dated May 10, 1982, with all attachments, relating to three matters which the Group is recommending to the Life Insurance (A) Committee for adoption in June 1982 *(See Attachment Four-I).*

No. 10 A letter from J. Alan Lauer to Ted Becker dated May 20, 1982, relating to an alternate proposal for one of the three recommendations to the Life Insurance (A) Committee *(See Attachment Four-J).*

No. 11 Another letter from Ted Becker to Commissioner Barnes dated May 21, 1982, which corrects one of the attachments to this previous letter *(See Attachment Four-K).*

Preliminary Notes

The Life, Accident and Health Technical Staff Actuarial Group is an informal group of state insurance department employees, most of whom are actuaries. The group is not considered as a task force, and no individuals are designated as "members." The group began to function in June 1981, when the National Association of Insurance Commissioners (NAIC) was reorganized and the former Life, Accident and Health Insurance (C4) Technical Subcommittee was discontinued. Most of the individuals who are active with the group had been members of the (C4) Technical Subcommittee.

The group is working on a number of actuarial projects relating to life insurance. These projects were specifically assigned to the group by the Life Insurance (A) Committee at its meeting on December 17, 1981. This report contains comments on each of the assigned projects.

The group is also working on certain other actuarial projects relating to accident and health insurance, as assigned by the Accident and Health (B) Committee. Comments on these projects are contained in a separate report prepared for the Accident and Health (B) Committee.

There have been two meetings of the group since similar reports were prepared for December 1981. The group met on December 12, 13, and 14, 1981, in New Orleans, Louisiana, in connection with the 1981 Winter Annual Meeting of the NAIC. Subsequently, the group met on April 3, 1982, in Houston, Texas, immediately following the Society of Actuaries meeting in that city.

The next meeting of the group is schedule for June 5 and 6, 1982, in Philadelphia, Pennsylvania, in connection with the 1982 Summer Annuall Meeting of the NAIC. It is expected that two other meetings will be held later in 1982. Assuming that proper permission can be obtained from the NAIC, the group would meet in October 1982 in Washington, D.C., immediately before or immediately following the Society of Actuaries meeting scheduled for October 18, 19, and 20, 1982, in that city. The group would then meet again in connection with the 1982 Winter Annual Meeting of the NAIC in Dallas, Texas. Probably this meeting of the group would be held on November 27 and 28, 1982; these dates would be immediately before the 1982 Winter Annual Meeting of the NAIC.

Format of the Report

The remainder of this report consists of sections entitled "Proceedings," "Recommendations," and "Attachments."

The "Proceedings" section is arranged by topic headings, corresponding to the agenda for the June 1982 meeting of the Life, A&H Technical Staff Actuarial Group (Attachment Four-A). In each case, these topic headings are reconciled with the projects which the Life Insurance (A) Committee assigned to the group on December 17, 1981. This report also identifies other committees and groups which have been working on the topics. When possible, a target date for completion of the work currently in progress has been given.

The "Recommendations" section identifies three matters on which the group has recommendations for the Life Insurance (A) Committee at its June 1982 meeting.

The "Attachments" section includes several other attachments in addition to the agenda for the June 1982 meeting of the group (Attachment Four-A). There are draft copies of the minutes for the December 1981 and April 1982 meetings of the group (Attachments Four-B and Four-C respectively). There is a brief report which was presented on behalf of the group to the Life Insurance (A) Committee at its meeting on April 6, 1982 (Attachment Four-D). There is a package of papers relating to the work of the Technical Advisory Committee on Dynamic Interest and Related Matters, consisting of minutes for its December 3, 1981, meeting and five brief reports to the group on behalf of this technical advisory committee dated December 12, 1981 (Attachment Four-E). There is a package of two instruments prepared by Harold B. Leff and dated April 19, 1982, which also relates to the work of this technical advisory committee (Attachment Four-F). There is a brief report from this same technical advisory committee to the group dated April 3, 1982, relating to the subject "Actuarial Opinions of Reserve Adequacy and Tests of Minimum Surplus" (Attachment Four-G). There is a memorandum from Robert M. Chmely dated December 10, 1981, and a supplementary memorandum, relating to progress on the study of mortality under group annuities (Attachment Four-H). There is a letter from Ted Becker to Commissioner J. Richard Barnes dated May 10, 1982, with all attachments, relating to three matters which the group is recommending to the Life Insurance (A) Committee for adoption in June 1982 (Attachment Four-I). There is a letter from J. Alan Lauer to Ted Becker dated May 20, 1982, relating to an alternate proposal for one of the three recommendations to the Life Insurance (A) Committee (Attachment Four-J). There is another letter from Ted Becker to Commissioner Barnes dated May 21, 1982, which corrects one of the attachments to his previous letter (Attachment Four-K).

Proceedings

Items one through eight below contain information concerning life insurance topics, along with comments on the current progress of the Life, A&H Technical Staff Actuarial Group on projects related to these topics.

Additional information on some of these topics can be found in the minutes for the December 1981 and April 1982 meetings of the group. (Please see Attachments Four-B and Four-C to this report.)

There may also be useful information in a brief report which was presented on behalf of the group to the Life Insurance (A) Committee at its meeting on April 6, 1982. (Please see Attachment Four-D to this report.)

There are references under some of the topic headings to the Technical Advisory Committee on Dynamic Interest and Related Matters. This technical advisory committee reports directly to the group and works on certain projects which have been specifically assigned by the group. Charles Greeley, of Metropolitan Life Insurance Company, in New York, New York, is the chairman of this technical advisory committee. This technical advisory committee met on December 3, 1981, and on April 2, 1982; but the next meeting is not scheduled until October 1982. Some of the attachments to this report are concerned with the work of this technical advisory committee. (Please see Attachments Four-E, Four-F and Four-G to this report.)

Also, there is an American Academy of Actuaries Subcommittee for Liaison (Life Insurance) which is invited to comment on any life insurance topic is the agenda for the group. Ardian Gill, of Tillinghast, Nelson and Warren, in New York, New York, is the chairman of this American Academy of Actuaries Subcommittee.

1. Standard Valuation Law and Standard Nonforfeiture Laws

On December 17, 1981, the Life Insurance (A) Committee authorized the group to continue working on this topic. It corresponds to the project "A continued review of the standard valuation and nonforfeiture laws including the annual updating of interest assumptions generated by those laws." This topic heading includes matters relating to the Standard Valuation Law, the Standard Nonforfeiture Law for Life Insurance, and the Standard Nonforfeiture Law for Individual Deferred Annuities.

These model laws define minimum reserves and minimum nonforfeiture benefits for life insurance policies and annuity contracts. A comprehensive revision of the Standard Valuation Law and the Standard Nonforfeiture Law for Life Insurance was adopted by the NAIC in December 1980. According to information recently furnished by Anthony T. Spano, of the American Council of Life Insurance, in Washington, D.C., the December 1980 model laws have now been enacted in 33 states. This legislation has passed in two houses of the legislature in two other states, and in one house of the legislature in one more state.

No additional interest rates generated under these laws can be furnished at this time, beyond those which were included in Attachment four of the December 1981 report of the group to the Life Insurance (A) Committee. Later in the year 1982, additional interest rates can be determined. The group plans to include a table showing the additional interest rates as part of its December 1982 report to the Life Insurance (A) Committee.

The Society of Actuaries has a committee which is working on specifications for the preparation of actuarial tables needed for the December 1980 model laws. Godfrey J. Perrott, of M and R Services, Inc., in Seattle, Washington, serves as chairman of this Society of Actuaries Committee. In a recent telephone conversation with Mr. Perrott, he reported that this Society of Actuaries Committee was making good progress and that an exposure draft relating to its work was expected to be ready later in the year 1982.

While the group believes that the December 1980 model laws are a great improvement in adapting the laws to current conditions, these laws are complex and certain problems in interpretation remain. In some cases, the group needs to develop actuarial guidelines which interpret the model laws. The actuarial guidelines are included in the NAIC Financial Condition Examiners Handbook after they have been properly considered and adopted within the NAIC. Elsewhere in this report, under "Recommendations," the group is proposing adoption of one new actuarial guideline and adoption of revised wording for an existing actuarial guideline by the Life Insurance (A) Committee in June 1982. The group is still studying other problems in interpretation to see if additional actuarial guidelines should be developed for these laws.

The Technical Advisory Committee on Dynamic Interest and Related Matters has been assisting the group in its work on actuarial guidelines and other aspects of this topic. Attachments Four-E and Four-F to this report contain material relating to the work of this Technical Advisory Committee under this topic heading. For example, Attachment Four-E includes two brief reports prepared by the technical advisory committee entitled "Reserve Requirements for Policies Issued on Preferred Underwriting Basis" and "Cash Value Guarantees." These reports relate to subjects which are of great interest to the group.

The report entitled "Reserve Requirements for Policies Issued on Preferred Underwriting Basis" is concerned with a proposed change in existing Actuarial Guideline IV. The group is currently considering this proposed change.

The report entitled "Cash Value Guarantees" explains why this technical advisory committee believes that life insurance policies without cash value guarantees should be permitted, under certain circumstances. In response to this suggestion, the group has now authorized the technical advisory committee to further investigate the possibility of allowing such policies. It is recognized that such policies could not be issued under the present Standard Nonforfeiture Law for Life Insurance, and the study by the technical advisory committee would include the development of proposed wording for a statute that would accommodate such policies. The group understands that the technical advisory committee would require such policies to have a rather large face amount, possibly a minimum of $100,000.

The group's agenda for this topic includes the study of "updating or replacing existing products." This refers to changes which an insurance company proposes to make in its existing life insurance policies or annuity contracts to improve the benefits or bring the contract provisions up-to-date. There has been discussion of this study, but no significant progress has as yet been made. The group may develop one or more actuarial guidelines later, arising from this study.

Because of the broad encompassing nature of this topic heading, it is expected that new questions will arise from time to time. New interest rates will be generated each year. Also further revision of the model laws may be needed later. Therefore no target date for completion of work on this topic can be furnished.

2. Minimum Surplus

On December 17, 1981, the Life Insurance (A) Committee also authorized the group to continue working on this topic. It corresponds to the project "A continued study of the components contributing to the development of surplus and the setting of standards for Minimum Surplus."

This project will eventually require the development of new legislation to supplement or replace the present Standard Valuation Law.

At the present time, the Technical Advisory committee on Dynamic Interest and Related Matters is working on this project. The technical advisory committee is also assisting the group by monitoring several studies pertinent to this topic that are now being made within the Society of Actuaries. Three different major types of risk have been identified. Probably, the most difficult problem stems from the so-called "C-3 risk," the risk to the insurance company from changes in the interest rate environment.

Attachments Four-E, Four-F and Four-G to this report all contain information about the work of the technical advisory committee on this topic. Attachment Four-E includes a brief report prepared by the technical advisory committee entitled "Actuarial Opinion of Reserve Adequacy and Tests of Minimum Surplus" dated December 12, 1981. Attachment Four-G is a similar brief report prepared by the technical advisory committee on April 3, 1982.

It now appears that no recommendations growing out of this project can be made until December 1983, at the very earliest. It is hoped that an exposure draft containing model legislation will be ready at that time. Under that timetable, the group could then recommend model legislation for adoption by the Life Insurance (A) Committee in the year 1984.

It should be noted that the work on this project is expected to be pertinent to accident and health insurance as well as to life insurance, even though such a project has not been specifically assigned to the group by the Accident and Health (B) Committee.

Please note also that the December 1981 report of the group to the Life Insurance (A) Committee mentioned the projects "Revision of Analysis of Increase in Reserves" (Page 6 of the present annual statement blank for life insurance companies) and "Reserve Strengthening for Insurers Earning Less on Their Investments Than Guaranteed in Their Reserve Accumulations and Deposit Fund Guarantees" under the topic heading "Other Matters." The group now perceives that these two projects are aspects of a study of the topic "Minimum Surplus," as assigned by the Life Insurance (A) Committee.

3. Universal Life and Related Plans of Life Insurance and Annuities

This is another topic which the Life Insurance (A) Committee assigned to the group on December 17, 1981. It corresponds to the specific instruction that "A review of special plans with unusual characteristics should be continued." The group feels that this review of special plans would also authorize work on "Other Special Plans," which is listed separately as the next topic heading in this report.

The December 1980 version of the model Standard Valuation Law and the Standard Nonforfeiture Law for Life Insurance contemplates that regulations will be issued pertaining to minimum reserves and minimum nonforfeiture values for universal life plans and related plans. Such regulations would be issued by the commissioner of insurance in each state, but it is hoped that there will be considerable uniformity among the different states.

A particularly difficult question relates to the definition of proper minimum reserves for some of the new universal life products, in which the benefits are guaranteed to be at least as high as those determined from a formula which depends on the subsequent performance of an outside index. These plans are commonly described as "indexed products." In some cases, the contract language promises that the benefits will be determined from the larger of two distrinct indices.

The group hopes to develop a model regulation just as soon as this is feasible. It may also be necessary to develop actuarial guidelines for these plans.

At the present time, the group is studying guidelines and regulations on such plans which are being developed by certain state insurance departments. For example, the group is monitoring studies which are now in progress in the New Jersey Department of Insurance and the California Department of Insurance. These two states have already prepared documents arising from their studies. The group understands that other state insurance departments, such as the Texas State Board of Insurance, also have studies in progress. Additional documents may, therefore, be available to the group from other state insurance departments later in 1982.

In addition, the American Council of Life Insurance (ACLI) has recently furnished the group with a draft position paper entitled "Suggested Valuation and Nonforfeiture Standards for Certain Life Insurance Plans with Adjustable Features." This draft position paper was developed by the ACLI's Task Force on Valuation and Nonforfeiture Regulation for New Products, but it has not yet been reviewed by the ACLI's Actuarial Committee. The ACLI is working on the subject of reserves for "indexed products," but this draft position paper does not specifically address such plans.

The group intends to give all of these documents careful consideration.

Work on this topic has not proceeded as rapidly as the group had originally hoped. It is possible that an exposure draft for a model regulation will be ready by December 1982, but some work on this topic will probably have to continue into 1983. If any actuarial guidelines are needed, they could probably not be developed until 1983 or 1984.

4. Other Special Plans

This topic heading is concerned with indeterminate premium life insurance plans, single premium life insurance plans with minimum death benefits, and other life insurance or annuity plans which can not be handled under traditional actuarial procedures. As stated under the previous topic heading "Universal Life and Related Plans of Life Insurance and Annuities," the Life Insurance (A) Committee has instructed the group that "A review of special plans with unusual characteristics should be continued." The group feels that this review of special plans would authorize work under both of these topic headings.

Model regulations need to be developed for these other types of plans also, and actuarial guidelines may also be needed.

Several state insurance departments have already promulgated regulations or guidelines on indeterminate premium policies, and the group hopes to make a detailed review of these documents in the near future.

Probably, there is a more urgent need for the group to work on the plans included under the previous topic heading "Universal Life and Related Plans of Life Insurance and Annuities," than on the plans under this topic heading.

A model regulation on indeterminate premium life insurance plans will probably not be ready until 1983. A model regulation on other types of plans contemplated by this topic heading and any actuarial guidelines related to this topic heading would be developed later in 1983 or early in 1984.

5. Variable Life and Variable Annuities[1]

On December 17, 1981, the Life Insurance (A) Committee also authorized the group to work on the project "Continue the work of redrafting of the model variable life regulations." That project corresponds to this topic heading.

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1. This section on Topic 5 was written prior to receipt of the letter from Gary E. Hughes, of the American Council of Life Insurance, to Commissioner Robert C. Quinn, chairman of the Variable Life Insurance (A) Task Force. Any future activity by the group on this topic will be in accordance with instructions from the Life Insurance (A) Committee, taking into account the needs of the Variable Life Insurance (A) Task Force.

The group has not done any work on variable annuities since December 17, 1981; but the group's agenda for its meetings has continued to use the original topic heading. The agenda for future meetings of the group, and subsequent reports for the group, will use the corrected topic heading "Variable Life Insurance."

There is a Variable Products Advisory Committee which reports directly to the group. Jerome S. Golden, of Monarch Resources Inc., in New York, New York, is the chairman of this Variable Products Advisory Committee.

This Variable Products Advisory Committee has now prepared a definite proposal for a comprehensive revision of the present NAIC model variable life insurance regulation. This proposal was furnished on March 22, 1982, along with a letter from Mr. Golden to Ted Becker. The proposal was not attached to this report because of its length – approximately 85 pages. However, the proposal was recently mailed to all persons included on the group's current mailing list. This proposal would allow insurance companies to write additional plans of variable life insurance, including a product similar to universal life insurance which would be funded in a separate account. Other changes are also proposed.

The group is aware that the Life Insurance (A) Committee now has a special Variable Life Insurance Task Force, which is also very interested in revision of the model variable life insurance regulation. The group is most anxious to cooperate with this Variable Life Insurance Task Force on this project.

Assuming that this would not conflict with the desire of the Life Insurance (A) Committee or its Variable Life Insurance Task Force, the group could probably review the Variable Products Advisory Committee proposal and develop it into a recommendation in time for the December 1982 NAIC meeting. The group respectfully requests the advice of the Life Insurance (A) Committee on this matter.

As a separate project, the Variable Products Advisory Committee has also begun to study certain long term considerations which would be reflected in a subsequent revision of the variable life insurance regulation, but not in the current proposal. These long term considerations are: (a) deduction of charges for incidental insurance benefits, (b) liquidity of investments, (c) group permanent variable life insurance and (d) standards for illustrations. It is not feasible at this time to set a target date for completion of work on this study of long term considerations.

6. Mortality and Morbidity Studies

Another project which the Life Insurance (A) Committee assigned to the group on December 17, 1981, was "The development of experience tables for the valuation of (a) life insurance for smokers vs non-smokers, (b) individual annuities, (c) group annuities, and (d) credit life and credit disability insurance." That project corresponds to this topic heading. Each of the four studies in this list is described below under a separate subheading.

The December 1981 report of the group to the Life Insurance (A) Committee also mentioned other experience studies which were under consideration such as "disability experience for disability benefits attached to life insurance policies," "substandard insurance," "guaranteed issue plans," "renewable term life insurance," and "industrial life insurance." Work was never commenced on any of these experience studies. Since these studies were not specifically authorized by the Life Insurance (A) Committee on December 17, 1982, all reference to them has been deleted from the group's agenda.

a. Super Select Mortality, Smoker vs. Non-Smoker

This study is of great interest for two reasons. Insurance companies which sell certain life insurance plans only to non-smokers should be able to offer these plans at a low competitive gross premium rate, and the questions of whether the reserve for such plans needs to be increased on account of the low gross premium rate should be determined by taking into account the better mortality rates which non-smokers enjoy. It would be desirable for the basic reserve for such plans to also be based on non-smoker mortality rates. On the other hand, some companies also have plans under which most or all of the insureds are smokers. Reserve and net premium calculations for such plans should be based on appropriate mortality rates for smokers.

The Technical Advisory Committee on Dynamic Interest and Related Matters has done some valuable preliminary work on this study. Attachment Four-E to this report contains a relevant brief report prepared by the technical advisory committee entitled "Reserve Requirements for Policies Issued on the Preferred Underwriting Basis," which includes some comments on smoker and non-smoker mortality.

Subsequent to the April 3, 1982, meeting of the group, Charles Greeley, the chairman of this technical advisory committee, contacted D. K. Bartlett III, of National Health and Welfare Mutual Life Insurance Association, in New York, New York, about possible assistance from the Society of Actuaries on this particular study. Mr. Bartlett is chairman of the Society of Actuaries Research Policy Committee.

The Society of Actuaries has now agreed to appoint a Task Force to Study Mortality under Non-Smoker Plans. In a recent telephone conversation with Mr. Bartlett, he advised that Peter A. Marion, of State Mutual Life Assurance Company of America, in Worcester, Massachusetts, had been named chairman of this new Society of Actuaries task force. This Society of Actuaries task force has been asked to have a report prepared for the technical advisory committee by December 31, 1982.

Presumably, the technical advisory committee will review this report and make its recommendations to the group in the early part of 1983. Under this timetable, the group could then make a recommendation to the Life Insurance (A) Committee for adoption later in 1983.

b. Individual Annuities

The group has a recommendation for the Life Insurance (A) Committee at its June 1982 meeting. Please see the "Recommendations" section in this report.

c. Group Annuities

The Society of Actuaries has a Committee on Annuities which is studying mortality under group annuities. Robert M. Chmely, of Preduential Life Insurance Company of America, in Florham Park, New Jersey, is chairman of this Society of Actuaries committee.

Attachment Four-H to this report contains information about the progress on this study as of December 10, 1981.

In a recent telephone conversation with Mr. Chmely, he reported that this Societ of Actuaries committee had held a meeting early in May 1982. The Society of Actuaries committee evaluated the projection scales and determined that some modifications were necessary. A new set of projection factors is now being prepared, and it should be ready shortly. A paper relating to the work of this Society of Actuaries committee is expected to be reviewed by its members by the end of June 1982. The paper should then be ready for outside review and exposure after six to ten more weeks.

Mr. Chmely noted that his study is unusual in that it does not depend on current statistics, but there is overwhelming evidence that a more conservative table than the 1971 Group Annuity Mortality Table is needed.

The Technical Advisory Committee on Dynamic Interest and Related Matters has expressed an interest in this study, and the group may ask this technical advisory committee for its comments about the new table after the Society of Actuaries committee has prepared its report.

If no problems with the new table are noted, the group feels that June 1983 is a reasonable target date for recommending this table to the Life Insurance (A) Committee.

d. Credit Life and Credit Disability

The Society of Actuaries also has a Special Study Committee - Credit Insurance which is making a pilot study of experience on the consumer finance segment of the credit insurance business written by five insurance companies. This study would involve both life insurance and disability insurance. Harvey S. Galloway, of Nationwide Corporation, in Columbus, Ohio, is chairman of this Society of Actuaries committee.

In a recent telephone conversation, Mr. Galloway reported that some preliminary results may be ready in November 1982. These preliminary results would probably be limited to claim continuance numbers. All claim information for the study is now in. The Society of Actuaries committee is now waiting for Alexander Hamilton Life Insurance Company to finish compiling its exposure reports. The pilot study will not be completed until some time in 1983.

The Society of Actuaries committee is also working on a statement on credibility of credit insurance data, and the target date for completion is November 1982. The group will probably need to review this statement in order to be able to properly interpret the results of the pilot study, as they become available.

No work has been done on making an experience study under any types of credit insurance business, other than the consumer finance segment.

7. General Matters Relating to the Life, A&H Technical Staff Actuarial Group

This topic has appeared on the agenda for recent meetings of the group. It corresponds rather closely to the topic heading "Reorganization of the Life, A&H Technical Staff Actuarial Group," which appeared in the December 1981 report of the group to the Life Insurance (A) Committee.

Under this topic heading, the group hopes to determine how it can perform its assigned duties in the most efficient, rapid and economical manner possible. The group recognizes that it should not work on any new projects, unless and until it receives a specific charge to do so from either the Life Insurance (A) Committee or the Accident and Health (B) Committee.

No substantial progress has been made on this topic as yet. The group plans to discuss the topic further and to possibly implement some new procedures later in 1982.

8. Other Topics

The December 1981 report of the group to the Life Insurance (A) Committee referred to one additional project which has not been mentioned in the present report. This project was "Creation of a Society of Government Actuaries, or a special interest session in the Society of Actuaries." it was mentioned under the topic heading "Other Matters," in the December 1981 report.

Work on this project has been discontinued and it no longer appears on the group's agenda.

Recommendations

The Life, A&H Technical Staff Actuarial Group has three recommendations to the Life Insurance (A) Committee for adoption in June 1982. Attachment Four-I to this report discusses all of these recommendations. This report uses the same numbering system for the recommendations as that used in Attachment Four-I. (1) The group is recommending adoption of a new actuarial guideline entitled "Interpretation of the Standard Nonforfeiture Law for Life Insurance with Respect to the Operative Date of Section 5-c." Please see Attachment Four-I to this report. Attachment Four-K to this report contains some alternate language which could be used for this proposed actuarial guideline, corresponding to the current interpretation of this Section by the Pennsylvania Insurance Department. At its meeting on June 6, 1982, the group plans to discuss this alternate language and consider whether or not to modify the wording of the recommended actuarial guideline. (2) The group is recommending adoption of certain changes in existing Actuarial Guideline II entitled "Valuation of Active Life Funds Held Relative to Group Annuity Contracts." Please see Attachments Four-I and Four-K to this report. Attachment Four-K to this report corrects an error in Attachment Four-I by properly illustrating the current wording for Actuarial Guideline II. (3) The group is recommending adoption of a new individual annuity mortality table, the 1983 Table "a," for use in computing reserves for individual annuities. Please see Attachment Four-I to this report. Attachment Four-E to this report contains a brief report entitled "Annuity Valuation Mortality Tables." This brief report was prepared by the Technical Advisory Committee on Dynamic Interest and Related Matters, and it may also be of interest in furnishing additional information about the recommended table.

Ted Becker, Texas State Board of Insurance

John O. Montgomery, California Department of Insurance

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ATTACHMENT FOUR-A

Agenda for Meeting of the
Life, A&H Technical Staff Actuarial Group

Philadelphia, Pennsylvania

Notes: *The comments of the American Academy of Actuaries Subcommittee on Health Insurance are welcomed for any agenda item.*

The topics "Minimum Surplus" and "General Matters Relating to the Life, A&H Technical Staff Actuarial Group" are listed under "Topics Pertaining to the Life Insurance (A) Committee." However, these two topics pertain to the Accident and Health (B) Committee also.

Saturday, June 5, 1982

2:00 p.m. to 6:00 p.m., Parlor A, Franklin Plaza Hotel, Philadelphia, Pennsylvania

1. NAIC Premium Rate Filing Guidelines

   a. Proposal for revision
   b. Problems related to this topic
      (1) Generic group of plans experience vs. single plan experience
      (2) Good experience in early policy years should result in funds being set aside for anticipated deterioration. (Washington Proposal)
      (3) Major medical policies with indexed benefits and premiums
      (4) Other
   c. Other matters

2. Experience Tables

   a. Disability - Society of Actuaries study
   b. Cancer and dread disease
   c. Other matters

3. Valuation

   a. Society of Actuaries study
   b. Other matters

4. Hospital and Medical Corporations

   a. Report of Technical Advisory Committee on Hospital and Medical Corporations
   b. Other matters

Sunday, June 6, 1982

9:00 a.m. to 5:00 p.m., Parlor A, Franklin Plaza Hotel, Philadelphia, Pennsylvania

Topics Pertaining to the Life Insurance (A) Committee

1. Standard Valuation Law and Standard Nonforfeiture Laws

   a. The 1980 model, status of enactment, interest rates for 1982
   b. Specifications for the preparation of actuarial tables
   c. Problems in interpretation
      (1) Cash values based on interest assumptions lower than interest assumed in statutory reserves, and other high cash value plans

    (2) Reserving of annuities with surrender charges
    (3) Valuation - nonforfeiture interest rate differentials
    (4) Proposed revision of guideline on joint life insurance (Actuarial Guideline VI)
    (5) Other problems
d. Updating or replacing existing products
e. Proposal for allowing life insurance policies without cash value guarantees
f. Other matters, including comments on the work of the committee on Dynamic Interest and Related Matters

2. Minimum Surplus

a. Discussion of the Wisconsin legislation and regulation
b. Elements of aa law defining minimum surplus according to the structure of the risks assumed by an insurer
c. Revision of analysis of increase in reserves
d. Reserve strengthening for insurers earning less on their investments than guaranteed in their reserve accumulations, and other guarantees
e. Other matters, including comments on the work of the Committee on Dynamic Interest and Related Matters

3. Universal Life and Related Plans of Life Insurance and Annuities

a. Regulation
    (1) Interest and indexed plans
    (2) Reserves and nonforfeiture values
    (3) Surrender charges
    (4) Reporting requirements
    (5) Disclosure to policyholders
b. Distinguishing features as compared to variable life insurance and variable annuities
c. Other matters

4. Other Special Plans

a. Indeterminate premium plans
b. Single premium, specified minimum death benefit life insurance plans
c. Other plans

5. Variable Life and Variable Annuities

a. Revision of variable life insurance regulation
b. Other matters

6. Mortality and Morbidity Studies

a. Super select mortality, smoker vs. non-smoker
b. Society of Actuaries
    (1) Individual annuities
    (2) Group annuities
    (3) Credit life and credit disability
    (4) Other matters

7. General Matters Relating to The Life, A&H Technical Staff Actuarial Group

a. Establishment of priorities
b. Division into subgroups
c. Possible need for work on additional topics
d. Revision of mailing list
e. Other matters

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ATTACHMENT FOUR-B

Minutes of the Meeting of the
Life, A&H Technical Staff Actuarial Group

New Orleans, Louisiana
December 12, 13 and 14, 1981

The NAIC Life, A&H Technical Staff Actuarial Group met from 9:00 a.m. until 1:30 p.m. on December 12, 1981 in the Magnolia Room of the New Orleans Hilton Hotel, New Orleans, Louisiana, to consider certain topics pertaining to the NAIC Life (A) Committee.

The NAIC Technical Group met again from 9:00 a.m. until 11:30 a.m. on December 13, 1981 in the same hotel room to consider topics pertaining to the NAIC Accident and Health (B) Committee.

On December 14, 1981 the NAIC Technical Group met in the Eglinton Room of the New Orleans Hilton Hotel to consider an additional topic pertaining to the NAIC Life (A) Committee, "Variable Life and Variable Annuities."

The following persons from state insurance departments were present December 12: Ted Becker, Texas State Board of Insurance; Douglas A. Broome, South Carolina Department of Insurance; Erma Edwards, Nevada Department of Insurance; John O. Montgomery, California Department of Insurance; and David H. Rodgers, Washington Department of Insurance.

The following persons from insurance companies, insurance associations, and consulting actuaries were also present December 12: Jack Adams, Executive Life Insurance Company; James F. Allen, Federal Kemper Life Insurance Company; Nora Beattie, New York Life Insurance Company; John K. Booth, American Council of Life Insurance; William Carroll, American Council of Life Insurance; Daniel F. Case, American Council of Life Insurance; Gabe Cillie, Prudential Insurance Company; Doug Close, Transamerica Occidental Life Insurance Company; Alan Cunningham, Transamerica Occidental Life Insurance Company; Carroll Dietle, Anchor National Life Insurance Company; Ann Enarson, Federal Kemper Life Insurance Company; Charles Greeley, Metropolitan Life Insurance Company; Burnett Halstead, Federal Kemper Life Insurance Company; Robert J. Johansen, Metropolitan Life Insurance Company; Howard Kayton, Security First Group; Harold Leff, Metropolitan Life Insurance Company; Carl Ohman, Equitable Life Assurance Society; William N. Snell, Northwestern Mutual Life Insurance Company; Anthony T. Spano, American Council of Life Insurance; James L. Sweeney, Munich American Reassurance Company; and Peter Thexton, Health Insurance Assn. of America.

December 13, 1981 - NAIC Accident & Health Insurance (B) Committee

The following persons from state insurance department were present December 13: Ted Becker, Texas State Board of Insurance; Douglas A. Broome, South Carolina Department of Insurance; Erma Edwards, Nevada Department of Insurance; Larry Gorski, Illinois Department of Insurance; John O. Montgomery, California Department of Insurance; David H. Rodgers, Washington Department of Insurance; and William A. White, New Jersey Department of Insurance.

The following persons from insurance companies, insurance associations, and consulting actuaries were also present December 13: John K. Booth, American Council of Life Insurance; William Carroll, American Council of Life Insurance; Daniel F. Case, American Council of Life Insurance; Gabe Cillie, Prudential Insurance Company; John Hurley, Health Insurance Association of America (Legal Dept); Robert J. Johansen, Metropolitan Life Insurance Company; F. L. Kimbrough, American Family Life Assurance Company; David Robbins, Health Insurance Association of America; Robert Shapland, Mutual of Omaha Insurance Company; William M. Snell, Northwestern Mutual Life Insurance Company; Anthony T. Spano, American Council of Life Insurance; James L. Sweeney, Munich American Reassurance Company; Peter Thexton, Health Insurance Association of America; and William E. Timmons, Blue Cross/Blue Shield Association.

December 14, 1981 - NAIC Life Insurance (A) Committee - "Variable Life and Variable Annuities"

The following persons from State Insurance Departments were present December 14: Ted Becker, Texas State Board of Insurance; Douglas A. Broome, South Carolina Department of Insurance; Erma Edwards, Nevada Department of Insurance; Charles D. Gatson, Montana Insurance Department; John O. Montgomery, California Department of Insurance.

The following persons from insurance companies, insurance associations, and consulting actuaries were also present December 14: James F. Allen, Federal Kemper Life Insurance Company; John K. Booth, American Council of Life Insurance; William Carroll, American Council of Life Insurance; Daniel F. Case, American Council of Life Insurance; Gabe Cillie, Prudential Insurance Company; Doug Close, Transamerica Occidental Life Insurance Company; Ann Enarson, Federal Kemper Life Insurance Company; William Feeney, Equitable Life Assurance Society; Jerome Golden, Monarch Resources, Inc.; Burnett Halstead, Federal Kemper Life Insurance Company; Ross Hanson, J. Ross Hanson, Inc.; Robert J. Johansen, Metropolitan Life Insurance Company; Jack A. Marshall, John Hancock Mutual Life Insurance Company; Richard J. Miller, Monarch Life Insurance Company; Joe Mintz, NROCA Press; Roland L. Panneton, National Association of Life Underwriters; David Phipps, Underwriters National Assurance Company; Anthony T. Spano, American Council of Life Insurance; Gordon N. Taft, Lutheran Brotherhood Insurance; and E. David Yossem, California Association of Life Underwriters.

Life Insurance Committee Report

I. STANDARD VALUATION LAW AND STANDARD NONFORFEITURE LAW FOR LIFE INSURANCE

A. Report of the Committee on Dynamic Interest and Related Matters

Mr. Charles Greeley, chairman of the technical advisory committee, presented a report from the committee, dated December 12, 1981, advocating the elimination of cash value and policy loan requirements on permanent insurance policies for face amounts of $100,000 and over. In his report, Mr. Greeley described the recent experiences of the insurance industry with individual life insurance policies based on book value surrender guarantees. Since 1970, there have been frequent abrupt increases and decreases in both short- and long-term rates of interest, accompanied by dramatic changes in the demand for policy loans as well as cash surrender benefits. The demands for cash had tended to peak at the same time as interest rates. This had resulted in terminating policyholders securing termination values greatly in excess of the then value of the assets which they had conributed to the insurer. Mr. Greeley said that the advisory committee had concluded that some relief was needed from the relatively rigid surrender value requirements now being imposed and was therefore recommending the elimination of cash value and policy loan requirements on permanent insurance policies for face amounts of $100,000 and over.

In response to a question from Mr. Ted Becker, Mr. Greeley explained that under the proposal some form of paid-up insurance, such as reduced paid-up insurance or extended term insurance, would continue to be required.

The Technical Staff Actuarial Group decided to discuss the matter on an informal basis with members of the NAIC Life Insurance (A) Committee to determine whether the recommendation should be developed in greater detail.

Mr. Greeley also presented another report from the technical advisory committee on the subject of the operative date section of the Standard Nonforfeiture Law for Life Insurance advocating the adoption of a guideline interpreting the 1980 model law as permitting a company to elect separate operative dates by plan of insurance. Mr. Greeley pointed out that it would be in the public interest to give companies this flexibility since one of the principal purposes of the new nonforfeiture requirements is to enable companies to offer more competitively-priced products.

Mr. Gabriel G. Cillie said that the law enacting the 1980 amendments in New Jersey specifically permitted separate operative dates for different categories of insurance. He said that his company supported the recommendation of the technical advisory committee.

The Technical Staff Actuarial Group agreed to receive the recommendation and planned to expose it with the idea that it might possibly be considered for adoption by the NAIC in June, 1982.

B. The 1980 Model, Status of Enactments and Interest Rates

It was reported that 17 states had enacted the 1980 NAIC amendments during 1981 and that continued success was expected in 1982.

Mr. John O. Montgomery reported that the statutory valuation interest rates for 1981 and the standard nonforfeiture interest rates for life insurance for 1981 and 1982, would be attached to the minutes of the October 1981 meeting of the Technical Staff Actuarial Group and that he expected that they would be published in the NAIC proceedings. He also mentioned that an abridged table of these rates would be shown in a series of articles which he was writing for The Actuary.

C. Specifications for the Preparation of Actuarial Tables

Mr. Montgomery reported that he and Mr. Alan Lauer of the Pennsylvania Insurance Department were members of the Society of Actuaries Committee on Specifications for Monetary Values - 1980 CSO Tables. The Committee had been formed in response to a request from the former NAIC (C4) Technical Subcommittee (predecessor of the Technical Staff Actuarial Group) to develop specifications for the calculation of reserves and values associated with the 1980 CSO Mortality Tables. Mr. Montgomery said that the committee planned to address calculations specifications, reporting of results, use of select factors, and joint life functions.

D. Problems in Interpretation

1. Cash values based on interest assumptions lower than interest assumed in statutory reserves, and other high cash value plans. Mr. Montgomery said that he would prepare a draft guideline for reserve requirements for life insurance policies with cash values at future durations higher than reserves at those durations.

2. Other problems. There were no other problems in interpretation discussed by the Technical Staff Actuarial Group.

E. Updating or Replacing Existing Products

The Technical Staff Actuarial Group discussed the subject of unilateral policy updating programs. Mr. Becker reported that Texas had approved some unilateral programs, but that one state had questioned the practice.

Mr. Anthony T. Spano suggested that a unilateral approach should be permitted when the policyholder is better off after the change.

Mr. Montgomery asked about the status of this agenda item.

Mr. Becker Said that the Technical Staff Actuarial Group did not have any formal assignment which fell under this agenda item.

F. Other Matters

No items were discussed under this subtopic.

II. MINIMUM SURPLUS

A. Report of the Committee on Dynamic Interest and Related Matters

Mr. Carl Ohman, a member of the technical advisory committee, presented a report from the committee on the subject of the Actuarial Opinion of Reserve Adequacy and Tests of Minimum Surplus. Mr. Ohman reminded the members of the Technical Staff Actuarial Group that the technical advisory committee, in its 1980 report on the proposed amendments to the NAIC Model Standard Valuation and Nonforfeiture Laws, had concluded that the minimum reserve standards under the then proposed amendments would make good and sufficient provision for payments guaranteed under a company's policies and contracts provided that "there is an appropriate degree of matching of maturities of the company's assets and liabilities, together with appropriate safeguards in the company's investments and its insurance and annuity contracts so as to limit the company's (C3) risk (i.e., risk of loss to the company from changes in the interest rate environment)."

Mr. Ohman said that this would seem to indicate that the actuary would need to make specific projections of the company's liabilities and supporting investments under various future scenarios to judge whether the company's reserves really are adequate to fund its obligations.

Mr. Ohman, who is also chairman of the Society of Actuaries (C3) Risk Task Force, reported on a number of important efforts that have been undertaken by the Society of Actuaries and the American Academy of Actuaries in the areas of research, education, qualification standards and standards of practice.

In the research area the Society's (C3) Risk Task Force and its parent Committee on Valuation and Related Problems have been very active developing tools for identifying and quantifying (C3) risk. Meetings of the Society of Actuaries and local actuarial clubs had given important attention to this subject. Plans had been made to continue this educational effort during 1982. The academy had recently adopted qualification standards for practice in the valuation of life insurance company annual statement liabilities. The academy's Committee on Life Insurance Financial Reporting Principles would be considering the need for modification in the academy's recommendations and interpretations governing actuarial opinions.

Mr. Ohman said that all of these efforts were receiving priority attention and appeared to be progressing at a reasonable pace. He suggested that the NAIC Technical Staff Actuarial Group might encourage these efforts and continue to urge the society and academy to move forward.

He said that there appeared to be little need for immediate specific action on actuarial opinions by the NAIC itself, that the technical advisory committee believed that it would be premature for the NAIC to attempt to issue guidelines governing actuarial opinions, and that the technical advisory committee strongly recommended against such action at this time.

He concluded by reporting that the technical advisory committee believed that it would be highly undesirable to attempt to shortcut this approach with an arbitrary or "simple" formula defining minimum surplus requirements for each insurance company. Such a shortcut would pose a potential danger by implying that a company can be deemed to be "sound" so long as surplus equals x% of premiums, without regard to other relevant factors such as matching of assets and liabilities. He said that the technical advisory committee was deeply concerned that arbitrary tests of this type would divert attention from the critical need to adequately provide for risks such as the (C3) risk, and that the technical advisory committee strongly urged the Technical Staff Actuarial Group to reject such short-term proposals in order to concentrate maximum energy toward the more critical issues which the various professional groups were currently investigating.

Mr. Becker thanked Mr. Ohman for his report which was received by the Technical Staff Actuarial Group.

B. Discussion of the Wisconsin Legislation and Regulation

Mr. William M. Snell gave a brief update on the status of a regulation being considered in Wisconsin. The proposed regulation which would establish some criteria for minimum surplus had been developed in response to a special Wisconsin statute which apparently required the commissioner to promulgate such rules. It was reported that there was a possibility that that statute might be reconsidered by the Wisconsin legislature.

C. Discussion of the Definitions of the Elements of a Law Defining Minimum Surplus According to the Structure of the Risk Assumed by An Insurer and

D. Other Matters

There was no further discussion of minimum surplus under these subtopics.

III. UNIVERSAL LIFE AND RELATED PLANS OF LIFE INSURANCE AND ANNUITIES

There was no separate discussion of each subtopic under this agenda item.

It was agreed to change the name of this agenda item to the above so that the words "funded plans," to which there had been some objection, would be eliminated.

Mr. Montgomery distributed copies of the most recent draft of a proposed bulletin on this subject which was being developed by the California Department.

He reported on a recent meeting of the Los Angeles Actuarial Club at which there was a panel discussion on universal life. The panelists were David Carpenter, Lynn Miller, and Alan Cunningham. Mr. Montgomery said that the discussion had been very helpful. He mentioned that there had been some comments on the document that the ACLI had circulated at the October 1981 meeting of the Technical Staff Actuarial Group.

Mr. Doug Close said that his company was preparing written comments on the ACLI document.

In response to an invitation from Mr. Daniel F. Case, Mr. Close said that he would provide the ACLI with a copy of his company's comments.

Mr. Montgomery noted that the California document was being developed as a bulletin, rather than as a regulation, so that it could be more easily changed.

Mr. Montgomery mentioned that the matching of assets and liabilities was important for universal life and that the draft bulletin contained some reporting requirements.

Mr. Becker read a letter from Keith Sloan on this subject, dated December 7, 1981. The letter expressed agreement with Doug Paine's paper on retrospective development of cash values and expressed concern about possible misrepresentation of mortality rates.

It was noted that the California draft bulletin dealt with misrepresentation.

IV. MORTALITY AND MORBIDITY STUDIES

A. Super Select Mortality, Smoker vs Non-Smoker

Mr. Greeley presented a report from the technical advisory committee recommending that (i) Actuarial Guideline IV be modified to replace the table based on the Modern CSO with the 1980 CSO with Select Mortality Factors; and (ii) the NAIC Technical Staff Actuarial Group ask the Society of Actuaries to study the subject of smoker vs non-smoker mortality. In support of these recommendations, Mr. Greeley cited the general improvement in mortality and the considerably increased use of preferred-risk underwriting (e.g. smoker vs non-smoker distinctions). He said that companies were in a position to offer life insurance plans at substantially reduced premium rates, especially in the term insurance market. The ability of companies to make these plans available has been affected by reserve standards based on mortality standards which have been becoming more burdensome because of the increasing conservatism of the standards relative to actual mortality.

Mr. Greeley pointed out that the problem would be somewhat alleviated as companies were able to utilize the 1980 CSO Table with Ten-Year Select Mortality Factors that had been introduced into the Standard Valuation Law by the 1980 amendments. However, he noted, that many companies will be precluded from using this table until a substantial number of states have enacted the 1980 amendments.

He said that the first recommendation of the technical advisory committee, that the table in Actuarial Guideline IV be replaced by the 1980 CSO Table with Ten-Year Select Mortality Factors, was intended to provide some means of temporary relief so that companies could offer lower-cost products more broadly. The second recommendation, that the NAIC Technical Staff Actuarial Group ask the Society of Actuaries to study the subject of smoker vs non-smoker mortality was intended as a more permanent solution to some of the pricing and valuation problems associated with preferred-risk policies.

The Technical Staff Actuarial Group indicated general support for the recommendations. The report was received and the group planned to take some action on it at its next meeting, tentatively scheduled for Houston on April 3.

Mr. Becker mentioned that Texas would be issuing a new directive on the valuation of renewable term insurance. The new directive, scheduled for issue on December 15, 1981 would permit special mortality rates for some plans sold only to non-smokers. It would update the 1977 directive which was the Texas version of NAIC Actuarial Guideline IV.

B. Society of Actuaries

1. Individual Annuities

Mr. Robert J. Johansen, chairman of the Committee to Recommend a New Mortality Basis for Individual Annuity Valuation, distributed copies of the final report of the commitee along with his letter of December 11, 1981 to Commissioner Lyndon L. Olson, Jr., chairman of the NAIC Life Insurance (A) Committee. Mr. Johansen said that the final report reflected some comments which had been received as a result of exposure to the members of the society and to the NAIC Technical Staff Actuarial Group.

Mr. Ohman distributed a report from the technical advisory committee recommending that the NAIC adopt 1983 Table A as a mortality table suitable for the valuation of annuity benefits under individual annuities and supplementary contracts issued in 1983 and subsequent years.

He noted, in particular, the technical advisory committee's support of the recommendations in the society's committee report as to the propriety of gender-distinct mortality rates for the valuation of annuity benefits and in any minimum valuation standard mortality table.

Mr. Montgomery said that if this new mortality table were adopted by the NAIC it could be handled in the various states which had passed the 1980 amendments to the Standard Valuation Law by the New wording which gives the commissioners authority to permit tables adopted by the NAIC. He said that this would be the first opportunity to use this new procedure and that the Technical Staff Actuarial Group should prepare a guideline.

It was agreed that this procedure could not be used in states which had not yet passed the 1980 amendments.

Mr. Cillie pointed out that the wording of the 1980 amendments authorized commissioners to permit alternative mortality tables adopted by the NAIC, but that they were not given the authority to require them.

Mr. Johansen pointed out that an actuary would have to consider the opinion of the society's committee that the 1983 Table A was an appropriate standard for issues of 1983, but that would not preclude earlier use.

Mr. Montgomery said that an actuarial guideline should take all of this into account.

2. Group Annuities

There was no report from the society's committee.

Mr. Ohman continued with his presentation of the report of the technical advisory committee, which also touched on group annuities.

Mr. Ohman said that he understood that the society's Committee on Group Annuity Mortality, chaired by Robert Chmely, was developing projections of the 1971 GAM Table that would be suitable for the valuation of annuities purchased under group annuity contracts, and that it would be submitting its recommendations in the spring of 1982. He said that the technical advisory committee planned to review the results and make its recommendations at that time. He mentioned that it was possible that the committee might recommend that use of the projected 1971 GAM Table as a minimum standard should be limited to annuities under group annuity contracts where there is no cash settlement option available at the time of retirement, and that the same basis applicable to individual annuities be used for other group annuity contracts. He added that the technical advisory committee did not plan to make any recommendation until the Chmely Committee reported.

3. Disability Experience for Disability Benefits Attached to Life Insurance Policies

Mr. Becker mentioned that Mr. William Taylor was not eager to accept this assignment when his society committee completes its study of disability experience under accident and health policies.

The Technical Staff Actuarial Group agreed to postpone this project until that committee finished its current assignment.

4. Substandard Insurance

Mr. Becker reported that there was no activity under this subtopic. It was agreed to delete this subtopic from the agenda. It would no longer be carried as a specific item, but any discussion or reports of any activity could be taken up under subtopic six, "Other Matters."

5. Credit Life and Credit Disability

It was reported that the pilot study would probably be completed during 1982.

6. Others Matters

There was no discussion under this subtopic.

C. Credibility of Experience Data

Mr. Montgomery said that he had attended a meeting of the society's committee in October, 1981 in Atlanta. He mentioned that the committee had developed an excellent statement on credibility which would soon be published.

V. OTHER SPECIAL PLANS

A. Indeterminate Premium Plans

Mr. Becker mentioned that Texas was developing a new proposed regulation under which the minimum reserves and minimum cash values for an indeterminate premium plan would depend on the expected premiums used in the sale.

There was a discussion of the differences between this approach and an approach that had been suggested during 1980 by the ACLI. Mr. Becker said that he would send a copy of the draft regulation to the ACLI for comments.

B. Single Premium, Specified Minimum Death Benefit Life Insurance Plans

It was noted that model regulations would eventually be needed for this type of policy as well as the one covered under the previous subtopic.

VI. REORGANIZATION OF THE LIFE, A&H TECHNICAL STAFF ACTUARIAL GROUP

Discussion of this agenda item was deferred.

VII. OTHER MATTERS

A. Revision of Analysis of Increase in Reserves and

B. Reserve Strengthening for Insurers Earning Less on Their Investments Than Guaranteed in Their Reserve Accumulations and Deposit Fund Guarantees

It was agreed that future discussion of these subtopics would be under the agenda item "Minimum Surplus."

C. Special Interest Section in Society of Actuaries and Formation of a Society of Government Actuaries

Mr. Montgomery reported that some progress was being made in the initial stages of the process for the formation of a special interest section of the Society of Actuaries.

He suggested that this subtopic need not appear in the group's agenda.

D. Other Matters

Mr. Becker asked if anything was being done to provide specifications for joint life and last survivor type functions under the 1980 CSO Table.

Mr. Montgomery said that the society's committee which had been covered under agenda item I. C. was addressing the question.

The Technical Staff Actuarial Group also discussed several matters relating to actuarial guidelines for the NAIC Financial Condition Examiners Handbook.

Mr. Montgomery said that changes in these guidelines will still need approval of a second NAIC Group after adoption by the Life Insurance (A) Committee.

Mr. Becker said that the pending changes in Actuarial Guideline II had been recommended for adoption to the Life Insurance (A) Committee in Ted Becker's letter of November 23 to Lyndon L. Olson, Jr.

The problem of determining the appropriate interest rate for Actuarial Guideline II, in the future, was also discussed. (The Technical Staff Actuarial Group had previously based its recommendation on the interest rate developed by the New York Insurance Department. The adoption of the 1980 NAIC amendments in New York would remove the need for the New York Department to develop a rate.) It was agreed that Mr. Becker would draft a letter to the ACLI bringing the problem of determining this interest rate to their attention, and asking for their views. It was suggested that an appropriate interest rate could be derived from the standard valuation interest rates based on the 1980 amendments to the standard valuation law.

It was also reported that the Technical Staff Actuarial Group's statement on sex discrimination had been submitted to the Life Insurance (A) Committee for adoption, as well as to the Accident and Health (B) Committee.

VIII. VARIABLE LIFE AND VARIABLE ANNUITIES

Mr. Jerry Golden distributed a draft of a proposed model regulation with cover letter dated October 19, 1981. He also distributed his letter to Ted Becker of December 4, 1981 and the "Outline of Proposed Variable Life Regulation" which was attached to it.

Mr. Golden read aloud the list of principles in Attachment A, "Framework of VLI Regulation," to his letter dated December 4, 1981.

After a brief discussion of the principles involved, the group conducted a lengthy word-by-word review of the draft of the proposed regulation and the "Outline." During the discussion Mr. Golden agreed to make a number of changes which were suggested by the group.

Following this drafting session, Mr. John Booth stated that the ACLI felt that this subject was a very broad one, involving laws and regulations which deal with securities as well as insurance and actuarial matters.

He said that the ACLI had written to Lyndon L. Olson, Jr., chairman of the Life Insurance (A) Committee, asking that that committee appoint a task force of commissioners to study the issues involved.

Mr. Becker thanked Mr. Golden for excellent work and asked that Mr. Golden recognize the members of his technical advisory committee.

Mr. Golden identified the following individuals as members of his committee: Neal Gordon, Ross Hanson, Abraham Hazelcorn, Howard Kayton, Harold Leff, Jack Marshall, and Sam Schlesinger.

Accident and Health Insurance Committee Report

I. NAIC PREMIUM RATE FILING GUIDELINES

Mr. Peter Thexton distributed copies of proposed changes to the NAIC Guidelines for Filing of Rates for Individual Health Insurance Forms. He said that the proposal, dated April 1981, which was intended to modify the retroactive effect of the guidelines as originally approved and to make other editorial corrections, was essentially the same as the proposal he had presented last year. But now the entire proposal had been consolidated into one package.

Mr. John O. Montgomery asked if the proposal had been modified to take account of major medical policies with benefits and premiums related to the Consumer Price Index. (At the Technical Staff Actuarial Group meeting in October, 1981, William Hazzelwood had discussed the rationale behind such a product. He had noted that a change in the NAIC's rate filing guideline might be necessary to accommodate the products.)

Mr. Thexton said that no changes had been made in this regard since no wording had been suggested.

Mr. Douglas Broome reminded the group of the comments made by Paul Barnhart in his letter of October 16, 1981. Mr. Broome urged the Technical Staff Actuarial Group to modify the opening paragraph of the proposed footnote to section II B to eliminate what Mr. Barnhart had called "double and potentially conflicting standards."

In response to Mr. Broome's comments, the group discussed the sentence from this section which read: "With respect to filings of rate revisions for a previously approved form, benefits shall be deemed reasonable in relation to premiums provided both the following loss ratios meet the standards in IIA and in the predecessor regulation as applicable for the period in which the premium is earned." The group decided to change the last part of this sentence to read: ". . . . meet the standards as applicable either in IIA or in the predecessor regulation for the period in which the premium is earned."

The Technical Staff Actuarial Group decided to submit the proposal, as amended, to the Accident and Health Insurance (B) Committee for exposure.

In response to a question from Mr. Montgomery, Mr. Thexton said that approximately ten states had adopted these guidelines, and that a number of others were using them on an informal basis.

Mr. Montgomery introduced the question of whether, for re-rating purposes, experience should be studied separately for a single plan or in aggregate for a generic group of plans. He said that a number of complaints had been received at the California Department which could be traced to this. He said that the problems are caused when the "healthy" lives under a closed plan are rewritten on a new plan causing experience under the original plan to deteriorate.

Mr. Robert B. Shapland pointed out that there were circumstances in which the practice was justified.

Mr. William A. White mentioned that the problem was not confined to closed blocks and predicted that the problem would spill over into life insurance in this decade.

Mr. Becker reminded the group that they had not been given any specific assignment in this regard.

Mr. Becker changed the subject to the "Washington Regulation." At its previous two meetings, the Technical Staff Actuarial Group had heard reports from Mr. Storm Johnsen and had discussed whether there should be a model regulation or guideline which would require companies to set aside funds from good experience in early policy years for anticipated deterioration of experience.

It was suggested that the Society of Actuaries Committee For Accident and Health Valuation Principles might be an appropriate committee to consider this since rating principles were closely related to valuation principles. The group agreed to discuss this with the (B) Committee.

II. EXPERIENCE TABLES

A. Disability - Society of Actuaries Study

Mr. Becker reported on a telphone conversation he had with William Taylor, chairman of the society's Committee to Recommend New Disability Tables for Valuation. Mr. Becker said that the working group of this committee had met December 7, 1981. Good progress had been made on the termination rates, but the incidence rates were a bit off schedule. The committee hoped to finish preparation of the tables in the spring of 1982.

B. Cancer and Dread Disease

Mr. Becker reported that William Odell, chairman of the Technical Advisory Committee, planned to report to the Accident and Health Insurance (B) Committee at its December 17 meeting. Mr. Becker summarized a letter dated December 7, 1981, from Mr. Odell to Director Low, chairman of the Accident and Health (B) Committee. The study includes data from 17 companies which represent between 80 and 90 percent of the cancer insurance sold in the United States. The study involved 6½ million exposure records and 2 million claim records. Yet to be done are: a complete editing of the data, compiling crude data, graduating of crude data, and preparing claim cost tables. It is hoped that the project will be completed or nearly completed by late spring or summer 1982.

C. Major Medical

Since there was no study in progress under this subtopic, the group decided to delete it from the agenda.

D. Other Matters

There was no other business to discuss.

III. VALUATION

A. *Society of Actuaries Study*

Mr. Shapland, chairman of the society's Committee For Accident and Health Valuation Principles, reported that an exposure draft of that committee's report had been completed and would shortly be distributed by the society to its members.

B. Major Medical

There was no specific business to discuss. It was suggested that this subtopic be relegated to the "Other Matters" category for future agenda.

C. Other Matters

There was no other business to discuss.

IV. NONFORFEITURE BENEFITS

It was noted that the Technical Staff Actuarial Group had intended to appoint an advisory committee with Mr. Ernie Frankovich as chairman, but that the appointment had been delayed because of the reorganization of the group. The group decided to discuss the matter with the Accident and Health Insurance (B) Committee.

V. HOSPITAL AND MEDICAL CORPORATIONS

Mr. Becker reported that he had written a letter to Director Low, dated November 17, 1981, asking that the Accident and Health Insurance (B) Committee adopt the advisory committee report at its December 1981 meeting. He noted that the report itself had not been included with his letter, but that it was included as Attachment Four to the June 1981 Semi-Annual Report of the former (C4) Technical Subcommittee.

Mr. William Timmons said that Robert Dobson, chairman of the Technical Advisory Committee on Hospital and Medical Corporations, had asked him to be available to discuss the Report. He said that he would be available for the December meeting of the (B) Committee.

Mr. Becker also mentioned that the group had previously asked Mr. Dobson to continue work on the project of advising how the report might be implemented at the state level. The Technical Staff Actuarial Group decided to discuss the continuation of this project with the (B) Committee.

Finally, Mr. Becker said that Paul Barnhart's memorandum dated October 16, 1981, regarding "Proposed Actuarial Opinion Instructions for Health Service Corporations and Health Maintenance Organizations" had been forwarded to the (B) Committee for consideraton. The final report of the advisory committee had called for the opinion of a qualified actuary and the American Academy of Actuaries had been asked to develop wording for such an opinion. Mr. Barnhart's letter had been in response to that request.

VI. SEX DISCRIMINATION

Mr. Becker reported that the Technical Staff Actuarial Group's statement on sex discrimination had been submitted to Director Low in a letter dated November 18 for adoption by the Accident and Health Insurance (B) Committee. A similar letter had been sent to the Life Insurance (A) Committee.

VII. OTHER MATTERS

A. Analysis of Increase in Reserve and

B. Reserve Strengthening for Insurers Earning Less on Their Investments Than Guaranteed in Their Reserves

It was noted that the Technical Staff Actuarial Group had decided to delete the corresponding two subtopics from the life insurance agenda and to consider these matters under the "Minimum Surplus" agenda item. It was decided to do likewise with the accident and health agenda. This would require the inclusion of a new agenda item, "Minimum Surplus."

C. Special Interest Section in Society of Actuaries and Formation of Society of Government Actuaries

Mr. Montgomery reported that some progress was being made in the initial stages of the process for formation of a special interest section of the Society of Actuaries.

D. Other Matters

There was no further business to discuss.

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ATTACHMENT FOUR-C

Minutes of the Meeting of the Life, A&H Technical Staff Actuarial Group

Houston, Texas
April 3, 1982

The NAIC Life, A&H Technical Staff Actuarial Group met from 9:00 a.m. until 6:00 p.m. on April 3, 1982, in the Sandalwood Room of the Hyatt Regency Hotel, Houston, Texas, to consider certain topics pertaining to the NAIC Life (A) Committee and the NAIC Accident and Health Insurance (B) Committee.

The following persons from state insurance departments were present: Erma Edwards, Nevada Department of Insurance; Ted Becker, Texas State Board of Insurance; Bill White, New Jersey Department of Insurance; Larry Gorski, Illinois Department of Insurance; and Keith Sloan, Kentucky Department of Insurance.

The following persons from insurance companies, insurance associations, and consulting actuaries were also present: James F. Allen, Federal Kemper Life Insurance Company; Paul Barnhart, American Academy of Actuaries; Ray Bierschbach, Transamerica-Occidental Life Insurance Company; Bill Bolton, Transamerica-Occidental Life Insurance Company; John K. Booth, American Council of Life Insurance; Gordon Boronow, Equitable Life Assurance Society; Rick Boswell, National Western Life Insurance Company; Jack Bragg, John M. Bragg and Associates, Inc.; Shane Chalke, Transamerica-Occidental Life Insurance Company; Bill Carroll, American Council of Life Insurance; Warren Carter, Teachers Insurance & Annuity Association; Dan Case, American Council of Life Insurance; Donald D. Cody, Consulting Actuary; Jerome Golden, Monarch Resources, Inc.; Charles Greeley, Metropolitan Life Insurance Company; Ann Enarson Halstead, Federal Kemper

Life Insurance Company; Burnett Halstead, Federal Kemper Life Insurance Company; J. Ross Hanson, J. Ross Hanson, Inc.; Rex Hemme, Milliman & Robertson, Inc.; Dave Holland, Munich American Reassurance Company; Peyton Huffman, ITT Life Insurance Company; Harold Ingraham, New England Life Insurance Company; Paul Janus, Bankers Life & Casualty Company; Howard Kayton, Security First Life Insurance Company; Harold Leff, Metropolitan Life Insurance Company; Robert Lowden, John Hancock Mutual Life Insurance Company; Joel Magyar, New York Life Insurance Company; Richard S. Miller, Southwestern Life Insurance Company; Robert A. Miller III, Aetna Life & Casualty Insurance Company; Lew Nathan, CNA Insurance Companies; Carl Ohman, Equitable Life Assurance Society; Walt Rugland, Milliman & Robertson, Inc.; Paul Sarnoff, Prudential Insurance Company; Robert Shapland, Mutual of Omaha Insurance Company; Walter Shur, New York Life Insurance Company; William Snell, Northwestern Mutual Life Insurance Company; Anthony T. Spano, American Council of Life Insurance; Peter Thexton, Health Insurance Association of America; Bill Tozer, Kentucky Central Life Insurance Company; and Virgil Wagner, American Council of Life Insurance.

Life Insurance Committee Report

I. STANDARD VALUATION LAW AND STANDARD NONFORFEITURE LAW FOR LIFE INSURANCE

A. Report of the Committee on Dynamic Interest and Related Matters

Mr. Charles Greeley, chairman of the Technical Advisory Committee on Dynamic Interest and Related Matters, said that reports and recommendations of the technical advisory committee would be presented as the related agenda items were discussed. He commented on two subjects which he said deserved special attention.

First, he mentioned the Society of Actuaries (C3) Risk Task Force that had been studying the risks associated with fluctuations in the level of prevailing interest rates. At the Society of Actuaries meeting, held earlier in the week, a report had been given illustrating the application of techniques to measure the (C3) risk associated with traditional non-participating life insurance. (See Agenda Item II.C.)

Second, Mr. Greeley mentioned a recent telephone conversation he had had with John O. Montgomery, who had been unable to attend the meeting of the Technical Staff Actuarial Group. He said that both he and Mr. Montgomery agreed that the most important agenda item for the Technical Staff Actuarial Group was the December 1981 recommendation of the Technical Advisory Committee that cash value and loan value requirements on certain life insurance policies be eliminated. (See Agenda Item I.F.)

In response to a question from William A. White, Mr. Greeley said that the 1980 NAIC amendments to the standard valuation and nonforfeiture laws were a good and necessary step, but that study to improve these important laws should continue.

B. The 1980 Model, Status of Enactments and Interest Rates

Mr. Anthony T. Spano reported that 19 states had enacted the 1980 NAIC amendments and that they had passed at least one house of the legislature in 14 other states. He said that this rate of progress was faster than the experience under the NAIC's 1972 and 1976 amendments.

C. Specifications for the Preparation of Actuarial Tables

Mr. William Bolton, a member of the Society of Actuaries Committee on Specifications for Monetary Values - 1980 CSO Tables, reported that the committee was making good progress and expected a draft of the first part of the committee's report to be completed by June 1, 1982.

D. Problems in Interpretation

1. Cash Values Based on Interest Assumptions Lower Than Interest Assumed in Statutory Reserves and Other Higher Cash Value Plans

Mr. Greeley explained that this item was on the agenda because of a specific problem John Montgomery had in California. In particular, Mr. Montgomery was concerned over reserves in early policy years that did not recognize future durations where cash values would exceed the reserves on the basis used. He said that the Technical Advisory Committee on Dynamic Interest and Related Matters had formed an ad hoc group which would try to develop a solution satisfactory to Mr. Montgomery.

Mr. White asked if other states had experienced similar problems and if an NAIC guideline were needed.

Mr. Richard S. Miller said that some states, including Texas, could handle this as part of the policy form approval process, but that California could not since it did not require policy form approval prior to use.

Mr. Greeley said that the ad hoc group would work to find a solution for California, and he suggested that any solution should first be tried there and only later, if successful and if the need existed, should it be considered as a possible NAIC guideline.

2. Reserving of Annuities With Surrender Charges

Mr. Ted Becker said that this item had been placed on the agenda as a result of a discussion between Mr. Montgomery and Mr. Rick Boswell. Mr. Boswell had encountered some difficulty with one of the states over a proposed reserve method and he had suggested that the Technical Staff Actuarial Group develop a guideline on the subject.

The group asked Mr. Boswell to draft a proposed guideline, and he agreed.

3. Valuation - Nonforfeiture Interest Rate Differentials

Mr. William Carroll reviewed the history of this agenda item. The ACLI had prepared a report, dated October 15, 1981, in response to a request for an opinion on certain questions that arise when reserves and cash values are calculated at different interest rates. The report had described its findings as straightforward interpretations of the current standard laws, intended as a short summary of the main thrust of the law and not intended as a substitute for a careful reading of the law. The report had concluded that the standard laws were clear with regard to the use of interest rates for reserves and nonforfeiture values and that no additional amendments or interpretive guidelines were needed.

Mr. White said that an actuarial guideline was needed and he asked Mr. Carroll if a guideline based on the October 15 report could be developed for the June meeting of the Technical Staff Actuarial Group.

Mr. Carroll said that a draft could be written and distributed for comment to the ACLI task force which had studied the subject, and that he would give a progress report at the June meeting of the group.

4. Operative Date for 1980 CSO Mortality Table

Mr. Greeley urged the Technical Staff Actuarial Group to adopt a guideline interpreting the 1980 model law as permitting a company to elect separate operative dates by plan of insurance. He reminded the group that he had made this recommendation for the technical advisory committee at the December, 1981 meeting. At that meeting he had said that it would be in the public interest to give companies this flexibility since one of the principal purposes of the new valuation and nonforfeiture requirements was to enable companies to offer more competitively priced products.

Mr. Becker read the proposed guideline which was attached to the December 12, 1981 report of the technical advisory committee. He noted that Mr. Montgomery supported the proposal in his March 25, 1982 letter to the group.

The Technical Staff Actuarial Group voted to adopt the proposal and recommend it to the Life Insurance (A) Committee.

Mr. White said that the recommended guideline would not override the obligation of companies to not discriminate unfairly in the products offered for sale.

5. Valuation of Active Life Funds Held Under Group Annuity Contracts (Actuarial Guideline II)

Mr. Carroll presented a recommendation of the ACLI for a new method for determining the interest rates in Actuarial Guideline II for contributions received in 1982 and subsequent years. The proposal, described in Mr. Carroll's letter of February 24 to Mr. Becker, had been distributed to the Technical Staff Actuarial Group with Mr. Becker's mailing dated March, 1982. Under the proposal, the value of ^{i}my for calendar years y+1 through y+10, which applies to contributions received in 1982 and subsequent years, would be set equal to the calendar year statutory valuation interest rate in section three-b of the 1980 NAIC Amendments to the Standard Valuation Law applicable to the change in funds in calendar year y for guaranteed interest contracts with cash settlement options of Plan Type B with guarantee durations of more than 5 years, but not more than 10 years, and which do not guarantee interest on considerations to be received more than 12 months beyond the valuation date. Mr. Carroll said that in the past the valuation standard interest rates in Actuarial Guideline II had followed those developed by the New York Insurance Department for its Circular Letter. Because of the likelihood that the 1980 amendments would be enacted this year in New York and the circular letters discontinued, a new source for the current interest rate for Actuarial Guideline II was needed. Mr. Carroll said that the proposed method of determining an interest rate was consitent with the current guideline.

Mr. Carl Ohman reminded the group that Actuarial Guideline II would not apply to new contributions in states which had enacted the 1980 amendments. Therefore, although new rates would be needed yearly for Actuarial Guideline II, their importance was declining.

It was noted that no change was necessary in the text of the guideline, but that the footnote describing the source of the rates should be changed.

The Technical Staff Actuarial Group adopted the recommended method for determining the interest rates in Actuarial Guideline II for contributions received in 1982 and subsequent years.

6. Proposed Revision of Guideline on Joint Life Insurance (Actuarial Guideline VI)

The Technical Staff Actuarial Group had received a letter, dated December 21, 1982, from Virgil D. Wagner, a member of the American Academy of Actuaries Committee on Life Insurance Financial Reporting Principles. Mr. Wagner had pointed out that the text of the guideline applied correctly to joint life insurance payable on the first death of a covered life, but that the background material could be read to imply a more broad and incorrect application. He suggested that this be corrected.

The Technical Staff Actuarial Group agreed to defer the matter as suggested by Mr. Montgomery in his March 25 letter. Mr. Wagner was asked to take up the matter with Mr. Montgomery.

7. Other Matters

Mr. Becker mentioned that he had received a letter from Heinz Briegel, dated March 17, 1982, concerning the Standard Nonforfeiture Law for Individual Deferred Annuities. Mr. Becker said that he would send the letter to the members of the group.

The group agreed to ask the Technical Advisory Committee on Dynamic Interest and Related Matters for its comments on the letter.

E. Updating or Replacing Existing Products

Mr. Paul Sarnoff explained that the Standard Valuation Law in New Jersey had been amended to specifically permit the use of valuation standards current at the time a policy is updated.

Mr. Carroll said that this deviation from the NAIC model had not been included in any of the other states that had passed the 1980 amendments.

Mr. William M. Snell said that his company had not found any legal impediments to its update program.

The group took no action on the subject and agreed to continue to carry it on the agenda.

F. Proposal for Allowing Life Insurance Policies Without Cash Values

Mr. Greeley reviewed the proposal which had been made by the technical advisory committee in its December 12, 1981 report. That report had advocated the elimination of cash value and policy loan requirements on permanent life insurance policies for face amounts of $100,000 and over. Mr. Greeley gave the following four reasons for the adoption of this recommendation which he had previously characterized as the most important item on the group's agenda:

1. Risk of financial anti-selection would be reduced
2. Insurance protection aspect of whole life insurance would be reasserted
3. Insurance company funds could be more safely invested in long-term assets, contributing to needed capital formation within the economy
4. Cost of insurance could be reduced

In support of the fourth reason, Mr. Greeley distributed a supplement to the December report, dated April 3, 1982, that showed the reductions in premiums which were available in Canada where such products were permitted.

Mr. White suggested that the technical advisory committee had taken an extreme approach to solve the problem. He asked if they had considered any alternatives such as providing for cash values at 60 or 80 percent of the current level or providing that cash values could be adjusted to reflect market values.

Mr. Greeley said the technical advisory committee had a Subcommittee that had presented a number of alternatives, and that the proposal was a combination of those alternatives chosen for its simplicity.

Mr. Sloan questioned the need for the $100,000 size requirement. He said that no-cash-value policies with much smaller face amounts could be sold as burial insurance.

Mr. R. S. Miller said that the $100,000 limit had been included as a proxy for a suitability test.

Mr. Larry Gorski reported that there had been a mixed reaction to the report at the Illinois Insurance Department.

Mr. Greeley said that the technical advisory committee was willing to continue its work on the subject if the Technical Staff Actuarial Group wished them to do so.

The group asked Mr. Greeley to continue with the project and to provide draft legislation so that the proposal could be discussed in greater detail.

Mr. White suggested that there might be two separate agenda topics, one for "Life Insurance Policies Without Cash Values" and one for "Life Insurance Policies Without Guaranteed Cash Values."

G. Other Matters

There was no other business to discuss.

II. MINIMUM SURPLUS

A. Report of the Committee on Dynamic Interest and Related Matters

Mr. Walter Rugland, chairman of the Technical Advisory Committee's Subcommittee on Surplus and Solvency, reported for the committee. He distributed the committee's report dated April 3, 1982, and gave an oral summary of it. He outlined the various projects which were underway (see Agenda Item II.C. for details); he stressed the importance of taking a long range view toward the solution; he warned of the dangers of an arbitrary short-term solution; and he said that future analysis of a company's financial position would require that the balance sheet be looked at as an integral whole.

B. Discussion of the Wisconsin Legislation and Regulation

Reporting for the technical advisory committee, Mr. Rugland said that the approach being taken by the Wisconsin Insurance Department was seriously flawed and caused great concern. He suggested that the Technical Staff Actuarial Group should comment to Wisconsin on the subject.

Mr. Robert A. Miller, III summarized the Wisconsin regulation and criticized it for oversimplifying the problem by establishing rules of thumb.

The Technical Staff Actuarial Group decided to take no action on this subject.

C. Elements of a Law Defining Minimum Surplus According to the Structure of the Risks Assumed by an Insurer

Mr. Ohman reported on the progress of the Society of Actuaries (C3) Risk Task Force that had been studying the risks associated with fluctuations in the level of prevailing interest rates. The task force had presented reports illustrating the techniques for measuring the (C3) risk associated with guaranteed interest contracts and traditional non-participating life insurance. Plans had been made to present reports on deferred annuities and participating life insurance at the society's fall 1982 meeting. The task force then hoped to complete the first phase of its work with a paper to be published in spring, 1983. After that, work would be needed on the (C1) risk of asset default and the (C2) risk of inadequate premiums. Finally, the means of combining the results for each separate risk for each category of products sold by a company had to be developed.

D. Revision of Analysis of Increase in Reserves

Mr. Becker said that this topic dealt with Mr. Montgomery's ongoing project for revisions to page six of the NAIC's annual statement blank.

Mr. Sarnoff pointed out that Mr. Montgomery's most recent proposal would require companies to provide information for annuities currently not available to most companies.

The group suggested that Mr. Sarnoff make his comments directly to Mr. Montgomery.

E. Reserve Strengthening for Insurers Earning Less on Their Investments Than Guaranteed in Their Reserve Accumulations and Other Guarantees

It was noted that this topic, which had been on the agenda for over two years, was the result of a letter from one of the states asking for advice. Mr. Carroll was asked to draft a response for the group's consideration.

F. Other Matters

There was no other business to discuss.

III. UNIVERSAL LIFE AND RELATED PLANS OF LIFE INSURANCE AND ANNUITIES

There was no separate discussion of each subtopic under this agenda item.

Mr. Daniel F. Case distributed a draft position paper, dated March 25, 1982, and titled "Suggested Valuation and Nonforfeiture Standards for Certain Life Insurance Plans with Adjustable Features." Mr. Case explained that the paper reflected the studies made by the ACLI's Task Force on Valuation and Nonforfeiture Regulation for New Products. He said that the paper had not yet been reviewed by the Council's Actuarial Committee or Legislative Committee.

Mr. William Tozer, chairman of the task force that developed the paper, described the contents and conclusions of the paper.

The paper suggested approaches to minimum reserve and nonforfeiture requirements for certain life insurance plans which permit the insurer to adjust premiums or benefits.

For single-premium adjustable-benefit life insurance the paper concluded that such policies could be handled directly under the Standard Laws since at any time the policy provides specified paid-up, guaranteed future benefits.

For scheduled-premium adjustable-interest-credit policies, which require the payment of state periodic premiums and provide a guaranteed death benefit that reduces on a specified future date, the paper concluded that such policies could be covered under portions of the 1980 Standard Nonforfeiture Law for Life Insurance applicable to "policies which cause on a basis guaranteed in the policy unscheduled changes in benefits or premiums, or which provide an option for changes in benefits or premiums other than a change to a new policy."

For flexible-premium adjustable-interest-credit policies, commonly called universal life, the paper concluded that the Standard Laws do not directly address these policies, except that the 1980 Laws contain a provision for policies not directly addressed by the other provisions of those laws. The paper then suggested temporary valuation and nonforfeiture standards for universal life policies.

The valuation standard suggested was analogous to the commissioners reserve valuation method for traditional life insurance.

A minimum cash surrender value was expressed on a retrospective basis, actual surrender values provided by the policy were required to be at least equal to the minimum value and would be made subject to a grading requirement similar to the one in the 1980 law for traditional products, any paid-up nonforfeiture benefits provided by the policy would be regulated, and certain disclosure requirements were suggested.

In reply to a question from Mr. Becker, Mr. Tozer stated that his task force had no present timetable for commenting on indexed policies.

Mr. Shane Chalke said that the suggested guidelines were in some respects inconsistent with current law.

Mr. White asked how the suggestions contained in the paper might be used by the regulators.

Mr. Tozer said that the material might be used as policy approval guidelines under the authority granted by the 1980 Law.

Mr. Becker indicated his preference that model regulations be developed and stressed the need to include indexed policies. He also mentioned that Texas had formed an Advisory Committee on Universal Life which had met on March 30 and 31.

IV. OTHER SPECIAL PLANS

A. Indeterminate Premium Plans

Mr. Becker reported on indeterminate premium plans held in Texas on April 1. Under existing Texas regulation, minimum reserves and nonforfeiture values would be based on maximum premiums stipulated in the policy. Under the new proposal, reserves and nonforfeiture values would also have to exceed values obtained when illustrated premiums were used in the calculations instead of the maximum premiums stated in the policy.

Mr. Becker explained that this applied only to the basic reserve and not to the additional minimum reserve requirements. For example, if the maximum premiums were increasing with duration, but the illustrated premiums were level, whole life reserves and nonforfeiture values would be required.

B. Single Premium, Specified Minimum Death Benefit Life Insurance

It was noted that the position paper of the ACLI task force had concluded that single-premium adjustable-benefit life insurance policies could be handled directly under the Standard Laws.

C. Other Plans

There was no other business to discuss.

V. VARIABLE LIFE AND VARIABLE ANNUITIES

A. Revision of Variable Life Insurance Regulation

Mr. Jerome S. Golden distributed a letter, dated March 22, 1982, which he had written at John Montgomery's suggestion. The letter described the NAIC Model VLI Regulation as modified through the New Orleans meeting of the Technical Staff Actuarial Group and gave status reports on several long-term projects assigned to the Variable Products Advisory Committee. Mr. Golden reviewed the changes agreed to in New Orleans and commented on four long-term projects dealing with deduction of charges for incidental insurance benefits form the separate account, requirements as to liquidity for permissible investments, group permanent universal variable life insurance, and standards for illustrations.

Mr. Golden mentioned that in addition to his advisory committee there were two other groups working on the subject, an ad hoc group and an ACLI group. He said that the three groups were working well together.

Mr. John K. Booth mentioned the urgency of the proposal to permit flexible-premium variable life insurance.

There was some discussion of whether this topic had sufficient actuarial content to continue it on the agenda of the Technical Staff Actuarial Group. It was noted that the topic had been assigned by the Life Insurance (A) Committee.

The group encouraged Mr. Golden to continue work on the long-term projects.

B. Other Matters

There was no other business to discuss.

VI. MORTALITY AND MORBIDITY STUDIES

A. Super Select Mortality, Smoker vs Nonsmoker

Mr. David Holland, a member of the Technical Advisory Committee on Dynamic Interest and Related Matters, reported for the committee. He reminded the group that the committee had previously recommended that (i) Actuarial Guideline IV be modified to replace the table based on the Modern CSO with the 1980 CSO with Select Mortality Factors and (ii) the NAIC Technical Staff Actuarial Group ask the Society of Actuaries to study the subject of smoker vs nonsmoker mortality. At its December meeting the group had indicated general support for the recommendations. With regard to the second recommendation, Mr. Holland said that the technical advisory committee wished to expand it to include both a complete study of the subject leading to a permanent solution as recommended in December and also a request that the Society of Actuaries be asked to rapidly produce a temporary solution on the basis of mortality statistics already available.

On the question of smoker vs nonsmoker mortality, the Technical Staff Actuarial Group voted to contact the Society of Actuaries as recommended.

On the question of modifying Actuarial Guideline II to permit the 1980 CSO Table with 10-year select factors, the group voted to defer the question to its June 1982 meeting.

B. Society of Actuaries

1. Individual Annuities

The Technical Staff Actuarial Group voted to recommend to the Life Insurance (A) Committee that the NAIC adopt 1983 Table A as a mortality table suitable for the valuation of annuity benefits under individual annuities and supplementary contracts issued in 1983 and subsequent years. The group had previously discussed this subject at its December, 1981 meeting.

2. Group Annuities

There was no report on this item.

3. Credit Life and Credit Disability

Mr. Becker read a brief note from Harry Galloway, chairman of the society's committee that is making this study. The study was nearly complete and plans were being made to publish it.

4. Other Matters

There was no other business to discuss.

VII. GENERAL MATTERS RELATING TO THE LIFE, A&H TECHNICAL STAFF ACTUARIAL GROUP

This subject was deferred until the June, 1982 meeting.

Accident and Health Insurance Committee Reports

I. NAIC PREMIUM RATE FILING GUIDELINES

Mr. Paul Barnhart, chairman of the American Academy of Actuaries Subcommittee on Liaison with NAIC Accident and Health (B) Committee, distributed copies of a proposed revision of the NAIC Individual Rate Filing Guideline, prepared by the academy subcommittee. Mr. Barnhart said that the proposed changes addressed three important subjects which had been discussed by the Technical Staff Actuarial Group at its recent meetings - retroactive application under forms with similar risk exposure, and consideration of experience during select policy years. Mr. Barnhart urged the group to act on the proposal.

Mr. Robert B. Shapland repeated his concerns over certain retroactive aspects of the guideline. He said that the guideline could create liabilities where none had previously existed.

Mr. Peter M. Thexton said that he had not personally reviewed the proposal, nor had the HIAA developed a position, but that he saw no reason not to expose the proposal.

The Technical Staff Actuarial Group agreed to adopt the proposal as an exposure draft.

II. EXPERIENCE TABLES

A. Disability - Society of Actuaries Study

Mr. Becker said that he would contact William Taylor, chairman of the Society's Committee to Recommend New Disability Tables for Valuation, and ask him for a status report to include in the June, 1982 Semi-annual Report of the Technical Staff Actuarial Group.

B. Cancer and Dread Disease

Mr. Ted Becker distributed a brief status report, dated March 29, 1982, from William Odell, chairman of the technical advisory committee.

C. Other Matters

There was no other business to discuss.

III. VALUATION

A. Society of Actuaries Study

Mr. Becker thanked Mr. Shapland for the work he and the members of the society's Committee for Accident and Health Valuation Principles, which Mr. Shapland chairs, had done in preparing the exposure draft of that committee's report which had been distributed to the society's members.

Mr. Becker asked if there were any plans for a second report dealing with the practical implementation of the valuation principles expounded in the first report.

Mr. Shapland said that the first report completed the assignment which the committee had been given by the society, and that the Technical Staff Actuarial Group should contact the Society of Actuaries if it wished a second report.

Mr. Barnhart reminded the group that the exposure draft would be discussed by the society at the fall 1982 meeting of the Society of Actuaries in Washington.

The group agreed to defer consideration of the need for a second report until after the society's fall meeting.

B. Other Matters

There was no other business to discuss.

IV. HOSPITAL AND MEDICAL CORPORATIONS

A. Report of Technical Advisory Committee on Hospital and Medical Corporations

Mr. Becker distributed a letter, dated March 29, 1982, from Robert Dobson, chairman of the technical advisory committee that had prepared the report which the technical advisory committee had adopted at its October 1981 meeting.

Mr. Larry Gorski suggested that the group discharge the technical advisory committee and ask the NAIC Accident and Health (B) Committee what further action, if any, it desires the Technical Staff Actuarial Group to take on this subject.

B. Proposal for Actuarial Opinion

Mr. Becker mentioned that Paul Barnhart's memorandum, dated October 16, 1981, regarding "Proposed Actuarial Opinion Instructions for Health Service Organizations," had been adopted by the group at its October, 1981 meeting and had been forwarded to the (B) Committee for its consideration. No one present knew of any unfavorable comments resulting from the exposure of this proposal for an actuarial opinion made by Mr. Barnhart on behalf of the American Academy of Actuaries Subcommittee on Liaison with NAIC Accident and Health (B) Committee. Accordingly, the Technical Staff Actuarial Group voted to recommend the proposal to the Accident and Health (B) Committee for adoption in June, 1982.

C. Other Matters

There was no other business to discuss.

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ATTACHMENT FOUR-D

Report to the Life Insurance (A) Committee

by Ted Becker

I am reporting on behalf of the NAIC Life, A&H Technical Staff Actuarial Group. This is an informal group consisting mainly of state insurance department actuaries. It consists of essentially the same individuals who were members of the former (C4) group prior to reorganization of the NAIC last June.

In accordance with the decision made at the NAIC meeting in New Orleans last December, our Staff Actuarial Group is working on six different topics in the life insurance area:

1. Standard Valuation Law and the Standard Nonforfeiture Law

2. Minimum Surplus

3. Universal Life and Related Plans

4. Other Special Plans including Indeterminate Premium Plans

5. Variable Life Insurance and Variable Annuities

6. Mortality and Morbidity Studies

Our Staff Actuarial Group is also working on several accident and health topics, as directed by the Accident and Health (B) Committee.

The Staff Actuarial Group met at the Hyatt Regency Hotel in Houston last Saturday, April 3, and considered all of these topics. Five states were present.

We have the following specific recommendations for adoption by the (A) Committee at your June 1982 meeting in Philadelphia.

a. Including a new Actuarial Guideline in the Financial Condition Examiners Handbook which would specifically permit "plan-by-plan" election of an operative date under the 1980 Amendments to the Standard Nonforfeiture Law. This operative date refers to the 1980 CSO Mortality Table, and would also trigger a dynamic interest rate and a new formula for calculation of the adjusted premiums.

b. Amending the manner of calculating the interest rate for the existing Actuarial Guideline II, dealing with reserves for Active Funds under Group Annuity Contracts.

c. Adopting a new mortality table for individual annuities, the 1983 Table "A". This table was recently developed by a Society of Actuaries Committee.

The two actuarial guidelines are considered under the topic heading, "Standard Valuation Law and the Standard Nonforfeiture Law." The new mortality table was considered under the topic "Mortality and Morbidity Studies." There was discussion and progress on the other topics at our Houston meeting, but these are the only specific recommendations for the (A) Committee at your June 1982 meeting.

Our Staff Actuarial Group plans to meet again in Philadelphia on the weekend prior to the regular NAIC meeting. This would probably be Saturday, June 5, and Sunday, June 6.

Our Staff Actuarial Group would also like to request that we be specifically listed in the agenda for the Life Insurance (A) Committee meeting in June 1982.

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ATTACHMENT FOUR-E

Technical Advisory Committee on
Dynamic Interest and Related Matters

December 3, 1981

All members of the committee were present except for Messrs. Hill, R. A. Miller, and Rugland. Also attending were Messrs. Allen, Carroll, Launer, Leff, and Spano. The chairman thanked Mr. Carney for this hospitality in making arrangements for the meeting.

It was decided to disband the "Misscellaneous Subcommittee" since there did not appear to be any remaining work for that particular group. Messrs. Hill, R. A. Miller, and Rugland are invited to join any of the other three subcommittees in which they express interest.

Reports were given with respect to other subjects as follows:

Subcommittee on Mortality

A. Minimum Reserves

The NAIC Actuarial Advisory Group had requested that we study the question of minimum reserves, especially for renewable term insurance and specifically as it is impacted by preferred risk or nonsmoker underwriting designations. Messrs. Thornthwaite and Welch described current approaches in several states for addressing this question, and a new proposal suggested in another state. Concern was expressed about the growing lack of uniformity and the seeming arbitrariness of some of the approaches. The lack of precise language in the 1980 bills as to the operative date for the new table was also cited as contributing to the problem.

The opinion of the advisory committee is that this problem would most appropriately be handled in the long-run by development of more-refined valuation mortality tables and greater reliance on the valuation actuary to use appropriate mortality standards in valuing liabilities. However, it was recognized that any such new standards would not be available for several years, and that a practical approach would be appropriate in the meantime. Accordingly, it was agreed that the chairman would present a statement to the NAIC Actuarial Advisory Group recommending:

(i) Modification of Actuarial Guideline IV to substitute the 1980 CSO Table with Select Mortality Factors for the mortality table contained therein, which was based on the modern CSO developed by the Unruh Committee

(ii) Adoption of a new guideline interpreting the 1980 model bills as permitting a company to elect an operative date separately for each plan of insurance

(iii) That the Society of Actuaries be asked to analyze experience for smoker vs. nonsmoker mortality

B. Proposed 1983 IAM Valuation Mortality Table

We had been asked by the NAIC Actuarial Advisory Group to review the proposed new valuation mortality table for individual immediate annuities, and consider its adaptation for group annuities. The review of the proposed table produced general support for the Johansen Committee's report and the proposed table. The committee strongly recommends the adoption by the NAIC of the new table for valuing individual annuities. We expect to make further recommendations on group annuity mortality following receipt of the report from the Chmely Committee in the spring of 1982. We are tentatively leaning towards an approach which would value certain group annuities, where a cash settlement option is available, on the same basis as individual annuities.

As part of our recommendation to the NAIC Actuarial Advisory Group endorsing the use of the new table, we should strongly suggest that the 1983 Table A should be reviewed in a few years to judge its continued suitability for valuation purposes. One possible approach at that time might be to update the table using Projection Scale G.

Subcommittee on Cash Value Guarantees

The initial and supplementary reports from the subcommittee listed and analyzed nine possible approaches to alleviating the financial burden associated with book value guarantees during times of severe fluctuations in interest rates. The focus of the committee's discussion centered on a combination of two of the alternatives - eliminating the requirement for a cash value on policies of a specified size or larger, such as $100,000. It was the consensus of the committee that such an "experiment" would be valuable to gauge the receptivity of the insurance-buying public to the new approach. Adequate and suitable disclosure is especially necessary, and there should be a demonstrable savings accuring to the policyholder.

It was agreed that the chairman would approach the NAIC Actuarial Advisory Group with this concept and obtain their reaction before proceeding further.

Subcommittee on Surplus and Solvency

Mr. Ohman reported on the excellent progress being made by the Society of Actuaries Task Force on (C3) Risk, and their timetable for completing their part of the research. The advisory committee then entered into a discussion of the role of the Actuarial opinion. While it is expected the actuaries will ultimately need to perform specific tests under various interest rate scenarios to determine whether or not the reserves make good and sufficient provision for the liabilities, it would be premature to set rigid guidelines on what tests should be made. Even greater concern was expressed over the use of arbitrary or simple formulas to determine minimum surplus requirements for a given company.

Next Meeting

Our next meeting will be held on Friday, April 2 at 1:30 p.m. at the Hyatt Regency Hotel in Houston, following the close of the Society of Actuaries meeting. Friday's meeting will run from 1:30 p.m. to 6:00 p.m. and we will reconvene, if necessary, on Saturday, April 3 from 9:00 a.m. to 12:00 noon. (The NAIC Actuarial Advisory Group has tentatively scheduled their next meeting on April 3 in Houston.)

Actuarial Advisory Group

December 12, 1981

Following is a brief summary of the NAIC Actuarial Advisory Group's December 12, 1981 meeting of particular relevance to our committee's work.

Cash Value Guarantees

Mr. Greeley presented a report from the technical advisory committee (Attachment Four-E1) advocating the elimination of cash value and policy loan requirements on permanent insurance policies for a face amount of $100,000 and over. The NAIC Actuarial Advisory Group reacted favorably to the idea and will expose it to the commissioners to get their preliminary reaction.

Operative Date for 1980 Nonforfeiture Law

Mr. Greeley presented a report from the technical advisory committee (Attachment Four-E2) advocating adoption of a guideline interpreting the 1980 model law as permitting a company to elect separate operative dates by plan of insurance. The NAIC Actuarial Advisory Group was supportive of our proposal. It was mentioned that the Washington Insurance Department is already interpreting the law in such manner.

Reserve Requirements for Policies Issued on a Preferred Underwriting Basis

Mr. Greeley presented a report (Attachment Four-E3) recommending that (i) Actuarial Guideline IV be modified to replace the table based on the Modern CSO with the 1980 CSO with Select Mortality Factors; and (ii) the NAIC Actuarial Group ask the Society of Actuaries to study the subject of smoker vs. nonsmoker mortality. The NAIC Actuarial Advisory Group indicated general support for our proposal.

Minimum Surplus and Actuarial Opinions as to Reserve Adequacy

Mr. Greeley presented a report (Attachment Four-E4) and Mr. Ohman discussed orally the use of the 1983 Table A for Individual Annuity valuation. The NAIC Actuarial Advisory Group decided to recommend adoption by the NAIC of the new tables as a valuation standard (Attachment Four-E5).

Policies with a Nonforfeiture Interest Rate Lower than the Valuation Interest Rate

Mr. Montgomery will work on preparation of a guideline dealing with proper reserve methods when the nonforfeiture interest rate is less than the valuation interest rate.

Policy Updates

It was reported that Arkansas may be objecting to unilateral updates.

Harold B. Leff
Actuary

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ATTACHMENT FOUR-E1

To: The NAIC Actuarial Advisory Group

Subject: Cash Value Guarantees

Date: December 12, 1981

At the June 1981 meeting of the (C4) Technical Subcommittee I reported briefly on the activities of the advisory committee's Subcommittee on Cash Value Guarantees and indicated that a preliminary report would be available at this time.

The following preliminary report first states the problem as we see it; then lists the possible alternative solutions that were considered; and concludes with a specific recommendation for your consideration.

Statement of the Problem

Individual life insurance policies currently issued in the United States are generally required to include the following policy provisions:

Cash Surrender Value - This provision makes available a cash surrender value benefit which is fixed in advance at the time the policy is issued. The amount depends upon the number of premium payments which have been completed when the policy is surrendered.

Policy Loan - This provision requires an advance of all or a portion of the cash value specified by the policy upon the request of the policyholder. It permits the charging of interest, although there may be restrictions on the rate of interest that can be charged.

Nonforfeiture Paid-Up - This is a benefit required whenever a premium is in default. Ordinarily, the benefit is either extended term insurance or reduced paid-up insurance.

Basis of Computation - Amounts of cash surrender values and nonforfeiture paid-up benefits are determined according to a formula which specifies the minimum nonforfeiture amount that must be provided, and requires the paid-up benefits to be the actuarial equivalent of the cash values computed as of the same date.

While the Nonforfeiture Laws have been revised on occasion, the basic requirement for a predetermined scale of cash surrender values has been a feature of the United States individual life insurance product for substantially all of the 20th Century to date. As a result of this requirement, most insurers have followed the practice of distributing investment results to all generations of individual life insurance policies using portfolio average interest rates, because this is consistent with the availability of predetermined, or "book value" guaranteed cash values. At the time these practices began and during the ensuing first six or so decades of this century, it was the intention and actual result that these requirements and actuarial methods brought about reasonable equity as between terminating and continuing policyholders. Experience since 1970 has been different. There have been frequent abrupt increases and decreases in both short- and long-term rates of interest, accompanied by dramatic changes in the demand for policy loans as well as cash surrender benefits. Demands for cash tend to peak at the same time as the interest rates peak. The result is that terminating policyholders secure termination values greatly in excess of the then value of the assets which they have contributed to the insurer.

As described above, the current structure based on book value surrender guarantees and portfolio average investment results is vulnerable to disintermediation when market interest rates are high. In order for the insurer to protect the continuing policyholders, it needs some relief from the relatively rigid surrender value requirements that are now being imposed. Policyholders withdraw cash from the insurer because they can earn a higher return elsewhere; but the insurer cannot afford to pay the new money rate on old money. Nor can we really afford to pay surrender values at "book" when they are greatly in excess of the current value of the underlying assets. Nor can the insurer credit new money rates to new policies at a rate significantly greater than that used for old policies, or incentives to replace would become too great.

In evaluating proposed solutions, it should be kept in mind that the primary focus of the Nonforfeiture Laws is to provide reasonable equity between terminating and continuing policyholders. While this matter of equity is of the greatest concern in the case of participating life insurance, it is also a matter of concern for nonparticipating insurance. If the rigidity of the current law forces insurers to provide for benefits that may lead to great windfalls for some categories of policyholders, the premiums that the insurers charge are going to have to be increased.

Summary of Alternatives Considered

1. Provide no specified cash surrender values, but provide for paid-up nonforfeiture benefits.

2. Provide cash surrender values which vary by formula to reflect market value adjustment.

3. Permit payment of cash surrender and loan values only in installments over a minimum period of years, such as five years.

4. Vary the length of time specified in the six months deferral of payment provision.

5. Permit a level of guaranteed surrender values significantly below the level of policy assets, with an adjustment in the from of a terminal dividend (participating business) or a persistency bonus (nonparticipating business) to reflect the amount of additional assets that can be paid terminating policyholders under conditions of normalcy.

6. Provide a fixed scale of cash surrender values, but subject to a special adjustment only under conditions of economic stringency as determined by an external index.

7. Provide no specified nonforfeiture benefits at all, either for a stated period, or for the entire duration of the policy.

8. Permit waiver of the nonforfeiture law in the case of special jumbo size policies sold to sophisticated purchasers.

9. Develop adjustments to the model variable life insurance regulation which would accommodate life insurance based on a large percentage of fixed income type investments.

Recommendation

The Subcommittee on Cash Value Guarantees analyzed the pros and cons of each of the alternatives, both from a theoretical and practical point of view. The advisory committee as a whole then held intensive discussions at several of its meetings. The solution that seemed to us in the best long-run interest of the insurance public was a variation and combination of alternatives A&H listed above.

Specifically, we recommend that policies meeting an appropriate suitability test be exempt from the provisions that require guaranteed cash surrender values and loan values. Guaranteed paid-up nonforfeiture benefits would continue to be required. Suitability would be defined as all policies for $100,000 and greater. On such policies insurance companies could make whatever guarantees -- or no guarantees -- with regard to cash and loan values that they deem appropriate for the market place. This would permit healthy experimentation and a true market place test. However, it would be restricted to the most sophisticated market,through the $100,000 limit. Adequate disclosure would need to be mandated to avoid later misunderstanding. Finally, it would be required that nonavailability of guaranteed cash would result in a pricing advantage (either thorugh premiums or dividends) to such policyholders.

The advisory committee would appreciate your committee's reaction to this preliminary report so that we may know on what basis to finalize it.

Submitted for the Technical Advisory Committee

Charles Greeley, FSA, MAAA
Chairman

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ATTACHMENT FOUR-E2

To: The NAIC Actuarial Advisory Group

Subject: Standard Nonforfeiture Law for Life Insurance–Operative Date of Section 5-c

Date: December 12, 1981

As part of the 1980 amendments to the Standard Nonforfeiture Law for Life insurance, a new section 5-c was introduced to incorporate a number of significant changes in the basis for determining minimum nonforfeiture benefits. Subsection (11) of this section reads as follows:

> "After the effective date of this section five-c, 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 first, nineteen hundred and eighty-nine, which shall be the operative date of this section for such company. If a company makes no such election, the operative date of this section for such company shall be January first, nineteen hundred and eighty-nine."

As you have indicated, questions have been raised as to whether a company must elect one operative date for all of its plans of life insurance, or whether a company can make the election on a plan-by-plan basis. Under the latter approach, the company could elect different operative dates for different parts of its portfolio, subject to the January 1, 1989 overall deadline.

The law is not precise in this regard and, to our knowledge, the subject was not discussed during the numerous phases of the development of the 1980 amendments. On the other hand, these amendments to provide for a plan-by-plan option with respect to the use of either the Commissioners 1980 Standard Ordinary Mortality Table or, as an alternative, the same table with Ten-Year Select Mortality Factors. This is certainly a more significant option than one under which companies could, within a specified time period defined in the law, use some latitude in electing when different parts of their portfolio would become subject to the new provisions. The former could result in substantial and permanent differences in required reserves and nonforfeiture benefits, while the latter would merely give companies some additional flexibility for a temporary period. Thus, we feel there is a strong implication that a plan-by-plan election of operative dates may be intended.

We also feel there is a public interest consideration that supports giving companies this flexibility. It is widely recognized that one of the principal purposes of the new nonforfeiture requirements is to enable companies to offer more competitively-priced products. To the extent that companies would have to delay introducing any products based on the new requirements until they could develop an entire portfolio on that basis, the consumer would be denied the opportunity to purchase insurance more economically. With the law being silent on the point at issue, there is strong argument for using the interpretation that would produce the more favorable results for the consumer.

In summary, we feel that an interpretation of the law to permit a plan-by-plan election of operative dates would be consistent with the general philosophy and intent of the 1980 amendments and with the best interests of the insurance-buying public. We urge that you recommend adoption by the NAIC of an interpreative guideline to this effect. Attached is a proposal in the form of an Actuarial Guideline to the Financial Condition Examiners Handbook.

Submitted for the Technical Advisory Committee

Charles Greeley, FSA, MAAA
Chairman

ACTUARIAL GUIDELINE

Interpretation of the Standard Nonforfeiture Law
for Life Insurance with Respect to the
Operative Date of Section 5-c

Section 5-c(11) of the Standard Nonforfeiture Law for Life Insurance shall be interpreted to permit a company to elect an operative date separately for each plan of insurance. For any plan for which the company has not elected an earlier operative date, the operative date shall be January 1, 1989.

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ATTACHMENT FOUR-E3

To: The NAIC Actuarial Advisory Group

Subject: Reserve Requirements for Policies Issued on Preferred Underwriting Basis

Date: December 12, 1981

With the general improvement of mortality and the considerably increased use of preferred-risk underwriting (e.g., smoker vs. nonsmoker distinctions), companies are in a position to offer life insurance plans at substantially reduced premium rates, especially in the term insurance market. The ability of companies to make these plans available has been affected by the requirement in the Standard Valuation Law that minimum reserves be calculated by using, for each contract year, the lesser of the gross premium and the valuation net premium based on the minimum valuation standards. Recognizing that this requirement was becoming more burdensome because of the increasing conservatism of the 1958 CSO Table relative to actual mortality, the NAIC in 1978 adopted Actuarial Guideline IV to the Financial Condition Examiners Handbook. This guideline contains an interpretation regarding minimum reserves for renewable term life insurance. Included in the guideline is a provision that, for purposes of determining minimum reserve requirements, the gross premiums be compared with test premiums derived from mortality rates whose basic source is the Modern CSO Table published in Volume 27 of the Transactions of the Society of Actuaries.

The problem will be alleviated further as companies are able to utilize the 1980 CSO Table with Ten-Year Select Mortality Factors that was introduced into the Standard Valuation Law by the 1980 amendments. However, many companies will be precluded from using this table until a substantial number of states have enacted the 1980 amendments. We feel that some means of temporary relief should be sought in order to permit companies to offer lower-cost products more broadly. For this prupose, we propose that Actuarial Guideline IV be amended to provide for determining minimum reserve requirements based on a comparison of gross premiums with test premiums based on the 1980 CSO Table with Ten-Year Select Mortality Factors. This table would, therefore, be used instead of the mortality table currently included in the guideline, whose basic source, as indicated, is the Modern CSO Table. A copy of Actuarial Guideline IV with the necessary changes to give effect to this recommendation is attached.

Finally, we would recommend that the Society of Actuaries be asked to study the subject of smoker vs. nonsmoker mortality. The results of such a study should be helpful in developing a more refined and permanent solution to some of the pricing and valuation problems associated with preferred-risk policies.

Submitted for the Technical Advisory Committee

Charles Greeley, FSA, MAAA
Chairman

ACTUARIAL GUIDELINE IV

ACTUARIAL INTERPRETATION REGARDING MINIMUM RESERVES FOR CERTAIN FORMS OF TERM LIFE INSURANCE

Scope

This interpretation recommended by the NAIC Technical Task Force to Review Valuation and Nonforfeiture Value Regulation deals only with term life insurance without cash values which the owner has the unilateral right to maintain in force until its stated expiry date, subject only to the payment of required premiums which vary (generally increasing on a per $1000 basis) during the term of the policy and under which premium rates are guaranteed to the stated final expiry. This interpretation applies only to such term plans valued on the 1958 CSO Mortality Table for the current term period.

Ten-year renewable term, five-year renewable term and one-year renewable term to a stated age with generally increasing premiums are titles commonly given to such policies, but this interpretation concerns itself with the actual coverage provided and is not controlled by the name given the coverage.

Background Information

Historically, reserves on one-year renewable term policies have consisted of a basic reserve for the current term period of one-half the cost of insurance for the current term period, plus a deficiency reserve, if any. The application of the commissioners reserve valuation method to determine basic reserves and deficiency reserves for such policies is subject to varying interpretations as noted in Walter O. Menge's paper, "Commissioners Reserve Valuation Method" written at the time of construction of the Standard Valuation Law.

> . . . the adaptation of the commissioners reserve valuation method to fit policies for which the gross premium varies from year to year becomes a problem of generalization which, from a purely theoretical viewpoint, has an infinite number of possible solutions, some of which are practical and others of which are impractical.[1]

and

For these reasons, it seems desirable not to formulate at this time any fixed rules for the valuation of these unusual types of policies and riders. The second paragraph of section 4 of the Standard Valuation Law does not define the method of valuation of such contracts but requires that the method used, whatever it may be, must be consistent with that employed for uniform premium policies providing uniform insurance benefits, thus leaving open the possibility of a choice of several consistent methods.[2]

Acceptable Approaches

Two approaches to "consistent" reserves are suggested. The unitary policy approach considers such policies as variable premium policies up to the mandatory expiry date. Under this approach the valuation net premiums are a uniform percentage of gross premiums with the percentage fixed at issue date. If appropriate deficiency reserves are held, this approach has great appeal. However, it is susceptible to manipulation and illogical results. Reserves according to this approach should be acceptable only if the company can demonstrate that actual reserves, including deficiency reserves, for all renewable term business valued using this approach are of the same general magnitude as would occur using an approved method as defined below.

The other approach is to hold policy reserves for only the current period of years (not necessarily equal to the renewal period) during which the required premium per $1000 remains level, including deficiency reserves if appropriate. Additional reserves are established where net premiums, calculated on a basis which reflects current mortality, exceed gross premiums for future periods of level premiums. Although not speaking directly to valuation problems in this instance, the Hooker Committee report said:

> The question was raised whether a policy providing term insurance for several years, automatically followed by permanent insurance, should be considered as two separate policies for the purpose of the Act. In the Committee's opinion, the respective portions may be treated separately if the portion providing permanent insurance takes the Company's regular rate at the then attained age. The rated age provision in the law appears to cover this point. However, the Committee draws a distinction between policies providing purely term insurance followed by permanent insurance at the company's published rate at the attained age of conversion, the policies providing for an initial premium such that the increased premium at a subsequent duration differs from that for a new policy at the attained age. The latter case obviously constitutes a single policy to which the formula should be applied at the outset.[3]

The second sentence of the above quotation lends support to the approach of separating successive periods of level premiums.

Under this interpretation, an approved method is any method which produces reserves greater than or equal to the sum of policy reserves, including deficiency reserves, for the current period of level premiums calculated on the basis of the applicable mortality and interest standards and reserve method specified in the Standard Valuation Law plus additional reserves calculated according to the following basis applied uniformly to all such policies.

> The present value of the excess of test premiums for future periods of level premiums for which gross premiums are guaranteed over the respective gross premiums, such test premiums and present values being calculated on the ~~mortality table attached to this interpretation~~ Commissioners 1980 Standard Ordinary Mortality Table with Ten-Year Select Mortality Factors and 4½% interest.

In case a future gross premium exceeds the test premium, the excess shall be considered zero and not a negative amount. This is in accordance with the principle of anticipating no future profits but providing for all future losses.

Reinsured Business

If reinsurance is assumed under an agreement in which the reinsurer reserves the right to raise premiums to a level at least as great as the net valuation premiums, the reinsurer is not required to establish deficiency reserves or additional reserves, and the ceding company is not permitted to take credit for such reserves on the portion of the business which is reinsured.

If a reinsurance agreement guarantees future reinsurance premiums, the reinsurer should establish deficiency reserves and additional reserves as required by this interpretation for the period for which reinsurance premiums are guaranteed, and the ceding company may take credit for such reserves against its deficiency and additional reserves on the portion of the business which is reinsured to the extent permitted by law.

Adequacy of Reserves

Although the above alternative is acceptable as meeting the intent of the Standard Valuation Law, this does not in any way relieve the certifying actuary of the insurance company from exercising his own best judgment with respect to the appropriate reserves. In particular, the actuary should consider term contracts of this nature when he states his opinion that aggregate reserves "make a good and sufficient provision for all unmaturity obligations of the company guaranteed under the terms of its policies" and "include provision for all actuarial reserves and related statement items which ought to be established."[4]

References

1. The Record, American Institute of Actuaries, Vol. XXXV, 1946, p. 270.

2. Ibid., p. 300.

3. 1947 NAIC Proceedings, 257.

4. Instructions for Completing NAIC Life and Health Annual Statement Blank, 1976, p. 1.

MORTALITY RATES

The basic source of the rates is the modern CSO (27 Transactions of the Society of Actuaries 624). These rates are age nearest birthday (ANB) rates, and age last birthday (ALB) rates were obtained by the same process as was used to obtain the 1958 CSO (ALB) rates. Beginning with the age 71 rates, these rates were interpolated into the 1958 CSO such that ages 75 and up are 1958 CSO rates.

The resulting q_x values were then individually subjected to a maximum of the 1958 CSO rates for males and the 1958 CSO rates set back six years for females (six-year setback according to the methods described in 11 Transactions of the Society of Actuaries 1060, for the three-year setback.)

	Male		Female	
	ANB	ALB	ANB	ALB
0	0.00498	0.0032443	0.00498	0.0032443
1	0.00150	0.0014700	0.00150	0.0014700
2	0.00144	0.0014001	0.00138	0.0013500
3	0.00136	0.0013300	0.00132	0.0012900
4	0.00130	0.0012701	0.00126	0.0012350
5	0.00124	0.0012151	0.00121	0.0011850

	Male		Female	
	ANB	ALB	ANB	ALB
6	0.00119	0.0011701	0.00116	0.0011400
7	0.00115	0.0011349	0.00112	0.0011050
8	0.00112	0.0011150	0.00109	0.0010850
9	0.00111	0.0011100	0.00108	0.0010800
10	0.00111	0.0011150	0.00108	0.0010850
11	0.00112	0.0011350	0.00109	0.0010950
12	0.00115	0.0011751	0.00110	0.0011050
13	0.00120	0.0012349	0.00111	0.0011150
14	0.00127	0.0013100	0.00112	0.0013000
15	0.00135	0.0013899	0.00114	0.0011500
16	0.00143	0.0014699	0.00117	0.0011900
17	0.00151	0.0015550	0.00121	0.0012350
18	0.00160	0.0016400	0.00126	0.0012900
19	0.00168	0.0017149	0.00132	0.0013550
20	0.00175	0.0017850	0.00139	0.0014250
21	0.00182	0.0018449	0.00146	0.0015000
22	0.00186	0.0018749	0.00154	0.0015800
23	0.00189	0.0019000	0.00162	0.0016549
24	0.00191	0.0019199	0.00169	0.0017150
25	0.00193	0.0019450	0.00174	0.0017649
26	0.00196	0.0019750	0.00179	0.0018100
27	0.00199	0.0020099	0.00183	0.0018449
28	0.00203	0.0020549	0.00186	0.0018749
29	0.00208	0.0021049	0.00189	0.0019000
30	0.00212	0.0021350	0.00191	0.0019199
31	0.00215	0.0021699	0.00193	0.0019450
32	0.00219	0.0022099	0.00196	0.0019750
33	0.00223	0.0022601	0.00199	0.0020099
34	0.00229	0.0023299	0.00203	0.0020549
35	0.00237	0.0024199	0.00208	0.0021049
36	0.00247	0.0025300	0.00213	0.0021600
37	0.00259	0.0026699	0.00219	0.0022199
38	0.00275	0.0028448	0.00225	0.0022850
39	0.00294	0.0030449	0.00232	0.0023600
40	0.00315	0.0032698	0.00240	0.0024549
41	0.00339	0.0035198	0.00251	0.0025750
42	0.00365	0.0037947	0.00264	0.0027199
43	0.00394	0.0040996	0.00280	0.0029049
44	0.00426	0.0044296	0.00301	0.0031297
45	0.00460	0.0047896	0.00325	0.0033898
46	0.00498	0.0051945	0.00353	0.0036848
47	0.00541	0.0056394	0.00384	0.0040048
48	0.00587	0.0061293	0.00417	0.0043496
49	0.00639	0.0066740	0.00453	0.0047245
50	0.00696	0.0072789	0.00492	0.0051345

	Male		Female	
	ANB	ALB	ANB	ALB
51	0.00760	0.0079487	0.00535	0.0055894
52	0.00830	0.0086833	0.00583	0.0060941
53	0.00907	0.0094931	0.00636	0.0066541
54	0.00992	0.0103777	0.00695	0.0072739
55	0.01084	0.0113373	0.00760	0.0079586
56	0.01184	0.0123718	0.00832	0.0087133
57	0.01291	0.0134813	0.00911	0.0095330
58	0.01406	0.0146954	0.00996	0.0104227
59	0.01534	0.0160594	0.01089	0.0113922
60	0.01679	0.0176229	0.01190	0.0124467
61	0.01847	0.0194410	0.01300	0.0136010
62	0.02043	0.0215483	0.01421	0.0148703
63	0.02269	0.0239454	0.01554	0.0162642
64	0.02523	0.0265873	0.01700	0.0177882
65	0.02798	0.0294192	0.01859	0.0194568
66	0.03090	0.0323913	0.02034	0.0212802
67	0.03393	0.0354581	0.02224	0.0232634
68	0.03704	0.038634[illegible]	0.02431	0.0254260
69	0.04029	0.0419942	0.02657	0.0277884
70	0.04377	0.0456324	0.02904	0.0303751
71	0.04889	0.0509783	0.03175	0.0332207
72	0.05454	0.0568096	0.03474	0.0363609
73	0.06056	0.0629801	0.03804	0.0398247
74	0.06684	0.0694158	0.04168	0.0436032
75	0.07337	0.0761643	0.04561	0.0476512
76	0.07918	0.0823059	0.04979	0.0519144
77	0.08570	0.0892151	0.05415	0.0563373
78	0.09306	0.0969267	0.05865	0.0608855
79	0.10119	0.1053509	0.06326	0.0656105
80	0.10998	0.1143924	0.06812	0.0706525
81	0.11935	0.1239481	0.07337	0.0761643
82	0.12917	0.1339226	0.07918	0.0823059
83	0.13938	0.1442973	0.08570	0.0892151
84	0.15001	0.1551241	0.09306	0.0969267
85	0.16114	0.1664679	0.10119	0.1053509
86	0.17282	0.1783921	0.10998	0.1143924
87	0.18513	0.1910205	0.11935	0.1239481
88	0.19825	0.2045732	0.12917	0.1339226
89	0.21246	0.2193681	0.13938	0.1442973
90	0.22814	0.2358223	0.15001	0.1551241
91	0.24577	0.2544375	0.16114	0.1664679
92	0.26593	0.2758218	0.17282	0.1783921
93	0.28930	0.3006685	0.18513	0.1910205
94	0.31666	0.3306957	0.19825	0.2045732
95	0.35124	0.3706446	0.21246	0.2193681

	Male		Female	
	ANB	ALB	ANB	ALB
96	0.40056	0.4334881	0.22814	0.2358223
97	0.48842	0.5492489	0.24577	0.2544375
98	0.66815	0.7507962	0.26593	0.2758218
99	1.00000	1.0000000	0.28930	0.3006685
100			0.31666	0.3306957
101			0.35124	0.3706446
102			0.40056	0.4334881
103			0.48842	0.5492489
104			0.66815	0.7507962
105			1.00000	1.0000000

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ATTACHMENT FOUR-E4

To: The NAIC Actuarial Adivsory Group

Subject: Actuarial Opinion of Reserve Adequacy and Tests of Minimum Surplus

Date: December 12, 1981

The technical advisory committee, in its 1980 Report on the proposed amendments to the NAIC Model Standard Valuation and Nonforfeiture Laws, stated the following conclusion:

> The minimum reserve standards under the proposed amendments will make good and sufficient provision for payments guaranteed under a company's policies and contracts provided there is
>
> a) an appropriate degree of matching of maturities of the company's assets and liabilities, together with
>
> b) appropriate safeguards in the company's investments and its insurance and annuity contracts so as to limit the company's (C3) risk (i.e., risk of loss to the company from changes in the interest rate environment).

The committee's report went on to state that a company's valuation actuary would need to determine whether these conditions do hold for the company before concluding that the statutory minimum reserves really are adequate for that company.

This would seem to indicate that the actuary signing the actuarial opinion accompanying a company's annual statement would need to make specific projections of the company's liabilities and the supporting investments. This would need to be done under various alternative paths of future interest rates and various assumptions as to repayment of assets and policyholder withdrawals. The actuary could then make a judgment whether the company's reserves, even if in compliance with statutory minimums, really are adequate to fund the obligations.

This represents a substantial enlargement in the responsibility of the valuation actuary over what was anticipated when the requirements for actuarial opinions were first promulgated in a considerably more stable interest environment. At the time of our 1980 report, the technical advisory committee recognized that much research would be needed into the nature and magnitude of (C3) risk, and that educational materials and guidelines for measuring (C3) risk would need to be developed, before valuation actuaries in general could effectively take on the added responsibility.

During the past year, a number of important efforts have been undertaken by the Society of Actuaries and the American Academy of Actuaries in the areas of research, education, qualification standards and standards of practice, which efforts were undertaken at least partly in response to requests and encouragement from the NAIC Actuarial Advisory Group:

Research: The Society's (C3) Risk Task Force and its parent Committee on Valuation and Related Problems have been very active developing tools for identifying and quantifying (C3) risk. Carl Ohman has reported on progress earlier today.

Education: (C3) risk and its implications for actuaries signing actuarial opinions is receiving important attention in the programs for meetings of the Society of Actuaries and local actuarial clubs, and will continue to do so at least through 1982, offering ample opportunity for discussion and debate of the issues. Eventually, we expect the society to develop appropriate study materials and add appropriate material to its examination syllabus.

Qualification Standards: The academy recently exposed to its members proposed qualification standards for practice in the valuation of life insurance company annual statement liabilities. The standards have now been adopted and should help to answer the question of who is qualified to sign actuarial opinions.

Standards of Practice: The Academy's Committee on Life Insurance Financial Reporting Principles is considering the need for modifications in the Academy's Recommendations and Interpretations governing actuarial opinions to recognize implications of the (C3) risk problem.

All of these efforts are receiving priority attention and appear to be progressing at a reasonable pace. The NAIC Actuarial Advisory Group should encourage these efforts and continue to urge the society and academy to move them forward. The technical advisory committee proposes to monitor these various projects and would expect to report to the Actuarial Advisory Group on progress again in the spring of 1982.

In the meantime, there appears to be little need for immediate specific action on actuarial opinions by the NAIC itself. We believe that it would be premature now for the NAIC to attempt to issue guidelines governing actuarial opinions, and we would strongly recommend against such action at this time.

This very valuable and extensive research and education are beginning to suggest new approaches to valuation theory and surplus needs. The advisory commitee believes it would be highly undesirable to attempt to shortcut this approach with any arbitrary or "simple" formula defining minimum surplus requirements for each insurance company. Such a shortcut would pose a potential danger by implying that a company can be deemed to be "sound" so long as surplus equals x% of premiums, without regard to other relevant factors such as matching of assets and liabilities. The technical advisory committee is deeply concerned that arbitrary tests of this type may divert the attention of (and give a false sense of security to) the Valuation Actuary and insurance company management, as well as the regulator, from the critical need to adequately provide for risks such as the (C3) risk. Accordingly, we strongly urge your group to reject such short-term proposals in order to concentrate maximum energy towards the more critical issues which the various professional groups are currently investigating.

Submitted for the Technical Advisory Committee

Charles Greeley, FSA, MAAA
Chairman

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ATTACHMENT FOUR-E5

To: The NAIC Actuarial Advisory Group

Subject: Annuity Valuation Mortality Tables

Date: December 12, 1981

The Technical Advisory Committee has reviewed the Exposure Draft on "Derivation of the 1983 Table A for Individual Annuity Valuation" prepared by the Society of Actuaries' Committee to Recommend a New Mortality Basis for Individual Annuity Valuation, chaired by Robert Johansen. It is the consensus of the technical advisory committee that the Johansen Committee has done a superb job in the development of 1983 Table A and preparation of this exposure draft, and we strongly endorse the recommendations set forth in the draft.

Specifically, we recommend that the NAIC adopt 1983 Table A as a mortality table suitable for the valuation of annuity benefits under individual annuities and supplementary contracts issued in 1983 and subsequent years. Moreover, we recommend that this table be adopted by the NAIC as the minimum valuation standard mortality table for the valuation of such annuity benefits.

In particular, the technical advisory committee supports the recommendations in the exposure draft as to the propriety of gender-distinct mortality rates for the valuation of annuity benefits and in any minimum valuation standard mortality table.

We recognize that while the 1983 Table A mortality rates have margins that appear sufficient to provide for future mortality improvement affecting annuities issued in 1983 and even during the several years beyond 1983, we would expect that continuing improvements in mortality will make it necessary to replace the 1983 Table A by a more conservative table in perhaps five years, applicable to annuities and supplementary contracts issued thereafter. At that time, the NAIC may choose to adopt as a new minimum valuation standard mortality table the 1983 Table A with five years projection using the exposure draft's Projection Scale G, or it may choose to adopt another table if warranted by actual mortality experience during the intervening years.

It is our understanding that the Society of Actuaries' Committee on Group Annuity Mortality, chaired by Robert Chmely, is developing projections of the 1971 GAM Table that would be suitable for the valuation of annuities purchases under group annuity contracts, and that it will be submitting its recommendations probably in the spring of 1982. When the Chmely Committee completes its work, the technical advisory committee would expect to review the results and make its recommendations concerning the suitability of such projections as a minimum valuation standard for group annuities. It is possible at that time that the technical advisory committee might recommend that use of the projected 1971 GAM Table as a minimum valuation standard be limited to annuities under group annuity contracts where there is no cash settlement option available at the time of retirement, and that the same basis applicable to individual annuities be used for group annuity contracts with cash settlement option at retirement. However, the technical advisory committee will not make any recommendation as to group annuities until after the Chmely Committee has reported to the advisory group.

Again, the technical advisory committee welcomes this opportunity to comment on the proposed individual annuity valuation mortality table. We want to commend the Johansen Committee on the outstanding work done by that group in developing the 1983 Table A, and on the excellent exposure draft.

Submitted for the Technical Advisory Committee

Charles Greeley, FSA, MAAA
Chairman

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ATTACHMENT FOUR-F

April 19, 1982

Re: 1. Minutes of the April 2, 1982 Meeting of the Technical Advisory Committee (TAC)
2. Actions Taken by the NAIC Life, A and H Technical Staff Actuarial Group (TSAG) on April 3, 1982

1. Technical Advisory Committee Meeting - April 2, 1982

All members of the TAC were present except for Mr. Hill. Also attending all or part of the meeting were Messrs. Allen, Becker, Booth, Case, Cragoe, Halstead, Ingraham, Leff, Nathan, Spano and Weisz. The chairman welcomed the three new TAC members - Messrs. Bragg, Holland and Shur - and invited them to join any of the active subcommittees in which they were specifically interested.

The following subjects were discussed by the TAC:

A. Cash Values in Excess of Policy Reserves

Messrs. R. S. Miller and Sarnoff reviewed the background of the problem John Montgomery is encountering in California, as well as Mr. Montgomery's proposed solution. An ad hoc group - Messrs. Carney, R. S. Miller and Sarnoff - will attempt to develop an alternative by October, 1982 that is acceptable to both the regulators and the industry. The ACLI will contact U.S. Life to offer them the opportunity to provide input to the ad hoc group.

B. Elimination of Requirement for Cash Value Guarantees

A supplementary report on this subject which had been mailed to members prior to the meeting provided background regarding the current sale of these types of products successfully in Canada.

The TAC also discussed Keith Sloan's comments on the proposal (see his attached 2/24 letter). It was suggested that adequate disclosure of the nonavailability of cash values was vital, perhaps requiring a signed acknowledgment from the applicant. In addition, it was noted that the net payment and surrender cost indexes would be identical for a policy without cash values – the net payment index would be relatively low but the surrender cost index would be relatively high. It was also recognized that perhaps this proposal should be limited to whole life and term plans because of the possibility of abuse on an endowment policy – the provision of a maturity value without prior cash values begins to resemble a deposit-term arrangement.

The TAC approved submitting the supplementary report to the NAIC TSAG, along with our offering assistance in drafting proposed language for appropriate changes in the nonforfeiture law.

C. Mortality

(i) Proposed Individual Annuity Valuation Table

The TSAG had accepted our December report endorsing the use of the 1983 Table a which had been prepared by a Society of Actuaries Committee, but had not acted upon our recommendation to adopt the new table for individual annuities issued in 1983 and later. It was agreed we should reaffirm our endorsement of the new table to the TSAG.

(ii) Modifications ot Actuarial Guideline IV

In December, 1981, we had recommended that Actuarial Guideline IV (which provides mortality standards for minimum reserves for future renewal periods under renewable term policies) be modified to substitute the 1980 CSO Table with Select Mortality Factors for the outdated table now contained therein. The TSAG had not acted on this proposal, and it was decided we should request their formal approval of the change at this time.

(iii) Mortality Experience for Nonsmokers

Since item (ii) above is merely a very temporary and modest attempt to alleviate reserve problems encountered on nonsmoker renewable term plans, a more satisfactory solution is needed to solve the more general problem concerning an appropriate reserve basis for nonsmoker and smoker business. While it was noted that a joint committee of the Society of Actuaries and the Association of Life Insurance Medical Directors (ALIMDA) is investigating the accumulation of suitable data preparatory to commencing a study of nonsmoker versus smoker mortality experience, it was agreed that any results would not be available during the next few years. It was also noted that Texas, which had been working on their own rule to approximate nonsmoker versus smoker mortality differences, published a directive just after we submitted our recommended modification to Actuarial Guideline IV.

In the dual interests of (a) providing meaningful relief in terms of reserve strain while the Society of Actuaries and ALIMDA are conducting their study, and (b) promoting a uniform and credible basis for reserves on nonsmoker and smoker business during the interim, it was agreed that we should ask the TSAG's support in requesting that the Society of Actuaries propose appropriate mortality standards in a timely manner and on an approximate basis for the valuation of nonsmoker and smoker business.

D. Surplus and Solvency

Mr. Ohman described the results obtained thus far by the Society of Actuaries' (C3) Risk Task Force on guaranteed interest contracts and on nonparticipating whole life insurance, and their plans and timing for similar studies of deferred annuities and participating whole life insurance. Mr. Ohman indicated that their investigation was leading towards a suggested change in Recommendation 7 of the American Academy of Actuaries (the "Statement of Actuarial Opinion" on reserve and other actuarial items) to require the actuary to reflect the yield and maturity characteristics of the assets with the other actuarial assumptions in formulating his opinion. Suitable changes in Interpretation 7-B to Recommendation 7 would also be considered.

The (C3) Risk Task Force expects to complete and analyze all of their research into the (C3) risk by spring 1983. Mr. Rugland reported that his subcommittee is monitoring the task force's research, and expects by mid to late 1983 to begin formulating a framework of the direction in which to proceed in developing a new approach to valuation.

Mr. Rugland also presented a proposed report to the TSAG on this subject. This report discusses the preceding and other developments, including the TAC's dismay over the developments in Wisconsin on minimum surplus requirements. The TAC approved submission of the report to the TSAG.

E. Miscellaneous Item

(i) The TAC had proposed a guideline in December 1981 interpreting the 1980 Amendments as permitting a company to elect an operative date separately for each plan of insurance to comply with the new nonforfeiture provisions. The TSAG had taken no action at that time, and it was decided to request their approval of the proposal at their April 3 meeting.

(ii) The proposed California Bulletin on Universal Life plans was discussed. Several comments were made, primarily in the valuation area. An ad hoc group (Messrs. Carney, Rugland, and Shur) was formed to convey our comments to John Montgomery.

F. Next Meeting

The next TAC meeting will follow the end of the Annual Meeting of the Society of Actuaries in Washington, D.C. on Wednesday, October 20, 1982. The meeting will be held at the offices of The American Council of Life Insurance, 1850 K Street, N.W., Washington, D.C. in Room 6A on the 6th floor. The ACLI has kindly arranged for lunch to be available for us beginning at 1:00 p.m., with the meeting following from 2:00 p.m. to about 6:00 p.m.

2. NAIC Technical Staff Actuarial Group - April 3, 1982 Meeting

Following is a brief summary of those aspects of the NAIC Technical Staff Actuarial Group's April 3, 1982 meeting which are of particular relevance to the TAC's activities.

A. 1980 Model Laws

(i) It was reported that the amendments had been enacted into law in 19 states (including Wyoming where the dynamic interest rate provisions do not apply), and had been passed by one or both houses of the legislature in an additional 14 states.

(ii) It was reported that the TAC will propose a solution by October 1982 to the problem of cash values in excess of policy reserves for use in California. The TSAG agreed not to take any action on this issue in the interim.

(iii) The TSAG agreed to endorse and recommend adoption by the NAIC of a guideline permitting the election of separate operative dates for the 1980 Nonforfeiture Law for each plan of insurance, as proposed by the TAC on December 12, 1981.

(iv) The TSAG adopted the ACLI proposal for valuation interest rates for GIC contracts for 1982 and later in states where the 1980 amendments have not been enacted. (See William Carroll's February 24, 1982 letter to Ted Becker.)

B. Elimination of Requirement for Cash Value Guarantees

Our December 12, 1981 report and April 3, 1982 supplementary report were discussed at considerable length. The TSAG had several comments on the material, most significantly concerning the propriety of the lack of any cash value. Several suggestions were made, including making provision for a cash amount reflecting on some basis the market value of the underlying assets. It was pointed out that such an approach could result in possibly adverse reaction from the SEC, if provided for on a guaranteed contractual basis. The TSAG members approved of the general concept of permanent plans without cash value requirements, and it was agreed that proposed legislation and supporting material would be drafted for review by the TSAG. Subsequent to the TSAG meeting, the ACLI agreed to prepare draft legislation and circulate the proposal widely within the industry.

C. Mortality

(i) Nonsmoker/Smoker Differences

The TSAG asked the TAC to contact the Society of Actuaries and request preparation of interim mortality standards to reflect differences in experience for nonsmoker and smoker business. A copy of Mr. Greeley's letter to Mr. Bartlett is enclosed.

(ii) Actuarial Guideline IV

The TSAG deferred consideration of the TAC's proposed modification to Actuarial Guideline IV (see page 2, item C(ii)) until their June Meeting.

(iii) Proposed 1983 Table a

The TSAG voted to present the new 1983 Table a for formal adoption at the June NAIC meeting. The ACLI is investigating the appropriate procedures for promulgating the new table, possibly in the form of a model regulation, and it is anticipated that they will furnish the needed material to the TSAG.

(iv) Monitoring the Need for New Mortality Tables

The TSAG has asked us to develop procedures to measure the appropriateness of developing new mortality tables periodically, rather than waiting until problems such as excessive deficiency reserves arise. Mr. Holland has agreed to offer some preliminary thoughts in this regard.

Harold B. Leff
Actuary

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ATTACHMENT FOUR-G

To: The NAIC Life, A&H Technical Staff Actuarial Group (TSAG)

From: Technical Advisory Committee on Dynamic Interest and Related Matters

Subject: Actuarial Opinions of Reserve Adequacy and Tests of Minimum Surplus

Date: April 3, 1982

The December 12, 1981 report on this subject discussed the risk of loss to a life insurance company from changes in the interest rate environment (now commonly referred to as "(C3) risk"), and its implications for actuarial opinions of reserve adequacy and minimum surplus tests. We noted a number of important projects underway and indicated that we would monitor the projects and report to the TSAG on progress in the spring of 1982. We do that with this report.

Projects

Attachment I describes significant progress toward development of new technology and understanding of the risk issues in life company financial reporting. It merits continued encouragement and support by all future users of the results. In monitoring progress being made, we are more and more aware of the task at hand with regard to communication of the research results to practitioners, regulators, and their managers, and we are addressing this problem.

Long-Term View

In our work for the TSAG and the NAIC with regard to financial statements, we are concentrating on the long-term issues. As different stages are completed, we ask that you review the progress with this long-term direction in mind. As we move to a more complete understanding of the issues, we also ask that you do all you can to control short-term activities within the NAIC, states, and industry to avoid both diversions from the long-term nature of the assignment and bad precedents (unintentional or otherwise) created by short-term solutions to current problems.

Financial Reporting

Much remains to be determined in the research being done, but the TAC agrees, at this time, that it will be ncessary in the future for regulators to analyze a life insurer's financial position on a much broader basis than in the past. Tradition has called for review of assets, liabilities and the resulting surplus, as almost unique components. The future will require analysis of them as an integral whole with attention to asset and liability maturity structures and understanding of the underlying relationships between them, including the inherent business capacity afforded by their aggregate structure. We believe this to be a major change, and will continue to report its development on a regular basis.

In recent months, two events have occurred which relate to this.

The '80 amendments introduced in New York require an actuary's analysis of the structure of the assets in order to permit a company to use the maximum interest rate for annuities and guaranteed investment contracts. We support this provision as being consistent with our 1980 report to you on that proposal.

In Wisconsin, the proposed surplus guidelines continue to be considered. Research results show this to be a flawed approach to responsible regulation.

Attachment Four-G2 provides detailed comment on both situations.

Submitted for the Technical Advisory Committee,

Charles Greeley
Chairman

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ATTACHMENT FOUR-G1

ACTIVITY REPORT

With regard to actuarial opinions of reserve adequacy and tests of minimum surplus, the subjects of this report, the following specific activities are under way, being monitored by the TAC:

1. (C3) Risk for Interest Related Guarantees and Similar Products

Work Group: SOA (C3) Risk Task Force of Committee on Valuation and Related Problems

Status: Complete

Comment: The task was to quantify (C3) risk for guaranteed interest contracts and other interest intensive products under which a matching of durations of assets and liabilities is at least conceptually feasible. This project was completed last fall and discussed at the October SOA meeting. We learned a great deal about the (C3) risk characteristics of interest guarantee products and are beginning to understand the kind of valuation framework needed to protect the solvency of insurance companies with respect to this business.

2. <u>(C3) Risk for Non-Par Whole Life</u>

Work Group: SOA (C3) Risk Task Force

Status: Nearing Completion

Comment: The task was to identify and measure (C3) risk for non-par whole life insurance (with cash values). Results were presented at the April 2 Houston SOA meeting. Upon analysis we will learn (C3) risk characteristics of this business leading to suggested new approaches to valuation theory. We emphasize that implications of changing interest rates are much more complicated for whole life with cash values than for other products; we do not know enough, as yet, to suggest fundamental changes in valuation requirements for it.

3. <u>(C3) Risk for Par Whole Life</u>

Work Group: SOA (C3) Risk Task Force

Status: In Process - Target Fall of 1982

Comment: Similar to (2) above with analysis of role of policyholder dividends considered.

4. <u>(C3) Risk for Individual Deferred Annuities and Similar Products</u>

Work Group: SOA (C3) Risk Task Force

Status: In Process - Target Fall 1982

Comment: Current need is to determine if universal life is covered here, or if it needs separate analysis.

5. <u>(C3) Risk Summary</u>

Work Group: SOA (C3) Risk Task Force

Status: Target Spring 1983

Comment: Task force plans to prepare paper for SOA for full discussion and for use in examination syllabus.

6. <u>(C1) Risk Summary and (C2) Risk Summary</u>

Work Group: SOA Committee on Valuation and Related Problems

Status: In Process – No Target Date

Comment: Analysis of various approaches to (C1) and (C2) risks to be included in this research.

7. <u>Practical Aspects of the (C3) Risk</u>

Work Group: SOA Research Policy Committee

Status: Considering Definition, Priorities, Assignment at May Meeting

Comment: This needs to be done; we asked SOA to consider taking on the work. It includes:

- Measurement of (C3) for aggregates of different product types
- Relation of (C3) to (C1), (C2) and other kinds of risks
- Impact of investment income allocation methods
- Asset structuring to reduce risk
- Liability structuring to reduce risk

If SOA does not adequately support recognized needs, we will need to pursue other approaches.

8. Approach to NY Circular Letter No. 26 (1981)

Work Group: ACLI Subcommittee on Actuarial Aspects of Valuation Problems

Status: Defining Assignment and Determining Target Date

Comment: Obtain fullest benefit from first experience with NY requirement of "satisfactory tests to demonstrate that there is a reasonable matching of assets and liabilities relative to such group annuity contracts" by:

- Evaluating experiences inherent in the submissions
- Determining improvements, if any, needed in regulations guidelines supporting requirements for such submissions
- Assisting regulators in monitoring and evaluating submissions

9. Review of Actuarial Standards of Practice

Work Group: AAA Committee on Life Insurance Financial Reporting Principles

Status: Study Initiated April 2

Comment: Committee will be examining NY requirement for tests and certifications to determine what modifications, if any, are needed at this time in the academy's recommendations and interpretations for actuarial opinions accompanying life company annual statements to accommodate the New York requirement of Circular Letter No. 26 (1981).

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ATTACHMENT FOUR-G2

DEVELOPMENTS AND COMMITTEE OPINIONS

New York Development

On December 11, the New York Insurance Department in Circular Letter No. 26 (1981), on reserve requirements for interest rate guarantees under group annuity contracts, waived a reduction in certain valuation interest rates introduced the previous year:

> ". . . provided that an actuary who meets qualifications determined by the superintendent certified that he or she has performed satisfactory tests to demonstrate that there is a reasonable matching of assets and liabilities relative to such group annuity contracts. Such tests should include demonstrations that the expected cash flow, including scheduled investment earnings and maturities of the invested assets, is adequate to provide for the guarantees under the contracts and that there is appropriate protection against loss to the company in case of (1) premature prepayments of loans or investments (in case of falling interest rates) and (2) premature withdrawal by the policyholder (in case of rising interest rates)."

A similar requirement, applicable to guaranteed interest contracts, and annuities, will be included in the New York version of the 1980 amendments to the NAIC Model Standard Valuation Law now before the New York State Legislature.

Although a modification of the '80 amendments, the TAC believes this New York version of the amendments is consistent with our 1980 report regarding the amendments. Perhaps more importantly, it also is consistent with our longer range concerns.

For 1981, companies writing a majority of the GIC business performed tests and submitted certifications called for by the circular letter. Methodology provided by the work o the Society of Actuaries (SOA) (C3) Risk Task Force served as a blueprint for the tests performed by some of the companies submitting certifications.

The TAC believes that these New York submissions constitute an important step toward a new approach to the valuation of liabilities for guaranteed interest contracts. In order to assure the fullest benefit from this first experience with the new requirement, we recognize the need for an immediate review of this approach, and have taken steps to have it initiated.

Wisconsin Development

The TSAG and the TAC are aware of the surplus guidelines proposed for use in Wisconsin. We take this opportunity to reaffirm our concern about this development, and express our continuing opposition to this type of surplus regulation. We do not believe it has a scientific base, and also believe it is diversionary to the effort being made to provide a better understanding of a life insurance company's financial position.

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ATTACHMENT FOUR-H

The Prudential Insurance Company of America
Prudential Plaza
Newark, New Jersey 07101

December 10, 1981

To: Members of Committee on Annuities

Attached is a copy of a letter from Carl Ohman to members of the NAIC-TAC Subcommittee on Mortality. Carl and I both would like our committee to recommend an approach for projecting the 1971 GAM table by spring 1982.

The following steps are currently planned: (1) update the experience underlying the 1971 GAM table from 1966 to the current year (1982) through the use of projection scale(s); (2) add in appropriate loadings; and (3) develop a scale for projecting mortality from 1982 into the future and decide to recommend whether that projection scale should be mandatory or simply permitted for annual statement valuation purposes.

We have had problems similar to those of the individual Annuity Mortality Committee (IAMC) in funding appropriate and sufficient mortality data, especially for the period from 1966 to 1975. One possible approach for updating the 1966 experience would be to use two different projection scales. The first scale (Scale X) would bring the experience data up to 1975, while the second scale (Scale Y) would bring these 1975 values up to 1982. Scale Y could also be used to project mortality from 1982 into the future.

After reviewing the available data for the 1966-75 period, a recommended Scale X might be based heavily on population results, similar to the route taken by the IAMC. The Scale Y could be based on the group annuitant data which is available for the period 1975 to 1981.

To aid in making decisions, we have assembled the attached comparison showing average annual decreases in mortality rates for various populations. Also attached are several projection scales: (1) Projection Scale D from the 1971 GAM; (2) the scales adopted by the IAMC revising the 1971 IAM table; (3) A proposed Scale X (1966 to 1975) based mainly on population data and (4) Two proposed alternatives for the Scale Y.

I would like each of you to send me a brief note by December 30, 1981 giving any comments you have regarding this course of action. I would especially like your comments on the proposed projection scales which are attached. I will then compile the responses and develop a final recommendation for your review.

Please call if there are any questions or comments (201-966-3399).

Sincerely,

Robert M. Chmely, FSA
Vice President and Actuary

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ATTACHMENT FOUR-H1

The Equitable Life Assurance Society of the United States
1285 Avenue of the Americas
New York, N.Y. 10019

To: Members of the NAIC-TAC Subcommittee on Mortality

Date: September 23, 1981

Re: Annuity Valuation Mortality Tables

As stated in Will Thornthwaite's letter of August 14 on current assignments for the Subcommittee on Mortality, it was agreed at the June 5 meeting of the TAC in Detroit that we should examine the possible use of a new IAM table with appropriate setbacks (or set-forwards) for valuing both group and individual contracts – the setbacks or set-forwards designed to differentiate by contract characteristics. We were also asked to maintain contact with the Society of Actuaries committees charged with developing new annuitant valuation mortality tables and to monitor their progress in completing work on proposed new tables.

I spoke with Bob Chmely, chairman of the Society's Group Annuity Mortality Committee, last week. According to Bob, his committee does plan to come up with an approach for projecting the 1971 GAM table, which could serve as the basis for a new group annuity valuation mortality table, which they would submit to Ted Becker's committee or committees probably by next spring. (It is unlikely that they will be prepared to make such a submission this year.) His committee had considered the approach we had suggested. i.e. one basic table for both group and individual with adjustments, but had concluded to follow the traditional route of basing the group valuation table on group annuity experience.

My primary concern is to come up with a new mortality table for valuation of group annuities. While I prefer the approach we were considering, I would not want a debate on that point to get in the way of adoption of a new, more conservative (or as conservative as the present table was when adopted in 1971), group annuity valuation mortality basis.

I now believe that the TAC should hold up on this until the Chmely Committee has had a chance to make its submission to Becker, hopefully by spring. Presumably then we will have a chance to review the approach and either endorse it or suggest an alternative. In the meantime, for us to proceed with an alternative might be premature and could create some confusion.

Sincerely,

Carl R. Ohman
Vice President and Actuary

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ATTACHMENT FOUR-H2

The Prudential Insurance Company of America
Group Pension Office
Florham Park, New Jersey 07932

To: Members of Committee on Annuities

Based on comments received regarding the December 10, 1981 proposals, I feel that a further description of Scale X's construction may be of interest.

Enclosed you will find two tables which show annual percent changes in q-values for the period 1966 to 1975. The data is shown for various sources along with the proposed X scale. Although more heavily weighted by the U.S. White Population data, all sources were taken into consideration in constructing the X scale.

The proposed scale for maless more closely follows the U.S. White Population data than does the female scale. In each case, a smoothing of the data was necessary.

Robert M. Chmely, FSA
Vice President and Actuary

AVERAGE ANNUAL DECREASE IN MORTALITY RATES

MALES

	Standard Ordinary 1965-70 to 1972-77	Canadian Population 1966 to 1971	1971 to 1976	Medicare 1968 to 1975	U.S. White Population 1968 to 1973	Proposed Scale X 1966-1975
45		.03	.69			1.40
47						
50		.58	.76		1.50	1.50
52	3.13					
55		.86	.58			1.50
57	2.80					
60		.84	.79		1.40	1.50
62	2.64					
65		.48	1.11	1.64		1.45
67	2.38					
70		-.05	.86	1.61	1.50	1.40
72	1.76					
75		.30	.60	1.68		1.30
77	1.32					
80		.64	.39	1.44	- 0.40	1.20
82	1.33					
85		.34	.12	2.00		1.00
87	.88					
90		-.47	-.17	1.92	1.10	.50
92	.79					
95						

AVERAGE ANNUAL DECREASE IN MORTALITY RATES

FEMALES

	Standard Ordinary 1965-70 to 1972-77	Canadian Population 1966 to 1971	Canadian Population 1971 to 1976	Medicare 1968 to 1975	U.S. White Population 1968 to 1973	Proposed Scale X 1966-1975
45		.76	.67			1.40
47						
50		1.02	1.37		1.20	1.40
52	1.42					
55		.96	1.63			1.40
57	.45					
60		1.49	1.31		.70	1.50
62	1.02					
65		1.70	1.30	1.81		1.60
67	1.23					
70		1.40	1.45	2.20	2.40	1.75
72	2.66					
75		1.80	1.80	2.84		1.40
77	2.51					
80		2.30	1.71	2.68	.90	1.00
82	2.29					
85		2.46	1.20	2.83		1.00
87	2.02					
90		2.40	.55	2.37	3.60	.50
92	.51					
95						

MALES

Average Annual Decrease in Mortality Rates

Central Age	U.S. White Population 1971-1976 to 1977-1979	Medicare 1973-1977	Standard Ordinary 1968-1973 to 1972-1977	Metropolitan Individual Annuitants 1971-1976 to 1976-1978	George Buck Group Annuitants 1973-1977	Prudential Group Annuitants 1976-1980	Bankers Group Annuitants 1973-1978
20					-10.72%		
23			-1.72%				
25					- 6.29		
28			-4.31				
30					- .40		
33			2.11				
35					- 2.23		
38			2.49				
40					1.06		
43	3.32%		4.05				
45					4.35		
48	2.66		3.59				
50					.22		
53	2.66	2.40%	3.58				
55					2.16		
58	3.24	2.23	3.20				
60					1.66	2.81%	
63	2.21	1.97	3.23				3.87%
65				4.32%	1.63	6.31	
68	2.41	2.75	2.79				1.76
70				4.32	2.14	.04	
73	2.14	2.15	2.44				1.02
75				2.05	2.97	.64	
78	1.57	2.15	1.70				.85
80				2.05	1.94	.48	
83	1.12	1.59	1.55				.67
85				- .69	1.47	- .28	
88	2.17		.88				- .12
90				- .69	.43	1.61	
93	2.17		1.51				
95				-1.89	5.10	2.23	
98	2.17						
100				-1.89			

Average Annual Decrease in Mortality Rates

FEMALES

Central Age	U.S. White Population 1971-1976 to 1977-1979	Medicare 1973-1977	Standard Ordinary 1968-1973 to 1972-1977	Metropolitan Individual Annuitants 1971-1976 to 1976-1978	George Buck Group Annuitants 1973-1977	Prudential Group Annuitants 1976-1980	Bankers Group Annuitants 1973-1978
20					9.21%		
23			.28%				
25					8.82		
28			1.04				
30					5.74		
33			-1.94				
35					- 1.83		
38			3.34				
40					3.60		
43	4.10%		4.59				
45					6.75		
48	2.10		1.16				
50					4.97		
53	2.10	2.35%	4.35				
55					5.18		
58	2.22	3.44	2.39				
60					3.41	10.78%	
63	1.15	3.78	2.28				6.52%
65				11.41%	- .60	5.75	
68	1.83	3.53	3.83				.57
70				11.41	1.46	.09	
73	2.67	3.54	2.82				6.52
75				3.73	.88	1.93	
78	2.45	2.71	2.19				2.90
80				3.73	1.16	.06	
83	1.99	1.02	3.40				3.94
85				.86	1.65	3.52	
88	2.85		1.38				.77
90				.86	4.80	1.65	
93	2.85		-1.79				
95				9.66	-13.72	3.80	
98							
100				9.66			

Group Annuity Mortality Projection Scales

Annual Decrease in Mortality Rates

MALES

		Individual Annuity		Group Annuity Projection Scale Alternatives		
	Projection Scale D	Assumed 1973-1983	Projection G (1983-2000)	(1966-1975) X	(1975 and later) Y-1*	Y-2
20	.65%					
22						
25	.65			.25%		.50%
27						
30	.65			.50		1.00
32		1.00%	.75%			
35	.65			1.00		1.50
37		2.25	2.00			
40	.65			1.20		2.00
42		2.25	2.00			
45	.65			1.40		2.00
47		2.25	1.75			
50	.65			1.50		2.25
52		2.25	1.75			
55	.65			1.50		2.25
57		2.25	1.50			
60	.65			1.50		2.25
62		2.25	1.50		1.50%	
65	.63			1.45		2.25
67		2.25	1.50		1.50	
70	.56			1.40		2.00
72		2.25	1.25		1.50	
75	.46			1.30		2.00
77		2.00	1.25		1.50	
80	.36			1.20		1.50
82		1.75	1.25		1.35	
85	.26			1.00		1.25
87		1.50	1.25		1.10	
90	.16			.50		.75
92		1.50	1.00		.85	
95	.06					.25
97		1.50	1.00		.60	
100						
102					.35	

*Recommended by Committee member Jean Gregoire

Group Annuity Mortality Projection Scales

Annual Decrease in Mortality Rates

FEMALES

	Projection Scale D	Individual Annuity Assumed 1973-1983	Individual Annuity Projection G (1983-2000)	Group Annuity Projection Scale Alternatives (1966-1975) X	Group Annuity Projection Scale Alternatives (1975 and later) Y-1*	Group Annuity Projection Scale Alternatives (1975 and later) Y-2
20	1.30%					
22						
25	1.30			.50%		.50%
27						
30	1.30			1.00		1.25
32		1.00%	1.25%			
35	1.30			1.20		1.75
37		2.25	2.25			
40	1.30			1.40		2.00
42		2.25	2.25			
45	1.30			1.40		2.25
47		2.25	2.00			
50	1.30			1.40		2.25
52		2.25	2.00			
55	1.30			1.40		2.25
57		2.25	1.75			
60	1.30			1.50		3.00
62		2.25	1.75		1.50%	
65	1.28			1.60		3.25
67		2.25	1.75		1.50	
70	1.21			1.75		3.25
72		2.25	1.75		1.50	
75	1.09			1.40		2.75
77		2.00	1.50		1.50	
80	.92			1.00		2.25
82		1.75	1.50		1.35	
85	.68			1.00		1.50
87		1.50	1.50		1.10	
90	.38			.50		1.00
92		1.50	1.25		.85	
95	.08					.50
97		1.50	1.25		.60	
100						
102					.35	

*Recommended by Committee member Jean Gregoire

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ATTACHMENT FOUR-I

State Board of Insurance
1110 San Jacinto
Austin, Texas 78786
512/475-3325

May 10, 1982

Commissioner J. Richard Barnes
Colorado Department of Insurance
106 State Office Building
Denver, Colorado 80203

Re: Material Recommended for Adoption by the NAIC (A) Life Insurance Committee in June, 1982

Dear Commissioner Barnes:

At its meeting on April 3, 1982, in Houston, the Life, A&H Technical Staff Actuarial Group agreed to make three specific recommendations to the Life Insurance (A) Committee for adoption in June, 1982. I am writing to you in your capacity as chairman of the Life Insurance (A) Committee to ask for consideration of these recommendations at that time.

The following list describes the three recommendations and briefly explains the attachments to this letter:

1. Including a new actuarial guideline in the Financial Condition Examiners Handbook which would specifically permit "plan-by-plan" election of an operative date under Section 5-c of the Standard Nonforfeiture Law for Life Insurance (as amended in December 1980). This operative date would make the 1980 CSO Mortality Table the minimum standard for calculation of reserves and nonforfeiture values for life insurance policies. The operative date also triggers the use of a dynamic interest rate in determining minimum reserves and nonforfeiture values for these life insurance policies, as well as a new formula for the adjusted premium used in determining minimum nonforfeiture values.

   The title of this recommended actuarial guideline is "Interpretation of the Standard Nonforfeiture Law for Life Insurance with Respect to the Operative Date of Section 5-c." It is an interpretation of the Standard Nonforfeiture Law for Life Insurance with Respect to the Operative Date of Section 5-c." It is an interpretation of the Standard Nonforfeiture Law for Life Insurance. It is not a revision of an earlier guideline.

   Attachment Four-I1 to this letter consists of three pages. The third page of Attachment Four-I1 is the actual recommended actuarial guideline, as it would appear in the Financial Condition Examiners Handbook. The first two pages of Attachment Four-I1 are explanatory material from the Technical Advisory Committee on Dynamic Interest and Related Matters, which originally developed this proposed actuarial guideline. This Technical Advisory Committee reports to the Life, A&H Technical Staff Actuarial Group. These first two pages of Attachment Four-I1 are not a part of the proposed actuarial guideline.

2. Amending existing Actuarial Guideline II in the Financial Condition Examiners Handbook, entitled "Reserve Requirements with Respect to Interest Rate Guarantees on Active Life Funds Held Relative to Group Annuity Contracts," so as to change the manner of calculating the interest rate shown in the "Table of Values of i_{my}" for calendar year 1982 and subsequent calendar years.

   Attachment Four-I2 to this letter illustrates the changes in Actuarial Guideline II, which are being proposed and recommended. These changes are limited to the "Table of Values of i_{my}," where the footnote and the asterisk referring to the footnote would be deleted.

   Attachment Four-I3 to this letter consists of a letter from William Carroll, Actuary for the American Council of Life Insurance, addressed to me and dated February 24, 1982. This Attachment Four-I3 explains how the appropriate interest rate "i_{my}" would be calculated for calendar year 1982 and subsequent calendar years. Attachment Four-I3 is not a part of Actuarial Guideline II.

3. Adopting a new individual annuity mortality table, the 1983 Table "a," for use in computing minimum reserves for individual annuities. Please see the Standard Valuation Law (as amended in December 1980), Sections 3 - a(b) and 3 - a(c), which define a two-step procedure whereby an alternate individual annuity mortality table, such as this 1983 Table "a," may be used for computing minimum reserves in lieu of the 1971 Individual Annuity Mortality Table. The first step requires the alternate individual annuity mortality table to be adopted after 1980 by the National Association of Insurance Commissioners, and the second step requires approval of the table by regulation promulgated by the commissioner of the particular state or jurisdiction. Only the first of these two steps involves action by the National Association of Insurance Commissioners. This recommendation for adoption of the 1983 Table "a" would carry out this first step.

   Attachment Four-I4 to this letter is a report entitled "Derivation of the 1983 Table "a" for Individual Annuity Valuation." Table 16, on page 31 of this attachment defines the 1983 Table "a" since it gives the mortality rates "$1000q_x$" for each age "x" for males and females.

   Table 16, then, is what the Life Insurance (A) Committee is being asked to adopt. The remainder of Attachment Four-I4 is helpful explanatory material about the 1983 Table "a." Attachment Four-I4 was prepared by the Committee To Recommend a New Mortality Basis for Individual Annuity Valuation, which developed the 1983 Table "a." This is a Society of Actuaries Committee, chaired by Robert J. Johansen, of Metropolitan Life Insurance Company.

Please let me know if you have any questions or comments about these three recommendations.

Very truly yours,

Ted Becker, for the
NAIC Life, A&H Technical
Staff Actuarial Group.

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ATTACHMENT FOUR-I1

To: The NAIC Actuarial Advisory Group

Subject: Standard Nonforfeiture Law for Life Insurance–Operative Date of Section 5-c

Date: December 12, 1981

As part of the 1980 amendments to the Standard Nonforfeiture Law for Life insurance, a new section 5-c was introduced to incorporate a number of significant changes in the basis for determining minimum nonforfeiture benefits. Subsection (11) of this section reads as follows:

> "After the effective date of this section five-c, 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 first, nineteen hundred and eighty-nine, which shall be the operative date of this section for such company. If a company makes no such election, the operative date of this section for such company shall be January first, nineteen hundred and eighty-nine."

As you have indicated, questions have been raised as to whether a company must elect one operative date for all of its plans of life insurance, or whether a company can make the election on a plan-by-plan basis. Under the latter approach, the company could elect different operative dates for different parts of its portfolio, subject to the January 1, 1989 overall deadline.

The law is not precise in this regard and, to our knowledge, the subject was not discussed during the numerous phases of the development of the 1980 amendments. On the other hand, these amendments do provide for a plan-by-plan option with respect to the use of either the Commissioners 1980 Standard Ordinary Mortality Table or, as an alternative, the same table with Ten-Year Select Mortality Factors. This is certainly a more significant option than one under which companies could, within a specified time period defined in the law, use some latitude in electing when different parts of their portfolio would become subject to the new provisions. The former could result in substantial and permanent differences in required reserves and nonforfeiture benefits, while the latter would merely give companies some additional flexibility for a temporary period. Thus, we feel there is a strong implication that a plan-by-plan election of operative dates may be intended.

We also feel there is a public interest consideration that supports giving companies this flexibility. It is widely recognized that one of the principal purposes of the new nonforfeiture requirements is to enable companies to offer more competitively-priced products. To the extent that companies would have to delay introducing any products based on the new requirements until they could develop an entire portfolio on that basis, the consumer would be denied the opportunity to purchase insurance more economically, With the law being silent on the point at issue, there is strong argument for using the interpretation that would produce the more favorable results for the consumer.

In summary, we feel that an interpretation of the law to permit a plan-by-plan election of operative dates would be consistent with the general philosophy and intent of the 1980 amendments and with the best interests of the insurance-buying public. We urge that you recommend adoption by the NAIC of an interpretive guideline to this effect. Attached is a proposal in the form of an Actuarial Guideline to the Financial Condition Examiners Handbook.

Submitted for the Technical Advisory Committee

Charles Greeley, FSA, MAAA
Chairman

ACTUARIAL GUIDELINE

Interpretation of the Standard Nonforfeiture Law
for Life Insurance with Respect to the
Operative Date of Section 5-c

Section 5-c(11) of the Standard Nonforfeiture Law for Life Insurance shall be interpreted to permit a company to elect an operative date separately for each plan of insurance. For any plan for which the company has not elected an earlier operative date, the operative date shall be January 1, 1989.

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ACTUARIAL GUIDELINE I

INTERPRETATION OF THE STANDARD VALUATION LAW WITH RESPECT TO THE VALUATION OF POLICIES WHOSE VALUATION NET PREMIUMS EXCEED THE ACTUAL GROSS PREMIUM COLLECTED

1. The purpose of this guideline (items 2 and 3 below) is to clarify the intent of the Standard Valuation Law.

2. The method of valuation promulgated by the model legislation adopted by the NAIC in December 1976 for the valuation of life insurance policies whose valuation net premiums exceed the actual gross premiums collected is a change in method of reserve calculation and not a change in reserve standards.

3. For policies so valued the maximum permissible valuation interest rate and the applicable mortality basis specified is that in effect at the date of issue of such policies.

ACTUARIAL GUIDELINE II

RESERVE REQUIREMENTS WITH RESPECT TO INTEREST RATE GUARANTEES ON ACTIVE LIFE FUNDS HELD RELATIVE TO GROUP ANNUITY CONTRACTS

As part of the determination of the aggregate minimum group annuity reserves, a computation must be made of minimum reserves for deposit administration group annuity funds with interest rate guarantees including all such funds pertaining to possible purchase of group annuities whether such funds are held in a separate account or in a general account, whether shown as premiums, advance premiums, auxiliary funds, etc. and whether the liability is shown as Exhibit 8 or elsewhere. In making such computation, the procedure and minimum standards described below shall be applicable for the December 31 calendar year "y" valuation giving recognition to the dates deposits were made. Where appropriate and with the approval of the commissioner, recognition may be given to the extent and time of application of active life funds to purchase annuities, expense assessments against the funds, and excess of purchase price over minimum reserves. In no event shall the reserve be less than the transfer value, if any, of the fund. Approximate methods and averages may be employed with the approval of the commissioner.

To the extent that the application of these valuation procedures and standards would require a company to establish aggregate minimum reserves for group annuities and related funds in excess of reserves which it would not otherwise hold if these valuation procedures and standards did not apply, such company shall set up additional reserve liability shown in its general account or in a separate account, whether shown in Exhibit 8 or elsewhere.

For funds received:

(1) Prior to calendar year 1976, follow the procedure used at that time.

(2) In calendar year 1976 or later, follow the minimum standards described below:

   (a) Contracts having no guaranteed interest rates in excess of 6% on future contributions to be received more than one year subsequent to the valuation date.

   The minimum reserve shall be equal to the sum of the minimum reserves for funds attributable to contributions received in each calendar year.

Where V_y = Minimum reserve for funds attributable to contributions received in calendar year y

$V_y = [C_y \times (1 + i_{gy})^n] / (1 + i_{py})^n$

C_y = Portion of guaranteed fund attributable to contributions received in calendar year y

i_{gy} = Interest rate guaranteed under the contract with respect to funds attributable to contributions received in calendar year y

i_{py} = Lowest of:

(1) The net new money rate credited by the company on group annuity funds attributable to contributions received in calendar year y less .005; or

(2) i_{gy}; or

(3) i_{my}; where

i_{my} = (i) for calendar years y + 1 through y + 10, the values shown in the table of values of i_{my} distributed each year by the Central Office of the National Association of Insurance Commissioners;

(ii) for calendar years y + 11 and later, .060.

n = Number of guarantee years, and fractions thereof, remaining as of the December 31 valuation.

(b) Contracts having guaranteed interest rates in excess of 6% on future contributions to be received more than one year subsequent to the valuation date.

The same procedures as set forth under (a) above shall be used except that the deduction under (1) of i_{py} shall be .01 instead of .005 and i_{my} for calendar years y + 1 through y + 10 shall be reduced by .005.

Table of Values of i_{my}
(Effective for the December 31, 1977 Valuation)

DELETE

Calendar Year y in Which Contributions Were Received[*]	Value of i_{my} for Calendar Years y + 1 Through y + 10
1976	.089
1977	.087
1978	.081
1979	.084
1980	.095

DELETE

[~~* Note: These factors were based upon gross new money rates for reporting annuity writing companies less .01~~]

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ATTACHMENT FOUR-13

American Council of Life Insurance
1850 K Street, N.W.
Washington, D.C. 20006
(202) 862-4162

February 24, 1982

Mr. Ted Becker
Chairman
NAIC Life, A&H Technical Staff Actuarial Group
Texas State Board of Insurance
1110 San Jacinto
Austin, TX 78786

Dear Mr. Becker:

Actuarial Guideline II in the NAIC Financial Condition Examiners Handbook prescribes minimum standards for reserves for group annuity funds with interest rate guarantees. The Guideline was amended in 1981 to state that the procedures and standards therein will not apply to the extent that the valuation standards in the 1980 Amendments to the NAIC Model Standard Valuation Law for guaranteed interest contracts have been enacted and are applicable. Until the new law is enacted and applicable in a state, however, Actuarial Guideline II will continue to apply and valuation standard interest rates applicable to new contributions under guaranteed interest contracts will still be needed.

In the past, the valuation standard interest rates in Actuarial Guideline II have followed those developed by the New York Insurance Department for its Circular Letters. If New York does enact the 1980 Amendments in 1982, which is a reasonable likelihood, the New York Department will no longer need to develop such rates for its minimum reserve requirements; hence a new source will need to be found for the rates in Actuarial Guideline II for contributions received in 1982 and subsequent years. At the New Orleans meeting of the NAIC Life, A&H Technical Staff Actuarial Group in December, interested parties were invited to propose an alternative source for the Actuarial Guideline II rates.

We propose a simple approach that would produce reserves reasonably consistent with those under the current New York procedure. In Actuarial Guideline II, set the value of i_{my} for calendar years y+1 through y+10, which applies to contributions received in 1982 and subsequent years, equal to the calendar year statutory valuation interest rate in section three-b of the 1980 NAIC Amendments to the Standard Valuation Law applicable to the change in funds in calendar year y for guaranteed interest contracts with cash settlement options of Plan Type B with guarantee duration of more than 5 years but not more than 10 years, and which do not guarantee interest on considerations to be received more than 12 months beyond the valuation date. For contracts having guaranteed interest rates on future contributions to be received more than 12 months after the valuation date, the rate i_{my} developed above would be reduced by .50% as at present in Actuarial Guideline II.

The attached table shows that the proposed basis is consistent with the current guideline. The first column of rates, headed "Published NAIC Rate," shows the actual interest rate standards, according to the guideline, which applied to December 31, 1981 valuations. These rates for 1976 through 1979 contributions were each based on experience of the prior year's gross new money rate for reporting annuity writing companies. These rates for 1980 and 1981 contributions were based on current experience and do not reflect any lag. To facilitate comparison with the proposed basis, the actual published rates have been adjusted to eliminate the one-year lag. The adjusted rates, shown in the second column, represent what the NAIC rates would have been if they had always been determined on a current basis. The third column shows rates for 1975 through 1981 contributions calculated on the basis proposed for 1982 and subsequent contributions. The final column shows the difference between these rates and the adjusted NAIC rates.

The largest difference, 75 basis points, occurred in 1980 and resulted from an unusual combination of circumstances which are not likely to recur. In 1980, market interest rates rose very sharply, funds available for investment by life insurers were reduced, and at the same time a large volume of advance investment commitments, made earlier for disbursement in 1980, reached maturity and were taken down by borrowers. These commitment takedowns, carrying rates set at commitment and well below 1980 market rates, represented a larger than usual share of new investments, holding down the industry average yield. Changed made by companies in their advance committing policies and investment strategies have reduced the likelihood that a 1980 situation will reoccur.

We recommend that this approach, which is recommended by the Council Legislative and Actuarial Committees, be adopted by the NAIC Life, A&H Technical Staff Actuarial Group.

We appreciate the opportunity to present to you our views.

Respectfully submitted,

William Carroll
Actuary

VALUATION STANDARD INTEREST RATES
APPLICABLE TO NEW CONTRIBUTIONS
(values of i_{my} in percent)

Year Contributions Received	Published NAIC Rate	Adjusted NAIC Rate	Rate on Proposed Basis	Difference
1975	—	8.90	9.00	+.10
1976	8.90	8.70	8.75	+.05
1977	8.70	8.10	8.00	-.10
1978	8.10	8.40	8.00	-.40
1979	8.40	9.00	8.75	-.25
1980	10.00	10.00	10.75	+.75
1981	12.40	12.40	12.75	+.35

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ATTACHMENT FOUR-I4

Derivation of the 1983 Table "a" for Individual Annuity Valuation

Introduction

In December 1979 Mr. Ted Becker, chairman of the NAIC Life, Accident and Health Insurance Technical (C4) Subcommittee Task Force on Valuation and Nonforfeiture Value Regulation, asked the Society of Actuaries to "form one or more committees to study the possible need for new mortality bases or tables in the following areas: (1) individual and group annuities (mortality and adequacy of improvement projection factors); or settlement options. . ." The technical task force request went on to say "If it is concluded that one or more additional new bases or tables are needed, then the committee or committees would commence directly with developing new bases or tables just as soon as possible."

With the agreement of then President Vogel and then President-Elect Leckie, a committee was formed to study the need for a new individual annuity mortality basis. A corresponding committee was named to examine the need for a new group annuity table. By June of 1980, the staffing of the individual annuity committee, the "Committee to Recommend a New Mortality Basis for Individual Annuity Valuation," was completed.[1] The charge to the committee as printed in the society's Year Book is:

> To evaluate the need for new mortality tables and projection factors and, if it finds a need, develop new tables and/or projection factors. The new mortality tables would be recommended for possible adoption by appropriate authorities for valuation of reserves on individual annuities and settlement option contracts.

1. Committee membership: Robert J. Johansen, chairman, Gayle E. Emmert, Thomas R. Huber, Harry I. Klaristenfeld, John B. Kleiman, Robert S. Rubinstein, John H. Welch, and Richard K. Wong.

The committee reviewed an advance copy of the report, Mortality Under Individual Immediate Annuities, Life Income Settlements and Matured Deferred Annuities Between 1971 and 1976 Anniversaries, published in the 1979 Reports Number of the Transactions. It compared the 1971-76 experience with the experience which was used as the basis of the 1971 Individual Annuity Mortality Table (1971 IAM) - in both cases looking at ratios of actual to expected deaths (by amounts of annual income) based on the 1971 IAM Table.

In August 1980, the committee chairman reported at the meeting of the NAIC Life, Accident and Health Insurance Technical (C4) Subcommittee that based on preliminary studies it appeared to the committee that the 1971 table would not be adequate during the 1980's and that a simple age setback would not be appropriate. Further, the slope of the Projection Scale B mortality improvement factors was such that the factors would not adequately adjust for the recent improvement in mortality at the high ages. Any proposed new set of improvement factors would be substantially higher at the older ages.

Table 1 below compares the mortality experience used as the basis for the 1971 IAM with the 1971-76 experience on immediate annuities, matured deferred annuities, and settlement options, after adjusting the 1971-76 experience so that it would have the same proportions of exposures by kind of contract as in the 1971 IAM basic data experience. The experience is by amount of annual income and the mortality ratios are ratios of actual to expected mortality on the 1971 IAM Table.

Table 1

Mortality Comparison

Experience Used as Basis for 1963 Experience Table
vs. 1971-76 Adjusted Experience on Individual Immediate Annuities,
Matured Deferred Annuities and Settlement Options Combined
(Expected Deaths on 1971 IAM Table)

	Attained Ages	"1963" Experience	Adjusted 1971-76 Experience	Ratio '71-'76/'63
Male	60-69	127.8%	108.8%	85.1%
	70-79	126.7	123.3	97.3
	80 & over	121.1	108.0	89.2
Female	60-69	127.8	123.2	96.4
	70-79	126.7	109.7	86.6
	80 & over	119.3	103.7	86.9

If we assume that the 1971-76 experience is centered on 1973, then it is apparent that the 1971 IAM already provided less than the desired 10% margin at ages 80 and over. Given another 10 years of mortality improvement, a new valuation mortality table reflecting improved mortality at the older ages would appear to be needed for the period from 1983. In addition, mortality rates for the U.S. population and other sources for years subsequent to 1973 indicated that there had been substantial reductions in mortality at the higher ages through the later 1970's.

Tables 2 (reproduced here from the report, Mortality Under Individual Immediate Annuities, Life Income Settlements and Matured Deferred Annuities Between 1971 and 1976 Anniversaries) show the recent trends in mortality experienced under the different kinds of annuities. The trend strengthens the perceived need to replace the 1971 IAM Table.

An added reason for recommending a new mortality table is the trend toward permitting higher interest rates for valuation reserves, thus cutting down potential interest margins which could otherwise provide the additional reserves required to provide for increasing longevity. (It should be noted, however, that under current conditions there are ample margins when valuation interest rates are compared with the rates available on current new investments, in contrast to the situation about three decades ago when valuation and new money interest rates were much closer together). Adoption by the states of the concept of dynamic interest rates for valuation may further erode interest rate margins available to cover inadequate or negative mortality margins, increasing the need for an adequate valuation table.

In selecting the experience on which to base a new mortality table, the Committee reviewed the decisions made relating to the 1971 IAM Table and the reasoning behind those decisions. The Committee then evaluated those reasons and decisions as they would apply to the 1971-76 experience and to current conditions generally. As described below, the Committee found itself largely in agreement with the conclusions of the Joint ALC-LIAA Actuarial Committee which constructed the 1971 IAM Table.

TABLE 2-1

COMPARISON OF MORTALITY RATIOS ON INDIVIDUAL IMMEDIATE NONREFUND ANNUITIES—MALE LIVES
EXPERIENCE BETWEEN 1948 AND 1976 ANNIVERSARIES
EXPECTED DEATHS BASED ON ANNUITY TABLE FOR 1949 ULTIMATE AND 1971 INDIVIDUAL IMMEDIATE ANNUITY TABLE
BASED ON AMOUNTS OF ANNUAL INCOME

ATTAINED AGES	a-1949 ULTIMATE						1971 IAM	
	1948–53	1953–58	1958–63	1963–67	1967–71	1971–76	1967–71	1971–76
	Contract Years 1–5							
Under 60	*127%*	*211%*	*	*101%*	*	*	*	*
60–69	123	90	66%	72	88%	90%	117%	119%
70–79	83	78	71	75	96	86	129	115
80 and over	76	96	49	77	65	53	87	70
All ages	86%	89%	58%	76%	78%	70%	104%	93%
All ages adjusted	85%	89%	59%	76%	80%	70%	106%	93%
	Contract Years 6 and Over							
Under 60	95%	168%	*334%*	*98%*	*	*91%*	*	*116%*
60–69	101	127	116	92	115%	110	153%	147
70–79	128	97	101	81	108	93	145	125
80 and over	93	107	98	87	82	77	103	96
All ages	105%	106%	100%	86%	88%	82%	111%	104%
All ages adjusted	102%	105%	100%	86%	89%	82%	114%	104%
	All Contract Years							
Under 60	106%	180%	*189%*	*101%*	*145%*	*70%*	*N.A.*	*88%*
60–69	108	115	93	77	95	97	126%	129
70–79	118	93	92	78	102	90	136	121
80 and over	91	106	90	84	77	72	97	91
All ages	102%	103%	91%	82%	84%	78%	108%	101%
All ages adjusted	100%	103%	91%	82%	85%	78%	109%	101%

NOTE.—Mortality ratio in italics where 10–49 contracts terminated by death. N.A. = not available.
* Fewer than 10 contracts terminated by death.

TABLE 2-2

COMPARISON OF MORTALITY RATIOS ON INDIVIDUAL IMMEDIATE NONREFUND ANNUITIES —FEMALE LIVES
EXPERIENCE BETWEEN 1948 AND 1976 ANNIVERSARIES
EXPECTED DEATHS BASED ON ANNUITY TABLE FOR 1949 ULTIMATE AND 1971 INDIVIDUAL IMMEDIATE ANNUITY TABLE

BASED ON AMOUNTS OF ANNUAL INCOME

Attained Ages	a-1949 Ultimate						1971 IAM	
	1948-53	1953-58	1958-63	1963-67	1967-71	1971-76	1967-71	1971-76
	Contract Years 1-5							
Under 60	*94%*	*111%*	*207%*	*382%*	*257%*	*	N.A.	*
60-69	93	85	59	55	74	62%	102%	86%
70-79	75	86	71	63	46	51	65	72
80 and over	63	65	75	68	65	51	82	63
All ages	73%	77%	73%	67%	59%	51%	77%	67%
All ages adjusted	70%	74%	73%	66%	59%	51%	77%	67%
	Contract Years 6 and Over							
Under 60	112%	*101%*	*132%*	*119%*	*168%*	*503%*	N.A.	*613%*
60-69	109	87	127	80	115	116	160%	163
70-79	112	100	111	88	93	87	131	122
80 and over	101	97	99	93	90	75	112	93
All ages	105%	97%	102%	92%	91%	78%	115%	99%
All ages adjusted	103%	97%	102%	92%	91%	78%	116%	99%
	All Contract Years							
Under 60	106%	103%	*160%*	*301%*	*227%*	*278%*	N.A.	*337%*
60-69	104	87	102	63	88	85	121%	118
70-79	106	98	102	77	69	73	98	102
80 and over	98	95	98	89	85	71	106	87
All ages	101%	96%	99%	86%	82%	72%	105%	92%
All ages adjusted	100%	95%	99%	86%	82%	72%	105%	92%

NOTE.—Mortality ratio in italics where 10-49 contracts terminated by death. N.A. = not available.
* Fewer than 10 contracts terminated by death.

TABLE 2-3

COMPARISON OF MORTALITY RATIOS ON INDIVIDUAL IMMEDIATE REFUND ANNUITIES—MALE LIVES
EXPERIENCE BETWEEN 1948 AND 1976 ANNIVERSARIES
EXPECTED DEATHS BASED ON ANNUITY TABLE FOR 1949 ULTIMATE AND 1971 INDIVIDUAL IMMEDIATE ANNUITY TABLE
BASED ON AMOUNTS OF ANNUAL INCOME

Attained Ages	a-1949 Ultimate						1971 IAM	
	1948–53	1953–58	1958–63	1963–67	1967–71	1971–76	1967–71	1971–76
	Contract Years 1–5							
Under 60	215%	*241%*	*127%*	117%	*235%*	109%	N.A.	138%
60–69	140	114	102	91	98	74	130%	99
70–79	110	110	98	85	91	81	122	109
80 and over	109	92	86	75	70	79	97	103
All ages	122%	108%	96%	84%	87%	79%	117%	105%
All ages adjusted	120%	107%	96%	84%	89%	79%	118%	105%
	Contract Years 6 and Over							
Under 60	154%	178%	125%	167%	*86%*	218%	N.A.	274%
60–69	138	134	138	124	99	115	132%	153
70–79	128	117	115	102	106	91	142	122
80 and over	100	107	103	103	103	85	130	109
All ages	146%	114%	109%	105%	104%	90%	134%	117%
All ages adjusted	113%	113%	110%	104%	104%	90%	134%	117%
	All Contract Years							
Under 60	171%	189%	126%	135%	182%	139%	N.A.	176%
60–69	139	129	121	98	98	82	131%	110
70–79	124	116	111	94	99	86	132	116
80 and over	101	105	101	96	91	83	117	107
All ages	117%	113%	107%	96%	96%	85%	125%	111%
All ages adjusted	116%	114%	108%	96%	96%	85%	125%	111%

NOTE.—Mortality ratio in italics where 10-49 contracts terminated by death. N.A. = not available.

TABLE 2-4

COMPARISON OF MORTALITY RATIOS ON INDIVIDUAL IMMEDIATE REFUND ANNUITIES—FEMALE LIVES
EXPERIENCE BETWEEN 1948 AND 1976 ANNIVERSARIES
EXPECTED DEATHS BASED ON ANNUITY TABLE FOR 1949 ULTIMATE AND 1971 INDIVIDUAL IMMEDIATE ANNUITY TABLE
BASED ON AMOUNTS OF ANNUAL INCOME

Attained Ages	a-1949 Ultimate						1971 IAM	
	1948–53	1953–58	1958–63	1963–67	1967–71	1971–76	1967–71	1971–76
	Contract Years 1–5							
Under 60	92%	*92%*	*113%*	*72%*	137%	192%	N.A.	235%
60–69	135	106	83	107	87	104	118%	141
70–79	93	117	103	73	76	72	108	102
80 and over	99	82	92	71	63	71	79	88
All ages	103%	101%	96%	78%	73%	77%	96%	101%
All ages adjusted	102%	97%	95%	77%	72%	77%	94%	101%
	Contract Years 6 and Over							
Under 60	186%	183%	179%	138%	202%	210%	247%	257%
60–69	119	118	118	109	80	102	109	142
70–79	120	112	107	91	86	78	122	110
80 and over	106	104	105	98	81	82	101	101
All ages	113%	108%	106%	97%	83%	82%	106%	105%
All ages adjusted	110%	107%	106%	97%	82%	82%	106%	105%
	All Contract Years							
Under 60	160%	164%	157%	96%	162%	199%	199%	244%
60–69	122	115	108	108	84	103	115	141
70–79	116	113	107	84	82	75	115	107
80 and over	106	103	104	94	77	80	95	98
All ages	112%	107%	105%	92%	80%	81%	103%	104%
All ages adjusted	110%	107%	105%	92%	79%	81%	101%	104%

NOTE.—Mortality ratio in italics where 10–49 contracts terminated by death. N.A. = not available.

Selection of Source Data

Since the experience in the report, Mortality Under Individual Immediate Annuities, Life Income Settlements and Matured Deferred Annuities Between 1971 and 1976 Anniversaries, represents the most recent available on individual annuities, there was no question that it be used to produce a basic table. Because the 1971-76 experience was approximately centered on 1973 and the Committee was aiming for a valuation table appropriate for 1983, the first year in which any new table would likely be effective in a fair number of states, it was necessary to project the 1971-76 experience for about 10 years.

The second question to be answered was whether to combine the experience under refund and nonrefund immediate annuities, matured deferred annuities and settlement options, as was done for the 1971 IAM Table, or to revert to the earlier practice of basing an annuity valuation table on only the experience under immediate nonrefund annuities. The reasoning of the Joint Actuarial Committee was reviewed and is briefly summarized in the following paragraph.

The ALC-LIAA Joint Actuarial Committee's objective was "to develop an annuity mortality table which would be 'safe' . . . for the valuation (emphasis added) of all types of individual annuities, including single premium annuities, life income settlements and matured deferred annuities." The table was not intended as a basis for calculating the gross single considerations to be charged for immediate annuities. It was felt that the "combined immediate annuity and settlement option experience, with suitable margins, was an appropriate broad base for developing a mortality table to be used as a minimum valuation standard for all types of individual annuities." There were, however, some misgivings expressed that implicitly adopting the mix of business reflecting the data submitted by the particular companies contributing to the Society of Actuaries studies was, at least, arbitrary.

This latter point was a source of concern also to the current committee. Its concern was even greater since it found that there was such a substantial change in the proportions of business in the various annuity and settlement options categories that it was necessary to adjust the 1971-76 experience to the same proportions at the "1963" experience on which the 1971 IAM Table was based in order to make a valid mortality comparison. Table 3 shows for ages 60-69, 70-79 and 80 and over the ratios of the exposures (by amounts of annual income) in the experience used for the 1963 Experience Table to the corresponding exposures in the 1971-76 experience by kind of contract.

An analysis was made of the individual company contributions to the studies used to derive the 1963 Experience Table and the contributions to the 1971-76 Study. The analysis is summarized in Table 4.

Table 3

Ratios of Exposures: "1963" Experience to 1971-76 Experience By Kind of Contract
By Amount of Annual Income – All Durations Combined

Kind of Contract	Males Attained Ages 60-69	70-79	80 & Over	Females Attained Ages 60-69	70-79	80 & Over
Immediate Annuities – Refund	.553	.614	.666	.679	.658	.571
– Nonrefund	1.098	1.050	1.126	1.175	1.022	.963
Settlement Options from Death Claims						
– Refund – Payee Election	.083	.039	.029	2.609	1.560	.639
– Nonpayee	.862	.934	.597	1.992	1.165	.586
– Nonrefund – Payee Election	.199	.194	.133	.527	.424	.367
– Nonpayee	.142	.142	.130	.269	.247	.177
Settlement Options from Maturities, Surrenders						
– Refund – Nonpension	1.795	1.221	.590	1.329	.943	.426
– Pension	24.920	23.602	2.884	.640	.315	.059
– Nonrefund – Nonpension	.313	.189	.226	.152	.126	.137
– Pension	.419	.250	.029	.124	.116	.009

Kind of Contract		Males Attained Ages 60-69	Males Attained Ages 70-79	Males Attained Ages 80 & Over	Females Attained Ages 60-69	Females Attained Ages 70-79	Females Attained Ages 80 & Over
Matured Deferred Annuities							
– Refund	– Nonpension	4.076	1.701	.651	3.362	1.554	.589
	– Pension	3.189	1.360	.396	1.668	.692	.266
– Nonrefund	– Nonpension	3.124	1.272	.576	3.209	1.248	.523
	– Pension	2.721	1.190	.414	1.167	.767	.343

Table 4

Analysis By Company of Changes in Relative
Weights of Experience Used for
The 1963 Experience Table
and
Contributions to the 1971-76 Study

Company	Percent Immediate Annuity to Total Immediate and Matured Deferred Annuities and Settlement Options: "1963"	1971-76	Change	Immediate Annuities *Percent Nonrefund Contribution to* Total Redund and Nonrefund Contribution: "1963"	1971-76	Change
A	10%	34%	24	38%	27%	- 11
B	100	100	0	34	25	- 9
C	35	47	12	30	25	- 5
D	23	43	20	41	25	- 16
E	17	43	26	35	24	- 11
All others	18	14	- 4	36	31	- 5
Total	22	32	10	36	26	- 10

The portion of the total exposure that represented immediate annuities increased from 22% in the data underlying the 1963 Experience Table to 32% in the 1971-76 Study, a result of a dramatic increase in the experience of four of the five largest contributors to both studies. The fifth largest company did not contribute any experience to the settlement options or matured deferred annuity portions. All four companies exhibited similar percentage increases. The other companies, which comprised about 50% of the immediate annuity experience in the earlier study, did not exhibit this trend and accounted for only 20% of the 1971-76 immediate annuity experience.

The decline in the ratio of nonrefund to total refund and nonrefund annuity business from the 1963-67 Study to the 1971-76 Study was found to be consistent with respect to each of the companies contributing to both studies. Evidently this is indicative of a real change in the composition of the immediate annuity business.

Table 5

Effect on Mortality of Changes in Relative Weights by Kind of Annuity
All Immediate and Matured Deferred Annuity and Settlement Option Experiences
1971-76 Experience, Contract Years 1 and Over
(Expected Deaths on 1971 IAM Table)

Age Group	Adjusted to "1963" Exposure Basis	Unadjusted*
	Males	
60-69	109%	109%
70-79	123	118
80 & over	108	110
	Females	
60-69	123%	123%
70-79	110	109
80 & over	104	98

* Excluding Pension Trust Business

The committee examined the adjusted total experience, the unadjusted total experience and that of immediate annuities as shown in Tables 5 and 6. Based on this review, the reasoning behind the construction of the 1971 IAM Table and the feeling that only a substantial difference could justify reverting to the older method of using only immediate nonrefund annuity experience, the Committee decided to base the new table on the total experience under immediate refund and nonrefund annuities, matured deferred annuities and settlement options. However, Pension Trust issues were excluded because their mortality was higher than that of non-Pension Trust issues and it was felt that the proportion of such business could vary widely from company to company. Excluding such business was felt to be compatible with the aim of constructing a safe table for valuation purposes.

The committee found itself in agreement with the Joint Actuarial Committee on the latter's decision to base the annuity valuation table on amounts of income rather than numbers of contracts since the financial effect of annuitant mortality is measured by the amount of annual income rather than by number of contracts. The variation in mortality by amount of annual income which has been observed must be taken into account in providing sufficient reserves for future payments.

The committee also found no reason to change from the inclusion of all durations in the experience on which the new valuation table would be based. Admittedly, variations in levels of new issues and in the degree of self-selection exercised by applicants for annuities could affect the level of aggregate mortality (see Table 6 for a comparison of mortality ratios for groups of contract years). Nevertheless it was felt that aggregate would be safer than ultimate mortality and the material contributed to the 1971-76 Study was the best available estimate of the mix of select and ultimate business. If, in a particular company, the valuation actuary believes that the proportion of new, select, annuity business is substantially higher than that in the experience used for the new table, he should make suitable adjustments, such as using an age setback. Similar considerations would apply to a company with a very large proportion of nonrefund immediate annuities.

The Question of Sex-Distinct or Unisex Valuation Mortality Tables

The new individual annuity mortality tables are intended for use as valuation tables, that is, to provide a minimum standard for reserves on individual annuities in the aggregate. The committee considered but did not adopt the concept of a single merged gender table as a valuation standard. In making its decision, the committee considered the following points.

If the actual male/female proportions for the annuity business of a particular company are different from those assumed in the construction of a merged gender valuation table, the reserves will be redundant or insufficient depending on whether the actual proportions of male annuitants are greater or smaller.

If a merged gender table were constructed so as to reflect precisely the male/female distribution of a particular company's annuity contracts, then subsequent deviation of male and female mortality from that assumed could make the merged gender table inappropriate at some later time.

Construction of the 1973 Experience Table

In order to derive a projected 1983 mortality table, it was first necessary to construct experience tables based on the most recent data available. A special tabulation of the Society of Actuaries 1971-76 annuity mortality study was prepared for the committee. Broken down into five-year age groups, the tabulation summarized the data by numbers of contracts and amounts of annual income for contract durations 1 and over. (See Table 6.)

Combining the data over all kinds of contracts, ratios of actual to expected deaths on the 1971 IAM Table were calculated by five-year age groups for the total of immediate refund and nonrefund annuities, matured deferred annuities and all settlement options - from death claims, maturities and surrenders - for contract durations one and over, in all cases excluding pension trust business.

Table 6

Comparisons of Combinations of Immediate Annuity,
Matured Deferred Annuity and Settlement Option Experience
Over the Period 1971-76
By Amounts of Annual Income
(Expected Deaths on 1971 IAM)

Age Group	Males				Females			
	All Durations		Durations 6 & Over		All Durations		Durations 6 & Over	
	Deaths (Amounts in $1,000)	Ratio A/E	Deaths (Amounts in $1,000)	Ratio A/E	Deaths (Amounts in $1,000)	Ratio A/E	Deaths (Amounts in $1,000)	Ratio A/E
	Refund Immediate Annuities							
Under 50	$ 12	316%	$ 7	518%	$ 14	476%	$ 4	295%
50-59	71	183	35	308	64	180	32	236
60-64	155	124	38	157	141	137	44	132
65-69	491	103	149	161	401	134	156	137
70-74	653	112	337	118	569	104	340	115
75-79	869	109	461	108	1,139	105	660	103
80-84	911	101	551	105	1,846	108	1,282	110
85-89	986	109	640	118	1,751	86	1,427	94
90-94	401	92	364	104	1,220	100	1,127	101
95 & over	92	91	88	93	510	112	495	112
All	4,641	106%	2,670	113%	7,655	102%	5,567	104%

Age Group	Males				Females			
	All Durations		Durations 6 & Over		All Durations		Durations 6 & Over	
	Deaths (Amounts in $1,000)	Ratio A/E	Deaths (Amounts in $1,000)	Ratio A/E	Deaths (Amounts in $1,000)	Ratio A/E	Deaths (Amounts in $1,000)	Ratio A/E
	Refund and Nonrefund Immediate Annuities							
Under 50	$ 13	309%	$ 9	523%	$ 17	516%	$ 7	446%
50-59	76	154	39	268	80	199	46	289
60-64	206	138	55	171	161	134	59	147
65-69	639	113	212	173	494	132	210	144
70-74	956	123	510	133	757	103	477	122
75-79	1,313	113	703	111	1,608	104	983	109
80-84	1,374	98	865	103	2,602	102	1,858	110
85-89	1,477	103	1,047	115	2,489	83	2,057	91
90-94	703	89	657	96	1,722	96	1,597	96
95 & over	190	79	186	80	734	108	718	108
All	6,947	106%	4,283	111%	10,664	98%	8,012	103%
	Immediate Annuities, Matured Deferred Annuities, Settlement Options (Excluding Pension Trust Business)							
Under 50	$ 24	239%	$ 17	290%	$ 45	358%	$ 30	363%
50-59	165	161	95	217	280	183	169	195
60-64	449	122	155	139	561	127	288	129
65-69	1,819	107	622	132	1,610	122	966	133
70-74	3,239	119	2,329	121	2,859	110	2,336	119
75-79	4,507	118	3,624	117	5,504	108	4,567	110
80-84	4,588	115	3,947	119	7,896	103	6,840	105
85-89	3,630	114	3,122	119	7,124	93	6,554	97
90-94	1,386	96	1,334	100	3,975	97	3,807	97
95 & over	322	83	318	84	1,368	105	1,352	105
All	20,129	113%	15,563	117%	31,222	103%	26,909	105%

Table 7

1973 Experience Table — 1000qx

Age	Males	Females	Age	Males	Females	Age	Males	Females
5	0.507	0.260	45	3.289	1.538	85	117.907	83.528
6	0.471	0.214	46	3.709	1.682	86	128.241	93.197
7	0.448	0.180	47	4.155	1.850	87	138.957	104.173
8	0.443	0.169	48	4.622	2.046	88	149.996	116.556
9	0.441	0.163	49	5.107	2.268	89	161.439	130.197
10	0.441	0.162	50	5.613	2.515	90	173.403	144.815
11	0.445	0.165	51	6.138	2.787	91	186.006	160.170
12	0.450	0.172	52	6.684	3.083	92	199.363	176.010
13	0.458	0.182	53	7.250	3.401	93	213.588	192.093
14	0.467	0.194	54	7.831	3.736	94	228.778	208.211
15	0.479	0.208	55	8.420	4.084	95	245.025	224.167
16	0.492	0.224	56	9.012	4.440	96	262.420	239.762
17	0.507	0.240	57	9.601	4.801	97	281.058	254.797
18	0.523	0.256	58	10.188	5.167	98	301.088	269.772
19	0.540	0.272	59	10.810	5.568	99	322.661	285.129
20	0.559	0.289	60	11.511	6.040	100	345.926	301.546
21	0.580	0.306	61	12.336	6.618	101	371.033	319.345
22	0.603	0.324	62	13.328	7.340	102	398.133	339.035
23	0.629	0.343	63	14.527	8.227	103	427.376	361.267
24	0.657	0.363	64	15.951	9.248	104	458.910	386.391
25	0.688	0.385	65	17.610	10.357	105	492.838	414.958
26	0.722	0.408	66	19.516	11.511	106	529.457	447.466
27	0.759	0.433	67	21.682	12.664	107	568.770	484.418
28	0.801	0.460	68	24.114	13.795	108	610.974	526.312
29	0.847	0.489	69	26.803	14.964	109	656.222	573.650
30	0.898	0.520	70	29.733	16.264	110	704.661	626.931
31	0.953	0.554	71	32.892	17.779	111	756.444	686.656
32	1.014	0.591	72	36.263	19.595	112	811.719	753.325
33	1.081	0.631	73	39.846	21.790	113	870.636	827.438
34	1.154	0.675	74	43.682	24.330	114	933.347	909.496
35	1.234	0.723	75	47.826	27.370	115	1000.000	1000.000
36	1.324	0.775	76	52.334	30.766			
37	1.422	0.832	77	57.261	34.574			
38	1.533	0.895	78	62.661	38.804			
39	1.663	0.963	79	68.592	43.484			
40	1.821	1.038	80	75.113	48.648			
41	2.018	1.119	81	82.282	54.327			
42	2.261	1.208	82	90.157	60.554			
43	2.558	1.305	83	98.770	67.389			
44	2.903	1.414	84	108.052	74.986			

The q_x's for each five-year age group were not calculated directly because a test showed that the actual average age of a five-year age group was not always the same as the central age. The test consisted of dividing the expected deaths in each five-year age group by the exposure to obtain the average expected mortality rate. Entering the 1971 IAM Table with the resulting mortality rate showed that the corresponding age was not generally equal to the central age of the five-year age group. Accordingly, to obtain more accurate experience mortality rates at the central ages, the A/E mortality ratio for each five-year age group was applied to the 1971 IAM Table q_x for the central age of each five-year age group to obtain an experience q_x at the central age.

The resulting mortality rates, for males and females separately, were graduated and interpolated by a Jenkins fifth difference osculatory interpolation formula computer program which included a cubic equation to close out the highest ages with $q_x=1$ at age 115. (A Whittaker-Henderson graduation of the mortality ratios was also attempted with varying weights for smoothness but the results were unsatisfactory.) The experience from the 1971-76 study yielded mortality rates only at ages over 50. In fact, the Jenkins formula yielded useable rates only over age 60. It was necessary to look elsewhere for a source of appropriate mortality rates at the younger ages.

Fairly recent U.S. population mortality rates were available but the committee felt that population mortality is not expressive of annuitant experience which is affected not only by self-selection but likely also by socio-economic factors. Experience of insured lives seemed to be an acceptable substitute and the 1980 CSO Table covered the proper time interval. The committee considered and constructed a version of the 1973 Experience Table by using the mortality rates from the 1980 CSO Basic Table (K Basic Table) at ages 47 and under, with a cubic curve connecting these rates with the graduated 1971-76 combined experience rates at ages 67 and over. However, it appeared to the committee that the resulting mortality rates at the younger ages were somewhat high.

The committee decided to use the 1971 IAM Table mortality rates at ages 47 and under. However, the 1971 IAM Table rates had been loaded for use as a valuation table. If these rates wre used without adjustment in the 1973 Experience Table, a second loading would be added in the process of deriving the 1983 Table "a" from the 1983 Basic Table. To avoid this consequence and at the same time provide for a smooth table through all ages, the 1971 IAM Table rates at ages 47 and under were divided by 0.9 to offset exactly the level 10% loading adopted by the committee for the 1983 Table "a". (The rationale for the level 10% loading is described later in this report. It should also be noted that the committee developed the 1983 Table "a" at the financially important upper ages before adding the mortality rates at the younger ages.)

A cubic curve was used to connect the unloaded 1971 IAM Table mortality rates to the 1971-76 graduated rates at ages 67 and over. The entire set of rates was then re-graduated by the Jenkins fifth difference modified osculatory graduation formula. The resulting 1973 Experience Table mortality rates appear in Table 7.

The graduated 1973 Experience Table was then applied to the exposures of the 1971-76 combined annuity experience. The results are shown in Table 8 which indicates rather close adherence of the 1973 Experience Table to the 1971-76 experience. Table 15 provides a comparison of the graduated 1973 Experience Table with other annuity tables.

TABLE 8

Test of Graduation of 1973 Experience Table

By amount of annual income

Immediate Refund Annuity
Non-Pension Trust

Age Group	Males: ALL YEARS Deaths (in thousands)	Males: ALL YEARS Ratio A/E*	Males: YEARS 6 AND UP Deaths (in thousands)	Males: YEARS 6 AND UP Ratio A/E*	Females: ALL YEARS Deaths (in thousands)	Females: ALL YEARS Ratio A/E*	Females: YEARS 6 AND UP Deaths (in thousands)	Females: YEARS 6 AND UP Ratio A/E*
Under 50	$12	126%	$ 7	220%	$14	252%	$ 4	147%
50 - 59	71	187	35	313	64	177	32	233
60 - 64	155	129	38	164	141	140	44	135
65 - 69	491	97	149	149	401	114	156	116
70 - 74	653	96	337	101	569	93	340	103
75 - 79	869	93	461	92	1139	97	660	96
80 - 84	911	87	551	90	1846	104	1282	109
85 - 89	986	97	640	105	1751	90	1427	98
90 - 94	401	95	364	107	1220	104	1127	104
95 - 99	85	112	81	115	435	109	420	108
100+	7	86	7	86	75	93	75	93
All	4641	95	2670	102	7655	100	5567	103

Immediate Non-Refund Annuity

Non-Pension Trust

Age Group	Males: ALL YEARS Deaths (in thousands)	Males: ALL YEARS Ratio A/E*	Males: YEARS 6 AND UP Deaths (in thousands)	Males: YEARS 6 AND UP Ratio A/E*	Females: ALL YEARS Deaths (in thousands)	Females: ALL YEARS Ratio A/E*	Females: YEARS 6 AND UP Deaths (in thousands)	Females: YEARS 6 AND UP Ratio A/E*
Under 50	$1	93%	$ 2	180%	$3	406%	$3	664%
50 - 59	5	69	4	125	16	343	14	576
60 - 64	51	218	17	221	20	117	15	220
65 - 69	148	150	63	191	93	106	54	145
70 - 74	303	133	173	151	188	88	137	127
75 - 79	444	103	242	99	469	96	323	116
80 - 84	463	81	314	87	756	92	576	107
85 - 89	491	83	407	100	738	81	630	90
90 - 94	302	89	293	91	502	89	470	88
95 - 99	84	107	84	108	195	101	195	103
100+	14	46	14	46	29	71	28	71
All	2306	96	1613	101	3009	90	2445	100

*Expected deaths based on 1973 Experience Table

TABLE 8 CONT'D

Total Immediate Refund and Non-Refund
Non-Pension Trust

	Males				Females			
	ALL YEARS		YEARS 6 AND UP		ALL YEARS		YEARS 6 AND UP	
Age Group	Deaths (in thousands)	Ratio A/E*	Deaths (in thousands)	Ratio A/E*	Deaths (in thousands)	Ratio A/E*	Deaths (in thousands)	Ratio A/E*
Under 50	$13	121%	$ 9	213%	$17	259%	$ 7	217%
50 - 59	76	168	39	273	80	196	46	285
60 - 64	206	143	55	178	161	137	59	149
65 - 69	639	105	212	160	494	113	210	123
70 - 74	956	105	510	114	757	92	477	109
75 - 79	1313	96	703	94	1608	97	983	101
80 - 84	1374	85	865	89	2602	100	1858	108
85 - 89	1477	92	1047	103	2489	87	2057	95
90 - 94	703	92	657	99	1722	99	1597	99
95 - 99	169	109	165	111	630	106	615	106
100+	21	53	21	53	104	86	103	86
All	6947	95	4283	102	10,664	97	8012	102

Total Matured Deferred

Non-Pension Trust

Under 50	$0	0%	$ 0	0%	$ 1	13%	$ 1	89%
50 - 59	2	43	2	101	7	216	2	119
60 - 64	38	168	14	141	43	151	12	149
65 - 69	219	97	70	108	188	92	117	100
70 - 74	623	93	477	94	444	94	403	98
75 - 79	1208	99	1171	99	1004	105	992	104
80 - 84	1399	105	1377	104	1485	108	1475	108
85 - 89	1053	108	1049	108	1312	106	1312	108
90 - 94	364	106	364	106	703	105	703	105
95 - 99	84	121	84	121	185	100	185	106
100+	2	63	2	63	14	91	14	91
All	4992	102	4610	103	5386	105	5216	105

* Expected deaths based on 1973 Experience Table

TABLE 8 CONT'D

Total Settlement Options
Non-Pension Trust

Age Group	Males: ALL YEARS Deaths (in thousands)	Males: ALL YEARS Ratio A/E*	Males: YEARS 6 AND UP Deaths (in thousands)	Males: YEARS 6 AND UP Ratio A/E*	Females: ALL YEARS Deaths (in thousands)	Females: ALL YEARS Ratio A/E*	Females: YEARS 6 AND UP Deaths (in thousands)	Females: YEARS 6 AND UP Ratio A/E*
Under 50	$ 11	212%	$ 8	221%	$ 27	353%	$ 22	440%
50 - 59	87	177	54	211	193	181	121	181
60 - 64	205	111	86	132	357	127	217	129
65 - 69	961	97	340	110	928	103	639	114
70 - 74	1660	104	1342	104	1658	104	1456	108
75 - 79	1986	104	1750	102	2892	101	2592	102
80 - 84	1815	108	1705	109	3809	100	3507	100
85 - 89	1100	110	1026	108	3323	103	3185	104
90 - 94	319	106	313	107	1550	100	1507	100
95 - 99	41	87	41	93	385	98	385	98
100+	5	85	5	85	50	79	50	80
All	8190	105	6670	106	15172	103	13681	104

Total Immediate, Matured Deferred, Settlement Options
Non-Pension Trust

Age Group	Males: ALL YEARS Deaths (in thousands)	Males: ALL YEARS Ratio A/E*	Males: YEARS 6 AND UP Deaths (in thousands)	Males: YEARS 6 AND UP Ratio A/E*	Females: ALL YEARS Deaths (in thousands)	Females: ALL YEARS Ratio A/E*	Females: YEARS 6 AND UP Deaths (in thousands)	Females: YEARS 6 AND UP Ratio A/E*
Under 50	$ 24	150%	$ 17	217%	$ 45	254%	$ 30	344%
50 - 59	165	165	95	226	280	186	169	199
60 - 64	449	128	155	147	561	131	288	133
65 - 69	1819	99	622	123	1610	104	966	114
70 - 74	3239	102	2329	103	2859	99	2336	107
75 - 79	4507	100	3624	100	5504	101	4567	103
80 - 84	4588	99	3947	102	7896	101	6840	104
85 - 89	3630	101	3122	106	7124	97	6554	102
90 - 94	1386	98	1334	103	3975	100	3807	100
95 - 99	294	109	290	111	1200	103	1185	104
100+	28	58	28	58	168	84	167	84
All	20129	101	15563	104	31222	101	26909	104

* Expected deaths based on 1973 Experience Table

Mortality Improvement: 1973 to 1983

When the committee commenced work on the new individual annuity basis project, it was felt that work could be completed by the end of 1981 in time for consideration by the NAIC at its December 1981 meeting. Approvals by the various states could commence starting in 1982. Consequently, the committee decided to project the table to 1983 so that it would, at its inception, be as "up-to-date" as possible. The committee suggests that the 1983 Table "a" be re-examined periodically for continuing appropriateness.

As was the case for earlier annuity tables, this committee was hampered by a lack of recent, suitable data from which to project mortality improvement rates since the most recent individual annuity experience was centered around 1973. Published United States population mortality rates through 1978 indicated that mortality at the higher ages had shown much higher rates of improvement in the mid and later 1970s than in previous years. The committee was given an advance copy of John C. Wilkins' paper, Recent Trends in the Mortality of the Aged, to be published in the Transactions. The paper, which reported on the mortality of persons covered under Medicare where deaths were matched to exposures and ages were felt to be more accurately reported than in census data, corroborated the higher improvement rates. Annual improvement rates from several different sources are shown in Table 9.

In deriving the 1971 IAM Table, the Joint Actuarial Committee based its choice of mortality improvement rates for the period from 1963 to 1971 on the immediate annuity experience from 1958-63 to 1963-67 and the "settlement annuity" experience from 1955-60 to 1960-65. Annual improvement rates were developed from the combined experience for ages 79 and under (1.6%) and ages 80 and over (1.1%). The same rates were used for males and females.

There can be no doubt that there has been a substantial drop in mortality since 1968, following a marked slowdown in the rate of improvement over the period from the 1950's into the 1960's. Further, whereas the improvement in mortality prior to the 1950's reflected mostly progress against the infectious, acute diseases and benefited mainly the younger ages, the more recent improvements occurred among the chronic ailments of the older ages - ischemic heart disease in particular. While it is hard to find complete agreement among epidemiologists as to the cause of the decrease, they agree that the decrease is a fact. They also agree that the decrease in heart related deaths is real and not a result of changes in diagnostic techniques or coding of cause of death.

Reasons given for the recent improvement range from changes in smoking habits to greater recognition of hypertension and more effective means of treatment and better emergency and post-heart attack care. One writer suggests that the increase in deaths from heart related disease after 1920 followed the rapid spread of smoking after World War I while the recent decrease reflects a reduction in smoking.

There has been a decrease in deaths from other causes as well, even from cancer if lung cancer is excluded.

Table 9

Comparison of Annual Improvement Rates in Mortality from Various Sources

Age	"1963" Experience to 1971-76 "Adjusted" Experience (see text)	U.S. White Population 1961-65 to 1971-76	U.S. White Population 1971-76 to 1977-79 *	U.S. Medicare 1973 to 1977	Intercompany Insured Lives 1970-75 to 1976-79	Proj. B (Inter-polated)	Assumed Improvement Factors 1973-1983
			Males				
7			2.05%		-		2.00%
12					3.17%		0
17			-0.39		-0.02		0
22					0.85	1.25%	0
27			0.26		1.20	1.25	0
32					2.00	1.25	1.00
37			3.32		3.15	1.25	2.25
42					4.28	1.25	2.25
47			2.66		3.69	1.25	2.25
52		0.77%		2.40%	3.34	1.24	2.25
57	1.52%	0.74	3.24	2.23	4.61	1.22	2.25
62		0.41	2.21	1.97	2.85	1.16	2.25
67		0.72	2.41	2.75	3.54	1.04	2.25
72	0.26	0.22	2.14	2.15	2.07	.87	2.25
77		-0.19	1.57	2.15	3.35	.65	2.00
82	1.08	0.44	1.12	1.59	1.81	.40	1.75
87		0.11	2.17		2.42	.15	1.50
92					-0.05	0	1.50
97						0	1.50
			Females				
7			3.24%		-		2.00%
12					2.44%		0
17			0.78		-1.68		0
22					0.77	1.25%	0
27			2.72		4.58	1.25	0
32					3.07	1.25	1.00
37			4.10		2.40	1.25	2.25
42					2.77	1.25	2.25
47			2.10		1.80	1.25	2.25
52		0.43%		2.35%	3.47	1.24	2.25
57	0.35%	0.20	2.22	3.44	3.58	1.22	2.25
62		0.58	1.15	3.78	0.07	1.16	2.25
67		1.53	1.83	3.53	2.59	1.04	2.25
72	1.46	1.30	2.67	3.54	3.66	.87	2.25
77		1.01	2.45	2.71	3.74	.65	2.00
82	1.43	1.73	1.99	1.02	2.80	.40	1.75
87		2.15	2.85		4.97	.15	1.50
92					-0.23	0	1.50
97						0	1.50

* The 1979 experience was based on a 10% sample of deaths.

In view of the continued drop in mortality since 1968, especially at the very high ages, the use of improvement rates based on prior annuity experience did not seem appropriate for use over the period from 1973 to 1983. Unfortunately, there was no suitable annuity experience available, subsequent to the 1971-76 Study. A review of one large company's recent annuity experience showed inconsistencies and anomalies, probably arising from the effects of class selection in a competitive marketplace which could have a proportionately greater effect on a single company's experience than on that of several companies combined. The Society's Ordinary Life insurance experience was not deemed entirely appropriate because of the probable effects of changes in underwriting rules caused by inflation and competitive considerations. This left United States population mortality and Medicare experience as likely sources.

The committee considered both United States population data and the Medicare data reported in the Wilkin paper which ably analyzed the data at length and compared the data with United States population experience. The committee found that the improvement rates of the United States white population (males and females separately) for the period 1961-65 to 1971-76 tended to parallel the improvement rate of the total annuity and settlement option experience from the period covered by the 1963 Experience Table data to the 1971-1976 Study and were of about the same magnitude.

The use of population data to project annuity mortality can be objected to for a number of reasons. There is no self-selection. There are likely to be wide differences in average income levels, occupations and geographic distributions between the two sets of individuals. Mortality improvement among the population may be largely the result of improvement in average socio-economic status (mortality is considered a "social indicator"[2]). Finally there may be errors in counting or age reporting in the deaths and exposures.

Since the mortality improvement factors measure the change in the mortality of the population, not the mortality itself, they are not likely to be unduly sensitive to differences in composition of the two groups except to the extent that the factors causing the change in mortality reflect changes affecting one socio-economic group more than another.

While changes in the socio-economic area may have had some effect, it is believed that over the periods studied other factors were much more important, particularly at the ages which are financially important in an annuity table. These other factors were evident in the increased rate of improvement observed during the period subsequent to 1971-76.

Improvement rates in the Medicare experience at the higher ages were examined but, since they were available only for white and nonwhite lives combined, it was felt that these rates might be influenced too much by changes in socio-economic status of the nonwhite population. In fact a comparison of the improvement rates in Table 9 will show that the mortality improvement rates in the female Medicare experience from 1973 to 1977 are markedly higher than in any other experience.

After reviewing all the available data, the committee developed a set of improvement rates largely based on the United States white population experience with some effect given to the Medicare experience and the relationship of annuitant to the United States white population improvement rates during the period 1961-65 to 1971-76. The committee also felt that the use of separate male and female improvement rates was not warranted by the available experience for use over the period of projection from 1973 to 1983. A further consideration was the desire of the committee to create a table which, while it would be a safe table to use for valuation when interest rate margins were likely to be thin, would not be so conservative as to cause undue surplus strain on new issues. The final 1973-83 annual improvement factors appear in Table 9.

A distinction by sex will be made in the derivation of projection factors beyond 1983 since they may be in use over a longer period and should reflect past experience over a longer period. The factors used to derive the 1983 Experience Table were based on observed rates which covered half of the period - in fact the committee also looked at rates through 1977-79, although the 1979 experience was based on only a 10% sample of United States population deaths.

For comparison purposes, the Projection B improvement rates have been included in Table 9; the shift by age is apparent. As compared with Projection B, the 1973 to 1983 annual projection rates are higher at ages over 32 and persist into the 90s where the Projection B factors grade down to zero. The chosen improvement factors were intended to project recent experience which, however, may not be indicative of the period beyond 1983.

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2. See panel discussion, Social Indicators: Update of a New and Developing Field, RSA 6, p.1517

The 1983 Basic Table

Applying the final 1973-1983 improvement factors to the 1973 Experience Table produced the 1983 Basic Table (Table 10). For pivotal ages (those ending in 2 and 7) the 10-year (actually 9.5 years) improvement factors were calculated as

$$\frac{(1\text{- annual improvement rate percent})\ 9.5.}{100}$$

The factors were applied to the 1973 Experience Table values at pivotal ages and then the resulting 1983 pivotal values were graduated and interpolated by the Jenkins modified osculatory interpolation formula with, as before, a cubic curve to finish off the table at the extreme ages. Table 14 shows the calculation of the mortality rates at age 5 and 6 for the 1973 Experience Table, the 1983 Basic Table and 1983 Table "a". The 1983 Basic Table is compared with recent non-annuity mortality rates in Table 11, and with other annuity mortality rates in Table 15.

Table 10
1983 Basic Table — 1000qx

Age	Males	Females	Age	Males	Females	Age	Males	Females
5	0.419	0.215	45	2.657	1.242	85	101.261	72.363
6	0.389	0.178	46	2.988	1.362	86	110.424	81.137
7	0.370	0.149	47	3.343	1.500	87	119.894	90.907
8	0.391	0.149	48	3.718	1.658	88	129.609	101.721
9	0.409	0.151	49	4.110	1.837	89	139.643	113.454
10	0.424	0.156	50	4.518	2.033	90	150.099	125.936
11	0.438	0.163	51	4.938	2.246	91	161.082	138.997
12	0.450	0.172	52	5.370	2.474	92	172.699	152.469
13	0.461	0.183	53	5.811	2.716	93	185.049	166.187
14	0.472	0.195	54	6.260	2.971	94	198.219	180.008
15	0.483	0.209	55	6.718	3.242	95	212.291	193.795
16	0.495	0.224	56	7.184	3.520	96	227.346	207.411
17	0.508	0.239	57	7.658	3.832	97	243.467	220.718
18	0.523	0.255	58	8.146	4.155	98	260.903	234.235
19	0.540	0.271	59	8.671	4.515	99	279.903	248.485
20	0.559	0.288	60	9.265	4.927	100	300.716	263.935
21	0.581	0.306	61	9.961	5.411	101	323.592	281.255
22	0.605	0.325	62	10.787	5.983	102	348.780	300.815
23	0.632	0.345	63	11.769	6.656	103	376.529	323.185
24	0.661	0.366	64	12.920	7.416	104	407.033	348.885
25	0.692	0.388	65	14.248	8.241	105	440.707	378.434
26	0.724	0.410	66	15.761	9.114	106	477.634	412.352
27	0.756	0.431	67	17.467	10.012	107	518.120	451.160
28	0.788	0.452	68	19.373	10.931	108	562.412	495.376
29	0.819	0.473	69	21.486	11.916	109	610.761	545.521
30	0.850	0.493	70	23.810	13.027	110	663.417	602.115
31	0.881	0.513	71	26.353	14.326	111	720.626	665.676
32	0.913	0.534	72	29.120	15.872	112	782.640	736.725
33	0.945	0.555	73	32.123	17.717	113	849.708	815.782
34	0.930	0.578	74	35.398	19.883	114	922.077	903.367
35	1.023	0.605	75	38.936	22.383	115	1000.000	1000.000
36	1.077	0.636	76	42.930	25.228			
37	1.146	0.673	77	47.272	28.433			
38	1.232	0.717	78	52.054	32.017			
39	1.341	0.769	79	57.325	36.029			
40	1.476	0.827	80	63.132	40.525			
41	1.641	0.894	81	69.523	45.561			
42	1.842	0.967	82	76.547	51.194			
43	2.079	1.048	83	84.229	57.483			
44	2.352	1,139	84	92.498	64.512			

Comparison of 1983 Basic Table
with Recent Non-Annuity Mortality

Table 11 compares the 1983 Basic Table with the 1980 CSO Basic Table, recent intercompany ordinary life insurance mortality experience and recent group life insurance experience. The group figures made available to the committee were not yet final.

As compared with ordinary life insurance experience, the 1983 Basic Table has rather comfortable margins at the older male ages and the mid range of female ages, with somewhat lesser margins at the older and younger female ages and very thin margins at the younger male ages and at male ages 50-54.

As compared with group life insurance experience, the margins in the 1983 Basic Table are ample at all ages. However, examination of the death rates excluding disability claims indicates that the experience in the 50s of age is heavily affected by sidability claims.

Table 11

Comparison of 1983 Basic Table with
Recent Non-Annuity Mortality

Age	1983 Basic Table 1000 q_x	1980 CSO Basic Table 1000 q_x	1980 CSO Basic Table Ratio to 1983 Basic	Intercompany Ordinary Life Insurance Medical and Non-medical 1976-79 Experience Durations 6 & Over 1000 q_x	Ratio to 1983 Basic	Total Group Life Waiver of Premium Contracts 1975-79 Experience Total Claims* 1000 q_x	Ratio to 1983 Basic
			MALES				
12	0.450	0.31	69%	0.377	84%	--	--
22	0.605	1.25	207	1.199	198	1.60	264%
32	0.913	0.99	108	0.894	98	1.29	141
42	1.842	2.35	128	1.888	102	2.88	156
52	5.370	6.08	113	5.050	94	8.34	155
62	10.787	15.95	148	13.615	126	15.62	145
72	29.120	41.38	142	36.581	126	45.43	156
82	76.547	103.61	135	92.508	121	92.03	120
92	172.699	219.77	127	203.236	118	--	--
			FEMALES				
12	0.172	0.22	128%	0.213	124%	--	--
22	0.325	0.50	154	0.481	148	0.44	135%
32	0.534	0.69	129	0.627	117	0.72	135
42	0.967	1.81	187	1.587	164	1.32	137
52	2.474	4.11	166	3.422	138	3.73	151
62	5.983	8.33	139	8.105	135	6.36	106
72	15.872	21.89	138	17.822	112	21.01	132
82	51.194	71.11	139	60.564	118	--	--
92	152.469	197.20	129	170.785	112	--	--

* Includes 75 percent of disability waiver claims.

The mortality rates in the 1983 Basic Table are comfortably below those of the 1971 IAM Table except for male ages in the 70's and 80's (see Table 15). Since the committee was aiming for a valuation table that would be adequate but not overly conservative, these results are in line with expectations. It might be noted, too, that new tax laws which favor increased investment for retirement may make annuities more popular and act to decrease the effect of self-selection in the future.

Subsequent to the selection by the committee of the United States white population mortality improvement rates as the basis for projecting the 1983 Basic Table from the 1973 Experience Table, an error in the underlying United States population estimates was announced by the National Center for Health Statistics (U.S.D.H. and H.S.). For years between the 1970 and 1980 census, NCHS had computed exposures using the prior year's figures, adding births and estimates of net migration and subtracting deaths. The intercensal estimates are routinely checked against census counts every ten years and have been, in the past, fairly close to the actual.

It has now been reported that the estimated 1980 population was less than the census count by almost five million lives. As of this writing, few details are available except that the largest error affects males in the age range 15 to 34. It is most likely that the error increased with years elapsed since 1970. Under this hypothesis, the annual improvement rates are probably understated by some small amount. Since birth and death records are almost complete, the error must stem from one or more of the following: underestimating net immigration, a very large undercount in 1970 or a much more complete count in 1980. The committee believes that the underestimate would not have had any material effect on the committee's choice of improvement factors, even though they were in large part based on the population data. A rough recalculation on the basis of total population indicates that any resulting understatement of improvement factors is of the order of two hundredths of one percent. Table 12, an exhibit prepared by the Statistical Bureau of the Metropolitan Life Insurance Company, is of interest. It shows several sets of improvement rates and their effects projected to 1985, 1990, 1995 and 2000.

Deriving the Valuation Mortality Table - 1983 Table "a"

To provide a safe mortality table for valuation purposes it is necessary to provide a margin over the experience rates. The purpose of the margin may be defined variously as providing for variations in mortality levels by company, variations between different types of contracts (e.g., refund vs. nonrefund immediate annuities) and different levels of mortality because of variations in a company's mix of business, fluctuations in mortality from year to year, and, to some extent, a future decrease in mortality of annuitants, although the preferred method would be to recognize this improvement directly through the use of mortality improvement factors.

Table 12

MORTALITY PROJECTIONS OF THE GENERAL WHITE POPULATION OF THE UNITED STATES

MALES

AGE GROUP	DEATH RATES PER 100,000 1968	1973	1975	1978	1980#	Annual Improvement Rates for Period Shown 68-78	68-73	73-78	73-80	75-80
UNDER 1	2267.0	1776.5	1594.4	1359.6	1388.3	0.050	0.048	0.052	0.035	0.027
1 - 4	83.6	79.8	71.3	71.7	63.5	0.015	0.009	0.021	0.032	0.025
5 - 14	48.5	47.0	41.5	39.2	46.4	0.021	0.006	0.036	0.002	-0.023
15 - 24	169.0	176.2	165.9	168.5	185.2	-0.000	-0.008	0.009	-0.007	-0.022
25 - 34	174.4	177.6	169.1	166.7	176.6	0.005	-0.004	0.013	0.001	-0.009
35 - 44	345.8	324.4	295.8	268.1	269.6	0.025	0.013	0.037	0.026	0.018
45 - 54	907.6	839.7	790.2	733.8	748.9	0.021	0.015	0.027	0.016	0.011
55 - 64	2269.6	2118.2	1954.5	1819.2	1803.7	0.022	0.014	0.030	0.023	0.016
65 - 74	5029.7	4653.9	4355.8	4135.6	4043.9	0.019	0.015	0.023	0.020	0.015
75 - 84	10004.2	10214.3	9608.1	9420.5	8803.1	0.006	-0.004	0.016	0.021	0.017
85 AND OVER	21560.6	20436.1	18257.9	18100.3	18076.3	0.017	0.011	0.024	0.017	0.002

PROJECTED DEATH RATES IN:

AGE GROUP	1985 BASED ON: 68-78	68-73	73-78	73-80	75-80	1990 BASED ON: 68-78	68-73	73-78	73-80	75-80
UNDER 1	1075.1	1087.9	1062.5	1164.1	1208.8	832.6	852.5	815.2	976.1	1052.6
1 - 4	58.8	60.6	57.1	53.9	56.6	54.5	57.9	51.3	45.8	50.4
5 - 14	41.7	45.0	38.7	46.0	51.9	37.5	43.6	32.3	45.6	58.8
15 - 24	184.9	193.1	177.1	191.9	206.7	184.7	201.3	169.4	198.9	230.8
25 - 34	172.7	179.8	165.8	175.9	184.4	168.8	183.1	155.6	175.2	192.6
35 - 44	237.4	252.9	222.8	236.2	245.7	209.0	237.3	184.1	207.0	224.0
45 - 54	673.4	692.9	654.5	690.1	709.8	605.5	641.0	571.9	635.9	672.7
55 - 64	1614.8	1683.4	1549.1	1608.1	1664.5	1445.8	1571.1	1330.4	1433.7	1536.1
65 - 74	3666.9	3741.8	3593.5	3657.8	3754.3	3325.0	3462.2	3193.3	3308.5	3485.5
75 - 84	8542.4	8988.0	8119.0	7916.1	8065.5	8289.5	9176.7	7488.0	7118.5	7389.8
85 AND OVER	16562.3	17133.5	16010.2	16559.5	17896.5	15175.2	16239.9	14180.3	15169.9	17718.5

AGE GROUP	1995 BASED ON: 68-78	68-73	73-78	73-80	75-80	2000 BASED ON: 68-78	68-73	73-78	73-80	75-80
UNDER 1	644.8	668.1	622.3	818.5	916.5	499.3	523.5	476.3	686.3	798.0
1 - 4	50.4	55.2	46.1	38.9	44.9	46.7	52.7	41.4	33.1	39.9
5 - 14	33.7	42.2	26.9	45.1	64.9	30.3	40.9	22.5	44.7	72.5
15 - 24	184.4	209.9	162.0	206.1	257.6	184.1	218.8	154.9	213.5	287.6
25 - 34	165.0	186.5	146.0	174.5	201.2	161.3	189.9	137.1	173.8	210.1
35 - 44	184.0	222.6	152.2	181.4	204.1	162.1	208.8	125.8	158.9	188.0
45 - 54	544.4	593.1	499.8	586.0	637.5	489.5	548.7	436.8	540.0	604.2
55 - 64	1294.4	1466.3	1142.6	1278.2	1417.6	1158.8	1368.5	981.3	1139.5	1308.2
65 - 74	3015.1	3203.5	2837.7	2992.6	3235.9	2734.0	2964.1	2521.7	2706.9	3004.2
75 - 84	8044.0	9369.5	6906.1	6401.2	6770.6	7805.8	9566.2	6369.3	5756.2	6203.3
85 AND OVER	13904.2	15392.9	12559.5	13896.9	17542.2	12739.7	14590.1	11124.0	12730.8	17347.7

#Provisional

ACTUARIAL CORPORATE STATISTICAL BUREAU - AUGUST 27, 1981

Table 12 (continued)

MORTALITY PROJECTIONS OF THE GENERAL WHITE POPULATION OF THE UNITED STATES

FEMALES

AGE GROUP	DEATH RATES PER 100,000 1968	1973	1975	1978	1980#	Annual Improvement Rates for Period Shown 68-78	68-73	73-78	73-80	75-80
UNDER 1	1683.6	1342.8	1222.3	1069.7	1044.9	0.044	0.044	0.044	0.035	0.031
1 - 4	68.7	62.5	57.1	53.3	56.9	0.025	0.019	0.031	0.013	0.001
5 - 14	31.0	30.2	25.8	25.0	26.0	0.021	0.005	0.037	0.021	-0.002
15 - 24	60.8	60.0	56.0	58.1	56.9	0.005	0.003	0.006	0.008	-0.003
25 - 34	82.7	79.3	73.3	69.3	67.6	0.018	0.008	0.027	0.023	0.016
35 - 44	198.1	181.8	164.6	145.8	148.1	0.030	0.017	0.043	0.029	0.021
45 - 54	467.3	439.9	414.8	393.9	408.4	0.017	0.012	0.022	0.011	0.003
55 - 64	1038.1	1000.7	944.6	914.0	898.9	0.013	0.007	0.018	0.015	0.010
65 - 74	2622.8	2324.7	2152.8	2063.8	2080.0	0.024	0.024	0.024	0.016	0.007
75 - 84	6887.5	6582.2	6034.7	5810.2	5455.6	0.017	0.009	0.025	0.026	0.020
85 AND OVER	20012.9	16685.8	14494.1	14079.0	14234.3	0.035	0.036	0.033	0.022	0.004

PROJECTED DEATH RATES IN:

AGE GROUP	1985 BASED ON: 68-78	68-73	73-78	73-80	75-80	1990 BASED ON: 68-78	68-73	73-78	73-80	75-80
UNDER 1	832.9	833.4	832.4	873.5	893.2	663.9	664.7	663.1	730.2	763.6
1 - 4	50.1	51.8	48.5	53.2	56.7	44.1	47.1	41.4	49.8	56.5
5 - 14	23.3	25.3	21.5	23.4	26.2	21.0	24.7	17.8	21.0	26.4
15 - 24	55.6	56.2	55.1	54.8	57.8	54.4	55.4	53.4	52.7	58.7
25 - 34	61.9	64.8	59.1	60.3	62.3	56.6	62.2	51.6	53.8	57.5
35 - 44	127.1	135.9	118.8	127.9	133.3	109.0	124.7	95.3	110.5	119.9
45 - 54	375.0	384.5	365.7	387.3	402.1	344.2	361.9	327.5	367.3	395.9
55 - 64	843.5	866.5	821.0	832.6	855.4	791.4	835.3	749.9	771.2	814.0
65 - 74	1845.1	1843.6	1846.6	1921.1	2009.7	1636.7	1634.1	1639.3	1774.4	1941.7
75 - 84	5010.8	5213.8	4815.7	4771.0	4932.1	4602.2	4952.6	4250.9	4172.3	4458.8
85 AND OVER	11939.0	11867.9	12010.5	12707.0	13979.1	10013.8	9894.9	10134.1	11343.5	13728.6

AGE GROUP	1995 BASED ON: 68-78	68-73	73-78	73-80	75-80	2000 BASED ON: 68-78	68-73	73-78	73-80	75-80
UNDER 1	529.2	530.1	528.2	610.4	652.8	421.8	422.8	420.8	510.3	558.0
1 - 4	38.9	42.8	35.3	46.5	56.3	34.2	39.0	30.1	43.5	56.1
5 - 14	18.8	24.0	14.7	18.9	26.6	16.9	23.4	12.2	16.9	26.8
15 - 24	53.2	54.7	51.7	50.8	59.7	52.0	54.0	50.0	48.9	60.6
25 - 34	51.9	59.6	45.1	48.0	53.0	47.5	57.2	39.4	42.8	48.9
35 - 44	93.5	114.5	76.4	95.4	107.9	80.2	105.0	61.3	82.4	97.1
45 - 54	316.1	340.7	293.2	348.3	389.8	290.2	320.7	262.5	330.3	383.8
55 - 64	742.6	805.2	684.9	714.3	774.6	696.8	776.2	625.6	661.6	737.2
65 - 74	1451.8	1448.3	1455.3	1638.9	1876.0	1287.9	1283.7	1292.0	1513.7	1812.6
75 - 84	4227.0	4761.8	3752.3	3648.7	4030.9	3882.4	4550.7	3312.2	3190.8	3644.1
85 AND OVER	8399.0	8249.9	8550.8	10126.4	13482.5	7044.6	6878.3	7214.9	9039.8	13240.6

#Provisional

ACTUARIAL CORPORATE: STATISTICAL BUREAU - AUGUST 27,1981

In its deliberations on the form and amount of the loading, the committee considered the use of a non-level loading formula which would vary by age. In particular, the committee considered the use of a loading formula which would decrease the percentage loading at the ages above, say, age 70. Non-level loading formulas considered were of the form .10 $e_x/e70$ at ages over 70 or a linear function of age providing for a reduction in the loading at the higher ages. It was felt that the .10 $e_x/e70$ function would provide too rapid a fall off in loading while the linear function would be more gradual. It was also noted that in the process of applying a flat loading to the experience table and re-graduating, the loading would diminish toward the very end of the table as a result of the graduation process.

In order to test the adequacy and appropriateness of a flat 10% loading an approximate test was made for the companies that contributed to the 1971-76 Annuity Mortality Study.

The total non-pension experience for males and females combined produced a mortality ratio of 107% of the 1971 IAM Table. A 10% safety margin lowers the ratio to 96% of the 1971 IAM Table. Table 13 below shows the mortality ratios of 10 companies that contributed data to the 1971-76 Annuity Mortality Study. The experience of all but companies C, E, and J is covered by the loaded experience and only company C falls very far under the 96% limit.

Table 13

Test of Adequacy of 10% Margin

Variation In Mortality Level By Company By Amount of Annual Income
(Male and Female, Refund and Non-Refund Combined)
(1971-76 Experience)

Company	Actual Deaths ($1,000's)	Expected Deaths on 1971 IAM Table ($1,000's)	Mortality Ratio
A	564	477	118%
B	209	188	111
C	292	407	72
D	1,178	946	125
E	291	319	91
F	377	258	146
G	740	616	120
H	3,152	3,154	100
I	3,946	3,658	108
J	3,116	3,266	95
Total (10 companies)	13,865	13,287	104%

The committee finally rejected any variation by age, noting that the primary reason for the loading was to cover variations in mortality between companies. A secondary purpose of the loading is to provide for variations in mortality from year to year and the committee felt that there was a greater chance of fluctuation at the highest ages where the number of lives would be fewer and less confidence could be placed in the mortality experience. The committee also felt that weight should be given to the choice of a 10% level loading in the 1971 IAM. The committee noted that, based on the 1971-76 combined immediate annuity experience, a 10% loading factor would have provided a safe table for most of the companies contributing to the 1971-76 Society of Actuaries mortality study. Basing its judgment on the foregoing considerations, the committee agreed that a level 10% loading was the preferred approach.

High Age Mortality

Tabular Mortality Rates at the Very High Ages

As is customary in ending a valuation mortality table, the 1983 Table "a" mortality rates at ages above 97 were obtained by fitting a cubic curve from age 97 to age 115 with the value of q_x at age 115 taken as 1.000. This method is satisfactory in that it provides for graded mortality rates at the extreme ages where the precise values have little effect on monetary values at the important ages under 100.

It is suggested, however, that in the construction of future mortality tables this procedure be replaced by the use of more accurate experience mortality rates which will likely be available from sources such as Medicare and special follow-up studies. A private communication received by the chairman shows that mortality apparently does not continue to increase at ages over 100, but rather tends to level off at about 30 percent. Unfortunately, these data are not yet sufficiently substantiated that the committee could make use of the rates developed. Otherwise the 1983 Table "a" could have been terminated by using 300 deaths per thousand for males at ages 102 and higher and at ages 104 and higher for females, in each case terminating at 115 with q_x being set at 1.000. The table below shows the effect on values of a_x at ages 65, 75, 85 and 95.

Values of a_x at 7%

Age	1983 Table "a" Unadjusted Value of a_x (1)		1983 Table "a" Using .300 as upper limit on q_x: Value of a_x (2)		Ratio to Unadjusted (2)/(1)	
	M	F	M	F	M	F
65	9.265	10.246	9.266	10.247	1.0001	1.0001
75	6.867	7.868	6.869	7.869	1.0003	1.0001
85	4.450	5.041	4.454	5.045	1.0009	1.0008
95	2.598	2.845	2.632	2.867	1.0131	1.0077

Final Graduation of the 1983 Table "a"

The 10% loading was subtracted from the 1983 Basic Table at pivotal ages. The resulting rates were then graduated by the Jenkins modified osculatory fifth difference interpolation formula. The calculation of mortality rates at ages 5 and 6 is shown in Table 14 below. The table was closed off at the high ages by means of a cubic curve with q_{115}=1.000. The 1983 Table "a" mortality rates appear in Table 16; a comparison with other annuity mortality rates appears in Table 15. Graphs comparing the 1983 Table "a" with the 1971 IAM Table and the 1980 CSO Basic Table appear following Table 16.

Table 14

Extension of 1973 Experience Table, 1983 Basic Table, 1983 Table "a" to Age 5

Age x	1971 IAM Table 1000 qx	1973 Exper. Table 1000 qx	Ratio At Age 7 $(3)_7 = (2)_7 \div (1)_7$	1983 Basic Table 1000 qx	Ratio At Age 7 $(5)_7 = (2)_7 \div (1)_7$	1983 Table "a" 1000 qx	Ratio At Age 7 $(7)_7 = (6)_7 \div (1)_7$
	(1)	(2) Ages 5, 6: (2) = (1)x $(3)_7$	(3)	(4) Ages 5, 6: (4) = (1)x $(5)_7$	(5)	(6) Ages 5, 6: (6) = (1)x $(7)_7$	(7)
MALES							
7	.403	.448	1.11166	.370	.91811	.333	.82630
6	.424	.471		.389		.350	
5	.456	.507		.419		.377	
FEMALES							
7	0.162	.180	1.11111	.149	.91975	.134	.82716
6	.193	.214		.178		.160	
5	.234	.260		.215		.194	

At its June 1981 meeting, the NAIC (C4) Life, Accident and Health Insurance Technical Subcommittee expressed a desire that the 1983 Table "a" be expressible by a mathematical formula, noting that the 1980 CSO tables had been expresed as a 20-term formula. If a formula had to be found for the 1983 Table "a," the best time to do so would be before its final adoption, when minor variations would be acceptable in view of the ability to use a fairly simple formula.

Table 15

Comparison of Values of 1000 qx on Various Annuity Mortality Tables

		1973 Experience Table		1983 Basic Table		1983 Table "a"		Annuity Table for 1979*	
Age	1971 IAM 1000 q_x	1000 q_x	Ratio to 1971 IAM	1000 q_x	Ratio to 1971 IAM	1000 q_x	Ratio to 1971 IAM	1000 q_x	Ratio to 1971 IAM
				MALES					
42	2.000	2.261	113%	1.842	92%	1.673	84%	1.701	85%
47	3.754	4.155	111	3.343	89	3.009	80	3.193	85
52	6.461	6.684	103	5.370	83	4.812	74	5.511	85
57	9.850	9.601	97	7.658	78	6.839	69	8.543	87
62	14.073	13.328	95	10.787	77	9.740	69	12.678	90
67	20.290	21.682	107	17.467	86	15.717	77	19.880	98
72	30.933	36.263	117	29.120	94	26.131	84	32.413	105
77	48.715	57.261	118	47.272	97	42.587	87	54.058	111
82	77.668	90.157	116	76.547	99	69.081	89	90.941	117

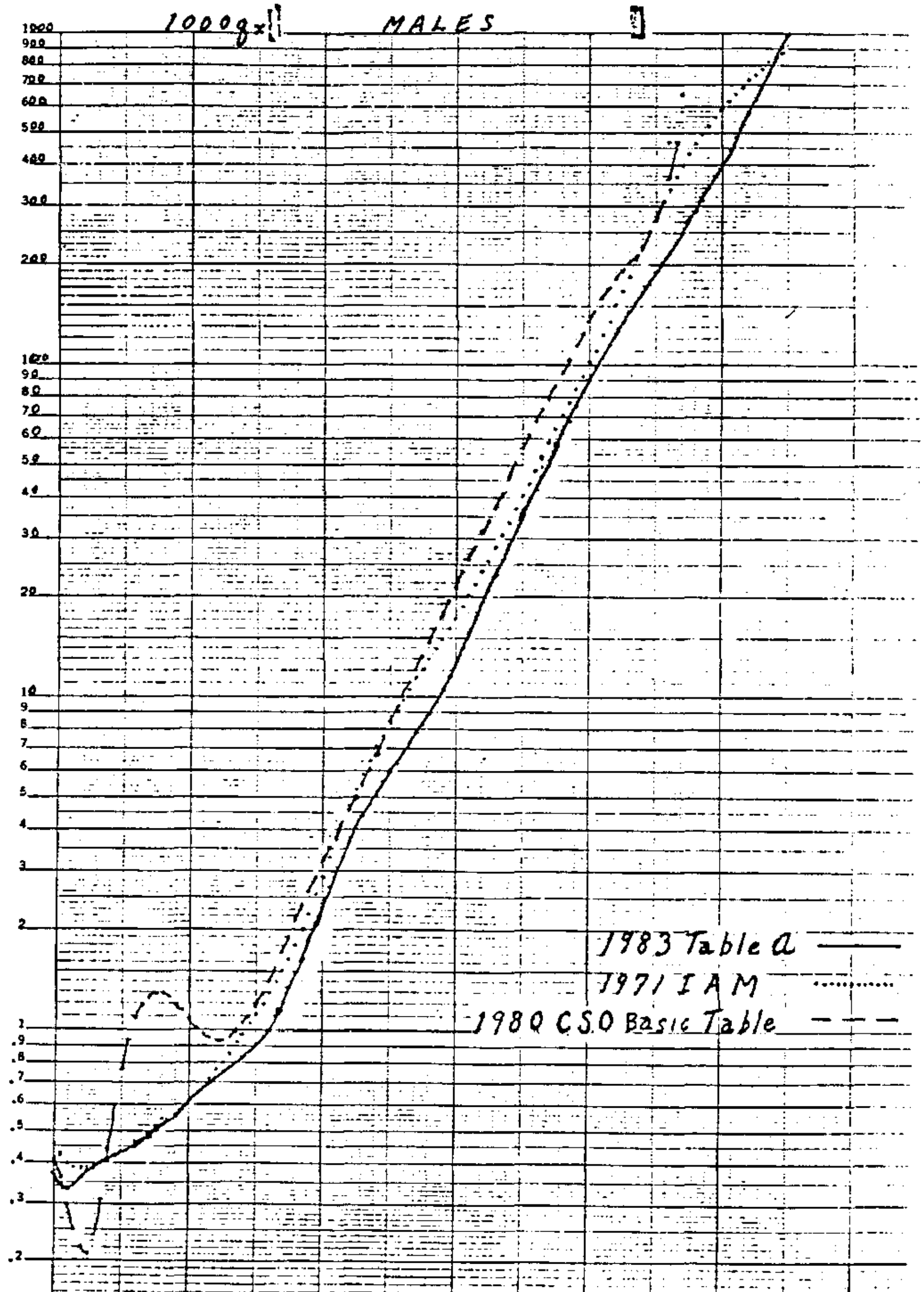
Age	1971 IAM 1000 q_x	1973 Experience Table 1000 q_x	1973 Experience Table Ratio to 1971 IAM	1983 Basic Table 1000 q_x	1983 Basic Table Ratio to 1971 IAM	1983 Table "a" 1000 q_x	1983 Table "a" Ratio to 1971 IAM	Annuity Table for 1979* 1000 q_x	Annuity Table for 1979* Ratio to 1971 IAM
				MALES					
87	123.048	138.957	113	119.894	97	107.577	87	152.327	124
92	208.457	199.363	96	172.699	83	155.429	75	246.328	118
97	340.214	281.058	83	243.467	72	219.120	64	370.973	109
				FEMALES					
42	1.094	1.208	110	.967	88	.867	79	1.085	99
47	1.654	1.850	112	1.500	91	1.356	82	1.639	99
52	2.641	3.083	117	2.474	94	2.215	84	2.497	95
57	4.826	4.801	99	3.832	79	3.432	71	3.867	80
62	7.773	7.340	94	5.983	77	5.413	70	6.394	82
67	10.622	12.664	119	10.012	94	8.888	84	11.190	105
72	17.548	19.596	112	15.872	90	14.319	82	20.160	115
77	32.050	34.574	108	28.433	89	25.509	80	36.836	115
82	59.409	60.554	102	51.194	86	46.121	78	67.481	114
87	109.338	104.173	95	90.907	83	82.318	75	122.582	112
92	181.776	176.010	97	152.469	84	137.222	75	214.397	118
97	242.211	254.797	105	220.718	91	198.646	82	346.674	143

* New Mortality Basis for Annuities, W.A. Jenkins and E.A. Lew, TSA I, pp 446, 447.

TABLE 16

1983 TABLE a — 1,000qx

Age	Males	Females	Age	Males	Females	Age	Males	Females
5	0.377	0.194	45	2.399	1.122	85	90.987	65.518
6	0.350	0.160	46	2.693	1.231	86	99.122	73.493
7	0.333	0.134	47	3.009	1.356	87	107.577	82.318
8	0.352	0.134	48	3.343	1.499	88	116.316	92.017
9	0.368	0.136	49	3.694	1.657	89	125.394	102.491
10	0.382	0.141	50	4.057	1.830	90	134.887	113.605
11	0.394	0.147	51	4.431	2.016	91	144.873	125.227
12	0.405	0.155	52	4.812	2.215	92	155.429	137.222
13	0.415	0.165	53	5.198	2.426	93	166.629	149.462
14	0.425	0.175	54	5.591	2.650	94	178.537	161.834
15	0.435	0.188	55	5.994	2.891	95	191.214	174.228
16	0.446	0.201	56	6.409	3.151	96	204.721	186.535
17	0.458	0.214	57	6.839	3.432	97	219.120	198.646
18	0.472	0.229	58	7.290	3.739	98	234.735	211.102
19	0.488	0.244	59	7.782	4.081	99	251.889	224.445
20	0.505	0.260	60	8.338	4.467	100	270.906	239.215
21	0.525	0.276	61	8.983	4.908	101	292.111	255.953
22	0.546	0.293	62	9.740	5.413	102	315.826	275.201
23	0.570	0.311	63	10.630	5.990	103	342.377	297.500
24	0.596	0.330	64	11.664	6.633	104	372.086	323.390
25	0.622	0.349	65	12.851	7.336	105	405.278	353.414
26	0.650	0.368	66	14.199	8.090	106	442.277	338.111
27	0.677	0.387	67	15.717	8.888	107	483.406	423.023
28	0.704	0.405	68	17.414	9.731	108	528.989	473.692
29	0.731	0.423	69	19.296	10.653	109	579.351	525.658
30	0.759	0.441	70	21.371	11.697	110	634.814	584.462
31	0.786	0.460	71	23.647	12.905	111	695.704	650.646
32	0.814	0.479	72	26.131	14.319	112	762.343	724.750
33	0.843	0.499	73	28.835	15.980	113	835.056	807.316
34	0.876	0.521	74	31.794	17.909	114	914.167	898.885
35	0.917	0.545	75	35.046	20.127	115	1000.000	1000.000
36	0.968	0.574	76	38.631	22.654			
37	1.032	0.607	77	42.587	25.509			
38	1.114	0.646	78	46.951	28.717			
39	1.216	0.691	79	51.755	32.328			
40	1.341	0.742	80	57.026	36.395			
41	1.492	0.801	81	62.791	40.975			
42	1.673	0.867	82	69.081	46.121			
43	1.886	0.942	83	75.908	51.889			
44	2.129	1.026	84	83.230	58.336			


1000qx
MALES
1983 Table a
1971 I A M
1980 CSO Basic Table
5
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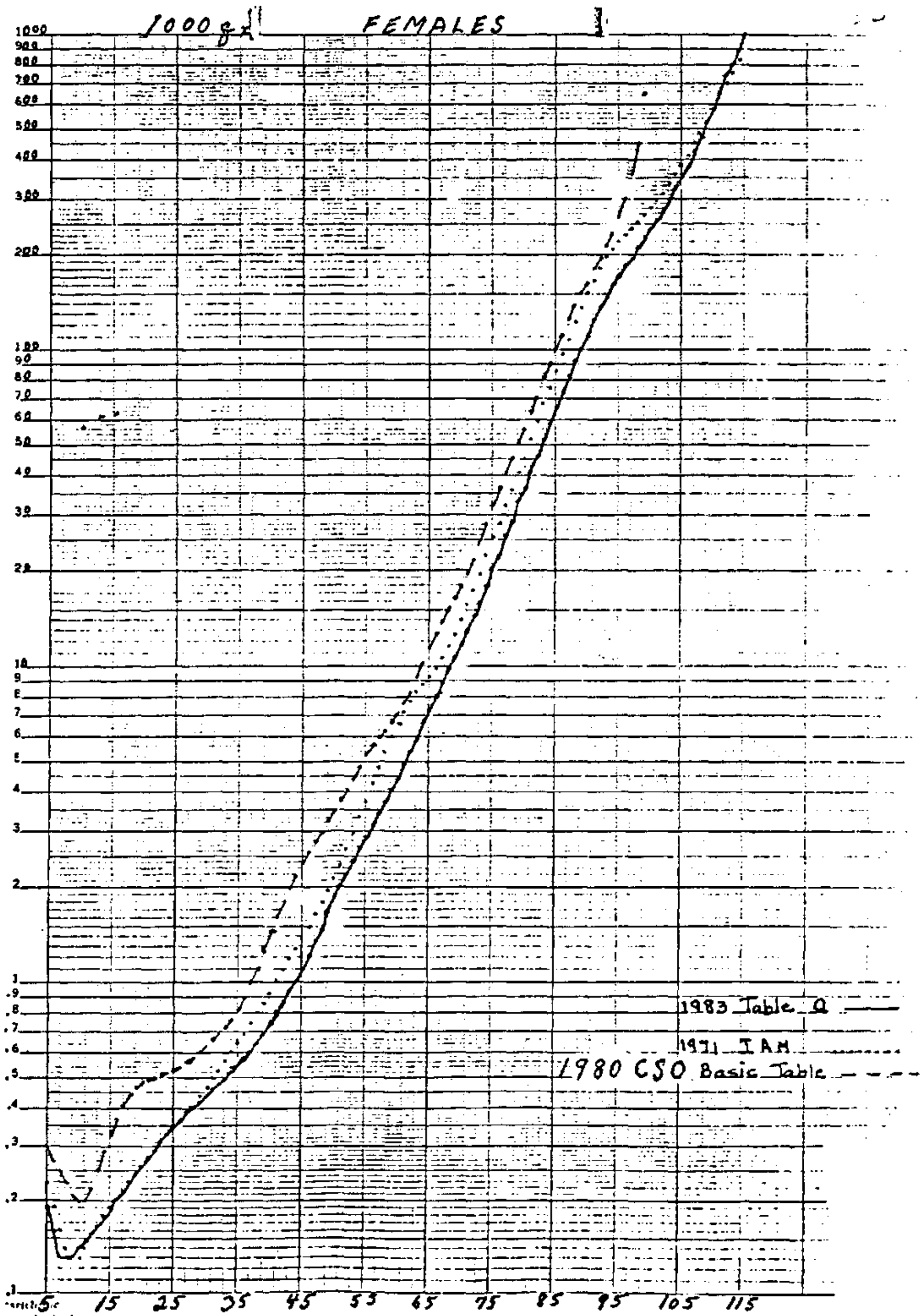
115


1000 qx
FEMALES
1000
900
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1983 Table a
1971 IAM
1980 CSO Basic Table

The committee attempted to use a formula of the kind described by L. Heligman and J. H. Pollard in "The Age Pattern of Mortality," Journal of the Institute of Actuaries, 107, Part I, 49. The authors were able to fit the formula

$$q_x/p_x = A^{(x+B)c} + De^{-E(1nx-1nF)^2} + GH^x$$

rather closely to Australian population mortality rates. The three parts of the Heligman-Pollard formula consist of (i) a Gompertz function for the high ages, (ii) a log-normal function to cover the accident hazard at the yound adult ages, and (iii) a sharply reducing exponential function for the childhood ages.

The form of the equation is unchanged whether the function graduated is q_x/p_x or colog p_x. The committee attempted to fit a comparable formula to the 1983 Table "a" values, first to values of q_x/p_x and then to colog p_x.

At the higher ages, the Heligman-Pollard formula rates are provided mainly by the Gompertz function, GH^x, to represent colog p_x. A least squares method was used first to derive the values of GH^x. When these had been obtained, the log normal segment was then estimated and finally the first term of the formula (omitting the B term) was fitted to the values for ages five and six.

While it was possible to achieve a close fit at the younger ages, especially on a relative basis (Δ / q_x), it was not possible to obtain a satisfactory fit ($\pm$ 2.5%) for the Gompertz function at the important ages of 60 to 92. This may be attributed in part to the use of the discontinuously varying "improvement factors" (described above) to reflect improvements in mortality over the period 1973 to 1983. The original raw data followed an exponential more closely.

When graphed on semilog paper, the 1983 Table "a" mortality rates fell below a least squares straight line at the lower and upper ranges of 60 through the 90's. In an attempt to correct for this, a function of the form $x^{1/n}/K$ was applied to GH^x where n was arbitrary and K was chosen so that $x^{1/n}/K$ was equal to unity at some pivotal age where no correction was desired. Values for n of 2, 4, 6 and 8 were tried, and different pivotal ages were used, but it appeared that no such simple expedient could improve one segment of the Gompertz function without worsening another. The attempt to define the new mortality table in terms of a reasonable mathematical formula was reluctantly abandoned.

Life Table values and commutation columns at 5%, 7% and 9% appear in the appendix.

Comparison of Annuity Values
1983 Table "a" vs. 1971 IAM Table

Values of (i) life annuities, (ii) annuities for 10 years certain and life and (iii) 20 years certain and life at 5%, 7% and 9% on the 1983 Table "a" and the 1971 IAM Table are shown in Table 17. Ratios of 1983 Table "a" values to 1971 IAM Table values are shown to indicate how much reserves will increase under the new table. (A model office comparison is described in the following section.) Values are shown for every fifth age from 60 to 95.

Table 17
Comparison of Annuity Reserves
1983 Table a vs 1971 IAM Table

Sex and Age	5% Interest 1971 IAM Table	5% Interest 1983 Table a	5% Interest Ratio 1983a/1971	7% Interest 1971 IAM Table	7% Interest 1983 Table a	7% Interest Ratio 1983a/1971	9% Interest 1971 IAM Table	9% Interest 1983 Table a	9% Interest Ratio 1983a/1971
				IMMEDIATE LIFE ANNUITY					
MALE									
60	11.702	12.355	1.056	9.809	10.279	1.048	8.387	8.736	1.042
65	10.332	10.918	1.057	8.832	9.265	1.049	7.670	7.999	1.043
70	8.831	9.362	1.060	7.704	8.106	1.052	6.803	7.115	1.046
75	7.261	7.775	1.071	6.465	6.867	1.062	5.809	6.130	1.055
80	5.706	6.237	1.093	5.184	5.613	1.083	4.740	5.092	1.074
85	4.238	4.861	1.147	3.925	4.450	1.134	3.651	4.097	1.122
90	2.871	3.722	1.296	2.706	3.459	1.278	2.559	3.228	1.261
95	1.776	2.757	1.552	1.698	2.598	1.530	1.627	2.455	1.509
FEMALE									
60	13.000	13.613	1.047	10.742	11.148	1.038	9.077	9.356	1.031
65	11.625	12.262	1.055	9.809	10.246	1.045	8.425	8.734	1.037
70	10.002	10.728	1.073	8.629	9.158	1.061	7.547	7.941	1.052
75	8.203	9.016	1.099	7.239	7.868	1.087	6.453	6.948	1.077
80	6.374	7.239	1.136	5.749	6.455	1.123	5.223	5.807	1.112
85	4.679	5.543	1.185	4.302	5.041	1.172	3.977	4.615	1.160
90	3.344	4.100	1.226	3.121	3.793	1.215	2.924	3.525	1.206
95	2.522	3.033	1.203	2.380	2.845	1.195	2.252	2.677	1.189
				LIFE ANNUITY WITH 10 YEARS CERTAIN					
MALE									
60	12.275	12.770	1.040	10.313	10.643	1.032	8.831	9.057	1.026
65	11.152	11.577	1.038	9.553	9.843	1.030	8.306	8.509	1.024
70	10.045	10.411	1.036	8.771	9.028	1.029	7.745	7.928	1.024
75	9.067	9.391	1.036	8.056	8.289	1.029	7.215	7.386	1.024
80	8.324	8.621	1.036	7.494	7.716	1.030	6.787	6.954	1.025
85	7.893	8.131	1.030	7.159	7.343	1.026	6.525	6.668	1.022
90	7.746	7.865	1.015	7.043	7.137	1.013	6.433	6.508	1.012
95	7.723	7.751	1.004	7.025	7.047	1.003	6.419	6.436	1.003
FEMALE									
60	13.316	13.848	1.040	11.020	11.354	1.030	9.322	9.538	1.023
65	12.081	12.640	1.046	10.209	10.577	1.036	8.777	9.025	1.028
70	10.752	11.344	1.055	9.287	9.698	1.044	8.126	8.417	1.036
75	9.505	10.071	1.060	8.382	8.793	1.049	7.461	7.763	1.040
80	8.559	9.004	1.052	7.671	8.006	1.044	6.921	7.176	1.037
85	8.039	8.297	1.032	7.272	7.470	1.027	6.612	6.767	1.023
90	7.828	7.933	1.013	7.108	7.190	1.012	6.484	6.549	1.010
95	7.750	7.774	1.003	7.046	7.066	1.003	6.435	6.451	1.002
				LIFE ANNUITY WITH 20 YEARS CERTAIN					
MALE									
60	13.659	13.912	1.019	11.340	11.489	1.013	9.599	9.689	1.009
65	13.097	13.290	1.015	10.998	11.114	1.011	9.388	9.459	1.008
70	12.707	12.850	1.011	10.752	10.841	1.008	9.232	9.288	1.006
75	12.516	12.603	1.007	10.630	10.685	1.005	9.152	9.188	1.004
80	12.467	12.497	1.002	10.597	10.617	1.002	9.131	9.144	1.001
85	12.462	12.466	1.000	10.594	10.597	1.000	9.129	9.130	1.000
FEMALE									
60	14.157	14.531	1.026	11.642	11.859	1.019	9.786	9.914	1.013
65	13.410	13.743	1.025	11.191	11.393	1.018	9.510	9.634	1.013
70	12.860	13.104	1.019	10.849	11.001	1.014	9.293	9.390	1.010
75	12.583	12.706	1.010	10.672	10.751	1.007	9.180	9.230	1.005
80	12.489	12.528	1.003	10.611	10.637	1.002	9.140	9.157	1.002
85	12.465	12.472	1.001	10.596	10.601	1.000	9.130	9.133	1.000

As might be expected, the percentage increases are greater when interest is at 5% than at 7% and 9%. The percentage differences also increase with age for life annuities, a result of the improvement factors at the older ages. For annuities with 10 years certain the percentage differences decrease with age as the effect of the certain annuity outweighs the contribution of the deferred annuity. This effect is more pronounced for annuities with 20 years certain and at the higher interest rates.

At 5% interest, 1983 Table "a" life annuity values are about 5% to 7% higher than those on the 1971 IAM Table for males at ages 60 through 75 and 5 to 10% higher for females at ages 60 through 75. The percentage increases are greatest at the very high ages where they exceed 20%. At male age 95, there is a 50% increase in the life annuity value at all three interest rates. The reserve, however, increases only from about 1 2/3 times the annual payment to about 2 1/2 times the annual payment.

To test the effect of carrying reserves at a lower interest rate on the 1971 IAM Table rather than on the 1983 Table "a" at an interest rate closer to the earned rate, ratios of 7% IAM Table annuity values to 9% 1983 Table "a" values were calculated. These ratios have been interpreted in Table 17a to show as a percentage of the 9% 1983 Table "a" values how much the 7% 1971 IAM Table values fall short of (-) or exceed (+) the 1983 Table "a" values. Table 17a sufficient for life annuities. For annuities with 10 years certain and 20 years certain, it is evident that the n year certain annuity portion outweighs the deferred life annuity portion.

Table 17a

Percentage Deficiency (-) or Excess (+) of 1971 IAM Annuity Values at 7% Compared with 1983 Table a Annuity Values at 9%

Age	Life Annuity Males	Life Annuity Females	10 Years Certain and Life Males	10 Years Certain and Life Females	20 Years Certain and Life Males	20 Years Certain and Life Females
60	+ 12%	+ 15%	+ 14%	+ 16%	+ 17%	+ 17%
65	+ 10	+ 12	+ 12	+ 13	+ 16	+ 16
70	+ 8	+ 9	+ 11	+ 10	+ 16	+ 16
75	+ 5	+ 4	+ 9	+ 8	+ 16	+ 16
80	+ 2	- 1	+ 8	+ 7	+ 16	+ 16
85	- 4	- 7	+ 7	+ 7	+ 16	+ 16
90	- 16	- 11	+ 8	+ 9	--	--
95	- 31	- 11	+ 9	+ 9	--	--

Model Office Reserve Test

In order to show the aggregate effect on reserves of valuing on the 1983 Table "a" rather than on the 1971 IAM Table, a model office was constructed and reserves on both tables were calculated at 5%, 7% and 9%. The results of the model office appear in Table 18.

Table 18

MODEL OFFICE ANALYSIS OF 1983 TABLE a VS 1971 IAM TABLE

RATIO (PERCENT) OF MODEL OFFICE TOTAL RESERVES OVER 11 YEARS ON 1983 TABLE a TO 1971 IAM TABLE AT 5%, 7% AND 9% INTEREST.

	IMMEDIATE ANNUITIES			MATURED DEFERRED			SETTLEMENT OPTIONS			
	REFUND	NON-REFUND	TOTAL	REFUND	NON-REFUND	TOTAL	REFUND	NON-REFUND	TOTAL	GRAND TOTAL
					5% INTEREST					
MALES	106.7	109.8	107.2	106.5	107.7	106.7	106.4	107.9	106.5	106.8
FEMALES	108.8	113.4	109.7	108.1	108.7	108.2	107.8	108.9	107.8	108.7
TOTAL	108.0	112.1	108.7	107.3	108.3	107.5	107.2	108.3	107.30	108.0
					7% INTEREST					
MALES	105.9	109.0	106.4	105.6	106.9	105.8	105.6	107.0	105.7	106.0
FEMALES	107.9	112.4	108.8	107.0	107.6	107.1	106.8	108.0	106.8	107.8
TOTAL	107.1	111.2	107.8	106.3	107.3	106.5	106.3	107.4	106.3	107.1
					9% INTEREST					
MALES	105.3	108.3	105.8	105.0	106.3	105.2	105.0	106.4	105.0	105.4
FEMALES	107.1	111.6	108.0	106.1	106.7	106.2	106.0	107.3	106.0	107.0
TOTAL	106.4	110.4	107.1	105.6	106.5	105.7	105.6	106.8	105.6	106.3

Table 18 (continued)

MODEL OFFICE ANALYSIS OF 1983 TABLE *a* VS 1971 IAM TABLE

RATIO (PERCENT) OF MODEL OFFICE TOTAL RESERVES OVER 21 YEARS ON 1983 TABLE *a* TO 1971 IAM TABLE AT 5%, 7% AND 9% INTEREST

	IMMEDIATE ANNUITIES			MATURED DEFERRED			SETTLEMENT OPTIONS			
	REFUND	NON-REFUND	TOTAL	REFUND	NON-REFUND	TOTAL	REFUND	NON-REFUND	TOTAL	GRAND TOTAL
					5% INTEREST					
MALES	108.7	111.6	109.2	108.6	109.5	108.7	108.4	109.5	108.4	108.8
FEMALES	111.6	116.2	112.5	111.4	111.7	111.4	110.4	111.1	110.4	111.5
TOTAL	110.5	114.6	111.2	110.1	110.9	110.3	109.7	110.2	109.7	110.4
					7% INTEREST					
MALES	107.9	110.8	108.4	107.7	108.7	107.9	107.6	108.7	107.6	108.0
FEMALES	110.7	115.2	111.6	110.3	110.7	110.4	109.5	110.2	109.5	110.5
TOTAL	109.6	113.7	110.3	109.2	110.0	109.3	108.8	109.3	108.8	109.5
					9% INTEREST					
MALES	107.3	110.1	107.7	107.1	108.0	107.2	106.9	108.0	106.9	107.3
FEMALES	110.0	114.5	110.9	109.5	109.8	109.5	108.7	109.5	108.8	109.8
TOTAL	108.9	112.9	109.6	108.4	109.2	108.5	108.0	108.6	108.1	108.8

As a basis for the model office, the exposures from the 1971-76 Study (contract years 1-5) were used as the first year inforce of a typical company. Values of $_5P_x$ at the central age of each five-year age group from the 1983 Basic Table were used to age the inforce over a period of twenty years. A computer program was written to apply reserve values to the inforces at each five year interval. Annuity values for ten years certain and life thereafter were used for all refund annuities. Simpson's rule was used to obtain a sum over the entire period. The results, as percentages of 1983 Table "a" reserves over 1971 IAM Table reserves, are shown for each kind of annuity business and for all combined. Admittedly certain liberties were taken with the calculation of the aggregate reserves, e.g., the use of an eleven-year period and a twenty-one year period, to simplify the calculations. The results should, of course, be regarded as illustrative only.

At 5% interest, the 1983 Table "a" aggregate reserves were about eight percentage points higher than those on the 1971 IAM Table over 11 years and 10 percentage points higher over 21 years. The 1983 Table "a" female reserves as compared with 1971 IAM Table female reserves were about two percentage points higher than for male reserves.

At 7% interest, the 1983 Table "A" reserves as compared with the 1971 IAM Table reserves were about seven percentage points higher over 11 years and 9-10 percentage points higher over 21 years. The ratios were generally about one percentage point lower than those for 5%. Similarly, the ratios for 9% reserves were about one percentage point lower than those for 7% reserves and about two percentage points below those for 5% reserves.

Future Mortality Improvement - Some General Considerations

Dr. James M. Fries, in his article, Aging, Natural Death and the Compression of Morbidity, [3] comments on the interaction between two sets of observations - first, that the length of life is fixed (or may increase at the rate of one month per century) and second, that chronic disease may be postponed, thus decreasing the period by which one falls short of the expected length of life which he estimates around 85. He points out that if one assumes a normal distribution of deaths around such an age, there would be some survivals beyond age 100 but not many would exceed that age. Most of the improvement in survival, Fries points out, has been at the neonatal and younger ages, with relatively little improvement at the older ages where the chronic diseases are important.

Fries justifies his view of a limit on the length of life mainly on the grounds of loss of organ reserve with increasing age and the consequent inability of the body to restore itself after some threat to its continued health. However, he states that the chronic diseases can be postponed so that not only premature death (i.e. prior to the expected age) will be prevented or postponed, but also chronic morbidity will also be postponed and its duration until death shortened. The reasons, he asserts, lie in effective treatment of hypertension, exercise as an answer to arthritis and heart disease, a decrease in smoking causing a postponement in chronic obstructive pulmonary disorders and a changing way of life stressing personal choice, all helping to postpone the onset of disabling disease.

According to the Fries viewpoint, we may look to decreases in mortality which will continue but lessen with increase in age. This concept would favor a set of projection factors much like Projection B. However, this conclusion must be contrasted with the recent decreases in mortality in the United States white population and in the Medicare experience.

Further refutation of the idea of little improvement in mortality of the extreme aged appears in Rosenwaike, Yaffe and Sagi, The Recent Decline in Mortality of the Extreme Aged: An Analysis of Statistical Data. [4] (Since this article relies on intercensal estimates of the United States population during the 1970's, it should be kept in mind that the populations were understated as noted earlier in this report and consequently the improvement rates during the 1970's may be slightly understated, although probably by a negligible amount at these very high ages.) The authors also make use of Medicare data to develop their analyses. According to their analysis of the Medicare vs. Census Bureau estimates of population, some, but certainly not the greater part of the substantial drop from 1966 to 1977 among those 85 and over is probably due to age misstatements and other errors. This is illustrated in Table 19 which compres (i) mortality rates and (ii) percentage changes in mortality rates, by cause of death, for the United States white population using Census Bureau and Medicare data in the denominators of the mortality rates.

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3. New England Journal of Medicine, July 17, 1980, Vol. 303, No. 3, p. 130.

4. American Journal of Public Health, October 1980, Vol. 70, No. 10, p. 1074.

Table 19

1977 Death Rates Per 1,000 Population
and Annual Percentage Change
in Death Rate from 1968 to 1977,
By Major Cause of Death,
Among Persons Aged 85 and Over

Cause of Death	Based on Census Bureau Estimates				Based on Medicare Data			
	White Male		White Female		White Male		White Female	
	Rate	Percent Change	Rate	Percent Change	Rate	Percent Change	Rate	Percent Change
All Causes	180.4	-2.0%	140.4	-2.8%	183.9	-1.7%	139.8	-2.5
Diseases of Heart	84.7	-2.0	69.2	-2.6	86.4	-1.7%	68.9	-2.2
Cerebrovascular Disease	25.1	-3.6	25.3	-3.7	25.6	-3.3	25.2	-3.3
Cancer (all)	21.8	+1.0	11.8	-0.8	22.0	+1.3	11.8	-0.4

Over the period 1968-1977, the same cause of death coding instructions were in effect, so coding of cause of death would have had no material effect on the decreases noted above. Because diseases of the heart and cerebrovascular disease are together such an important part of the total death rate at these advanced ages, any appreciable improvement in the death rate from these causes would have considerable impact. Rosenwaike et al attribute to Stamler and others the opinion that the sharp downturn in cardiovascular disease mortality is due to "progress in controlling such risk factors as high saturated fat and cholesterol diets, cigarette smoking and hypertension" which prevent or postpone cardiovascular disease, plus, on the other hand, more effective "emergency, acute and long term care for patients with coronary heart disease and stroke."

Another writer, however, concludes that there is no single cause or combination of causes which account for the recent decline in ischemic heart disease. Analyzing the rise in the death rate from 1920 to the 1950's and the sharp decline in the 1970's, Reuel A. Stallones [5] can find nothing which can account for the rise and fall, with the possible exception of cigarette smoking which increased and decreased over the same period. He does not believe that increased exercise, diet control, treatment of hypertension or better emergency care could have had the widespread effects needed to explain the decline. Even though Stallones cannot cite a logical cause for the decline, he nevertheless believes that the decline is real and not an artifact.

Stallones does, however, note that "the decrease in the risk of death from acute myocardial infarction for women is sharply at odds with the popular supposition that the redefinition of women's roles in American society (in particular their appearance in large numbers in executive offices around the country) will result in redistribution in their pattern of illness. Increases in peptic ulcer and in myocardial infarction are projected and sometimes cited. Since the mortality from peptic ulcer is decreasing as steeply as the mortality from myocardial infarction,the thesis appears to be contradicted by the observations."

In October 1978, a Conference on the Decline in Coronary Heart Disease Mortality [6] was held to analyze the drop in mortality from various heart related causes. Some of this analysis is particularly pertinent to the projection of mortality improvement rates after 1983 and will be summarized below.

Harry M. Rosenberg and A. Joan Klebba (Trends in Cardiovascular Mortality With a Focus on Ischemic Heart Disease: United States, 1950-76) [7] comment that for the total U.S. population over the period 1968-1976 almost every cause of death in the category "major cardiovascular diseases" showed substantial reductions in mortality" on an age adjusted basis. The percentage reductions ranged from 21% for ischemic heart disease to 50% for hypertensive heart disease and almost as much for hypertension. Only the residual group showed an increase. The table below illustrates recent annual changes in mortality for two important categories of heart disease.

5. The Rise and Fall of Ischemic Heart Disease, Scientific American, November 1980, Vol. 24, No. 3, p. 53

6. Proceedings of the Conference on the Decline in Coronary Heart Disease Mortality, USDHEW, NIH Publication No. 79-1610, May 1979.

7. Ibid.

Table 20

Annual Change-United States White Population - 1968 to 1976

Age Group	Acute Myocardial Infarction Male	Acute Myocardial Infarction Female	Chronic Ischemic Heart Disease Male	Chronic Ischemic Heart Disease Female
25-34	-5.0%	-7.7%	+2.2%	+2.8%
35-44	-5.0	-5.6	+0.4	-0.3
45-54	-4.3	-3.8	+1.0	-0.4
55-64	-3.8	-3.5	-0.5	-1.4
65-74	-3.5	-4.2	-1.5	-3.3
75-84	-2.5	-3.0	-0.8	-1.9
85 & over	-3.9	-4.2	-1.4	-2.2

The importantce of the above table in future projections of mortality lies in the fact that the above two causes account for two thirds of the total cardiovascular deaths and one third of the deaths from all causes. It should also be noted that while the female improvement rates are somewhat greater than male at the older ages for acute myocardial infarction, they are about double for chronic ischemic heart disease, which is the more important of the two at these older ages. At ages under 75, mortality from acute myocardial infarction is much the more important of the two.

Finally, Dr. Nemat O. Borhani, in his discussion, Mortality Trend in Hypertension, United States, 1950-1976, [8] as another part of the Conference on the Decline in Coronary Heart Disease Mortality, comments that "mortality from hypertension and hypertensive heart disease has declined steadily and dramatically since 1950" and that mortality from the latter cause has dropped during this period by 81%, with the largest percentage decline being observed among white females which he claims may be due to higher percentage changes in awareness and control of hypertension among women.

In any case, Dr. Borhani attributes the reduction in mortality not to a decrease in prevalence rates but rather to a much increased public awareness of hypertension and an increase in the percentage of persons with hypertension who were being adequately treated. While the awareness and treatment percentage increase was greatest among white women, there were increases also among the other race/sex groups. Dr. Borhani attributes about 40% to 48% of the decline in mortality to these changes in public awareness, changes in physicians' attitudes and efficacy of treatment.

If, in fact, the reduction in cardiovascular mortality does reflect improved awareness of and effective treatment for hypertension, then there is a good possibility for further reduction in the death rate, with perhaps, however, a greater effect among race/sex groups other than white females where the percentages of awareness and treatment are already quite high.

Cancer, in all its forms, presents a less hopeful picture for considerable future improvement, but at the more advanced ages it is not nearly as important as the cardiovascular group of causes of death. In the absence of a breakthrough of some kind, it appears unlikely that there will be any sharp downward shift in mortality from cancer. If smoking declines in the future or if the use and/or effectiveness of low tar/low nicotine cigarettes increases proportionately among those who continue to smoke, there may be future declines in lung cancer which, when combined with the decline in other cancer mortality, will lead to lower cancer mortality overall. Certainly at the older ages, no significant contribution to any overall reduction in mortality can be expected from the causes grouped under cancer (all forms).

Mortality Projection Beyond 1983

The close relationship between the annual improvement rates from the "1963" annuity experience to the 1971-76 annuity experience and that of the corresponding United States white population was noted in the discussion leading to the decision to base the 1973 to 1983 improvement factors mainly on the population experience. In going beyond 1983, recent population experience will be largely relied upon, although other sources will also be referred to in selecting likely improvement rates, e.g. recent ordinary insurance experience and the 1980 Social Security Administration projections.

8. Ibid.

The preceding section discussed at length recent expert opinion on trends in mortality from cardiovascular disease and also included a few comments on changes in cancer death rates, notably on the decrease in mortality from cancer excluding lung cancer. The Statistical Bureau of the Metropolitan Life Insurance Company prepared an analysis of the changes in mortality rates among the United States white population during the ten year period 1968-1978 for major causes of death. These analyses corroborated the opinions on heart and circulatory deaths and on cancer deaths. The analyses show substantial decreases with respect to several other important cause of death groups.

According to the Statistical Bureau analyses, there were decreases of generally 25 to 35% and more in the death rate from diabetes with higher decreases in the influenza and pneumonia death rates and deaths from bronchitis, emphysema and asthma. Deaths from accidents decreased about 20 to 35% at ages over 39 and at the childhood ages. The mortality of young adults either worsened or did not show appreciable change during the period. The suicide death rate increased considerably at the young adult and teen years. Homicides were up substantially over a wide range of ages.

It would appear likely that the distribution by cause of death for annuitants would be quite different from that of the United States population. Just the difference in average socio-economic level between the two groups could have an effect. Unfortunately, no cause of death analysis is available for annuitants and consequently any projection for the future will have to be on the basis of a judicious weighing of the relation of change in mortality by cause to total change in the mortality of annuitants. In any case the reasonableness of the set of future mortality improvement factors must rest on their relationship to changes by cause of death. A projection of future United States mortality using cause of death analyses was used in the 1980 projection of United States Social Security populations. [9] The result of using this method was computed by the committee and appears in Table 21.

Admittedly, a change in the average socio-economic status of annuitants could have a significant effect on the future mortality experienced under annuities as could a lessening of self-selection in the purchase of an annuity or in the decision to take the value of a matured deferred annuity or settlement option in the form of a refund or nonrefund annuity. While it is not possible to estimate changes of this type, it seems reasonable to assume that under the newly adopted tax laws in the United States there may well be additional incentives for the use of annuities as retirement savings vehicles. Certainly there would appear to be no reason to assume increasing annuitant selection in purchasing annuities. Accordingly, the prime forces affecting annuitant mortality would seem to be those influences which affect the mortality of the population as a whole.

Proposed Mortality Improvement Factors for the Period Beyond 1983

From the foregoing discussions, it is reasonable to state that, for the foreseeable future, mortality at most ages will continue to improve. While nothing in the way of a "breakthrough" in the treatment of cancer or heart and circulatory diseases is indicated or assumed, continuation of and improvement in current detection and treatment methods will almost certainly result in continued decreases in death rates from these diseases, although probably not at the levels of the 1970s. There are indications of continued progress in prevention and treatment of other diseases also.

Mortality in the teen years and in the twenties largely reflects life-style and there is nothing to indicate any great change from current levels. At the childhood ages, some future improvement should be expected, but probably not at a rate as high as in the 1970s.

9. United States Population Projections For OASDI Cost Estimates, 1980, Actuarial Study No. 82, USDH & HS, June 1980, SSA Pub. No. 11-11529

Table 21

Projected United States Population Mortality Rates
Derived From
Improvement Factors by Cause
Used in SSA Actuarial Study No. 82 Projections (Alternative II)

Age	1977 Mortality Rate/100,000 Male	1977 Mortality Rate/100,000 Female	Mortality Rate/100,000 Projected 10 Years Male	Mortality Rate/100,000 Projected 10 Years Female	Implied Annual Improvement Rate Male	Implied Annual Improvement Rate Female
0	1659.0	1303.5	1299.2	1013.4	2.42%	2.49%
1-4	76.5	60.8	62.3	47.9	2.03	2.36
5-9	40.6	27.1	33.1	21.1	2.02	2.47
10-14	44.4	25.5	37.1	19.8	1.78	2.50
15-19	145.7	56.4	128.7	47.0	1.23	1.81
20-24	201.9	65.3	179.7	53.7	1.16	1.94
25-29	193.9	71.4	167.9	55.5	1.43	2.49
30-34	193.2	90.0	160.0	67.9	1.87	2.78
35-39	259.5	134.8	205.7	100.4	2.30	2.90
40-44	393.3	220.6	304.1	167.8	2.54	2.70
45-49	625.8	345.8	484.5	274.8	2.53	2.27
50-54	998.7	528.7	787.5	433.2	2.35	1.97
55-59	1524.3	785.1	1230.3	661.3	2.12	1.70
60-64	2431.1	1216.5	2018.1	1033.1	1.84	1.62
65-69	3473.5	1691.2	2968.2	1433.3	1.56	1.64
70-74	5319.9	2766.7	4681.3	2313.3	1.27	1.77
75-79	8153.1	4739.7	7356.5	3899.5	1.02	1.93
80-84	11363.7	7393.6	10456.6	5972.2	0.83	2.11

As the United States population mortality experience of 1980 (see Table 12) indicates, there will also be periods of somewhat increased mortality, especially in years of influenza epidemics. There are indications that mortality in 1981 may also be somewhat elevated. Any set of future improvement rates must take into consideration that there will be periods of retrogression and no improvement in addition to periods of greater than average improvement.

The discussion relative to Table 4 indicated a trend not only to increased immediate annuity inforces but also a trend toward a greater proportion of refund annuities. The latter trend and the recent United States tax legislation portend the probability of less self-selection by annuitants (but see Appendix 5). If this continues, it could act to reduce the rate of improvement in overall annuitant mortality. The set of improvement factors identified as Projection Scale G in Table 22 is intended to reflect probable average improvement rates through the next decade or so. Table 22 also shows some other improvement rates for comparison purposes.

The Projection Scale G factors are generally somewhat lower than those used to obtain the 1983 Table from the 1973 Experience Table, except that some small improvement is anticipated in the teens and young adult years. Improvement rates for males are somewhat lower than those for females. (The projection factors used to obtain the 1983 Basic Table were the same for males and females. As noted earlier in this report this was because the committee, in reviewing a set of improvement rates which were different for males and females, felt that the differences were not significant considering the nature of the underlying data and were not sufficient to justify separate improvement rates over a relatively short period.)

The Projection Scale G improvement rates continue into the 90s of age at rates of 1.25 percent for females and 1.00 percent for males, increase slightly down to the 40s where the rates are 2.25 percent and 2.00 percent for females and males respectively and then decrease rapdily to very low rates in the teen years for males. The rates have been set at a level which should keep the 1983 Table "a." reasonably up to date during the remainder of the century but not cause it to become unduly conservative.

Acknowledgments

The committee is indebted to the Equitable Life Assurance Society of the United States for preparing special tabulations and studies for the committee and to the Statistical Bureau and the Word Processing Unit of the Metropolitan Life Insurance Company. Special thanks are due to Robert Finkelman, a student of the society who prepared many of the tables and to Joseph Shipman, a summer actuarial student, both at Metropolitan Life Insurance Company. Last, but far from least, appreciation is expressed to Dorothy Bailey, secretary to the chairman, for typing numerous versions of text and tables.

Table 22

Comparison of Annual Mortality Improvement Rates

Age	Factors Used to Derive 1983 Table a	Derived Factors from SSA Actuarial Study No. 82 (Alternative II)	U.S. White Population 1973-1980 (MLI Co. Statistical Bureau)	Projection G (1983-2000)
		Males		
7	2.00%	2.02%	0.2%	1.50
12	0	1.78		0.25
17	0	1.23	-0.7	0.20
22	0	1.16		0.10
27	0	1.43	0.1	0.10
32	1.00	1.87		0.75
37	2.25	2.30	2.6	2.00
42	2.25	2.54		2.00
47	2.25	2.53	1.6	1.75
52	2.25	2.35		1.75
57	2.25	2.12	2.3	1.50
62	2.25	1.84		1.50
67	2.25	1.56	2.0	1.50
72	2.25	1.27		1.25
77	2.00	1.02	2.1	1.25
82	1.75	0.83		1.25
87	1.50			1.25
92	1.50			1.00
97	1.50			1.00
		Females		
7	2.00%	2.4%	2.1%	1.50
12	0	2.50		1.00
17	0	1.81	0.8	0.50
22	0	1.94		0.50
27	0	2.49	2.3	0.75
32	1.00	2.78		1.25
37	2.25	2.90		2.25
42	2.25	2.70	2.9	2.25
47	2.25	2.27		2.00
52	2.25	1.97	1.1	2.00
57	2.25	1.70		1.75
62	2.25	1.62	1.5	1.75
67	2.25	1.64		1.75
72	2.25	1.77	1.6	1.75
77	2.00	1.93		1.50
82	1.75	2.11	2.6	1.50
87	1.50			1.50
92	1.50			1.25
97	1.50			1.25

APPENDIX TABLE 1

1983 Table a

ELEMENTARY VALUES

MALE LIVES

Age x	lx	dx	Age x	lx	dx
5....	10000.0000	3.7700	61....	8938.6298	80.2957
6....	9996.2300	3.4987	62....	8858.3341	86.2802
7....	9992.7313	3.3276	63....	8772.0539	93.2469
8....	9989.4037	3.5163	64....	8678.8070	101.2296
9....	9985.8874	3.6748	65....	8577.5774	110.2304
10....	9982.2126	3.8132	66....	8467.3470	120.2279
11....	9978.3994	3.9315	67....	8347.1191	131.1917
12....	9974.4679	4.0397	68....	8215.9274	143.0722
13....	9970.4282	4.1377	69....	8072.8552	155.7738
14....	9966.2905	4.2357	70....	7917.0814	169.1959
15....	9962.0548	4.3335	71....	7747.8855	183.2142
16....	9957.7213	4.4411	72....	7564.6713	197.6724
17....	9953.2802	4.5586	73....	7366.9989	212.4274
18....	9948.7216	4.6958	74....	7154.5715	227.4724
19....	9944.0258	4.8527	75....	6927.0991	242.7671
20....	9939.1731	5.0193	76....	6684.3320	258.2224
21....	9934.1538	5.2154	77....	6426.1096	273.6687
22....	9928.9384	5.4212	78....	6152.4409	288.8633
23....	9923.5172	5.6564	79....	5863.5776	303.4695
24....	9917.8608	5.9110	80....	5560.1081	317.0707
25....	9911.9498	6.1652	81....	5243.0374	329.2156
26....	9905.7846	6.4388	82....	4913.8218	339.4517
27....	9899.3458	6.7019	83....	4574.3701	347.2313
28....	9892.6439	6.9644	84....	4227.1388	351.8248
29....	9885.6795	7.2264	85....	3875.3140	352.6032
30....	9878.4531	7.4977	86....	3522.7108	349.1781
31....	9870.9554	7.7586	87....	3173.5327	341.3991
32....	9863.1968	8.0286	88....	2832.1336	329.4225
33....	9855.1682	8.3079	89....	2502.7111	313.8250
34....	9846.8603	8.6258	90....	2188.8861	295.2523
35....	9838.2345	9.0217	91....	1893.6338	274.3364
36....	9829.2128	9.5147	92....	1619.2974	251.6858
37....	9819.6981	10.1339	93....	1367.6116	227.8838
38....	9809.5642	10.9279	94....	1139.7278	203.4836
39....	9798.6363	11.9151	95....	936.24420	179.02300
40....	9786.7212	13.1240	96....	757.22120	155.01908
41....	9773.5972	14.5822	97....	602.20212	131.95453
42....	9759.0150	16.3268	98....	470.24759	110.38357
43....	9742.6682	18.3747	99....	359.86402	90.64579
44....	9724.3135	20.7031	100....	269.21823	72.93283
45....	9703.6104	23.2790	101....	196.28540	57.33712
46....	9680.3314	26.0691	102....	138.94828	43.88348
47....	9654.2623	29.0497	103....	95.064800	32.548001
48....	9625.2126	32.1771	104....	62.516799	23.261626
49....	9593.0355	35.4367	105....	39.255173	15.909258
50....	9557.5968	38.7752	106....	23.345915	10.325361
51....	9518.8236	42.1779	107....	13.020554	6.294214
52....	9476.6457	45.6016	108....	6.7253400	3.5581599
53....	9431.0441	49.0226	109....	3.1681801	1.8354883
54....	9382.0215	52.4549	110....	1.3326918	0.8460114
55....	9329.5666	55.9214	111....	0.48668040	0.33858550
56....	9273.6452	59.4348	112....	0.14809490	0.11289910
57....	9214.2104	63.0160	113....	.035195800	.029390464
58....	9151.1944	66.7122	114....	.005805336	.005307047
59....	9084.4822	70.6954	115....	.000498289	.000498289
60....	9013.7868	75.1570			

APPENDIX TABLE 1 CON'T.

1983 Table a

ELEMENTARY VALUES
FEMALE LIVES

Age x	lx	dx	Age x	lx	dx
5....	10000.0000	1.9400	61....	9458.3686	46.4217
6....	9998.0600	1.5997	62....	9411.9469	50.9469
7....	9996.4603	1.3395	63....	9361.0000	56.0724
8....	9995.1208	1.3393	64....	9304.9276	61.7196
9....	9993.7815	1.3592	65....	9243.2080	67.8082
10....	9992.4223	1.4089	66....	9175.3998	74.2290
11....	9991.0134	1.4687	67....	9101.1708	80.8912
12....	9989.5447	1.5484	68....	9020.2796	87.7763
13....	9987.9963	1.6480	69....	8932.5033	95.1580
14....	9986.3483	1.7476	70....	8837.3453	103.3704
15....	9984.6007	1.8771	71....	8733.9749	112.7119
16....	9982.7236	2.0065	72....	8621.2630	123.4479
17....	9980.7171	2.1359	73....	8497.8151	135.7951
18....	9978.5812	2.2851	74....	8362.0200	149.7554
19....	9976.2961	2.4342	75....	8212.2646	165.2882
20....	9973.8619	2.5932	76....	8046.9764	182.2962
21....	9971.2687	2.7521	77....	7864.6802	200.6201
22....	9968.5166	2.9208	78....	7664.0601	220.0888
23....	9965.5958	3.0993	79....	7443.9713	240.6487
24....	9962.4965	3.2876	80....	7203.3226	262.1649
25....	9959.2089	3.4758	81....	6941.1577	284.4139
26....	9955.7331	3.6637	82....	6656.7438	307.0157
27....	9952.0694	3.8515	83....	6349.7281	329.4810
28....	9948.2179	4.0290	84....	6020.2471	351.1971
29....	9944.1889	4.2064	85....	5669.0500	371.4248
30....	9939.9825	4.3835	86....	5297.6252	389.3384
31....	9935.5990	4.5704	87....	4908.2868	404.0404
32....	9931.0286	4.7570	88....	4504.2464	414.4672
33....	9926.2716	4.9532	89....	4089.7792	419.1656
34....	9921.3184	5.1690	90....	3670.6136	417.0001
35....	9916.1494	5.4043	91....	3253.6135	407.4403
36....	9910.7451	5.6888	92....	2846.1732	390.5576
37....	9905.0563	6.0124	93....	2455.6156	367.0212
38....	9899.0439	6.3948	94....	2088.5944	338.0056
39....	9892.6491	6.8358	95....	1750.5888	305.0016
40....	9885.8133	7.3353	96....	1445.5872	269.6526
41....	9878.4780	7.9127	97....	1175.9346	233.5947
42....	9870.5653	8.5578	98....	942.33990	198.92984
43....	9862.0075	9.2900	99....	743.41006	166.85467
44....	9852.7175	10.1089	100....	576.55539	137.92070
45....	9842.6086	11.0434	101....	438.63469	112.26986
46....	9831.5652	12.1027	102....	326.36483	89.81593
47....	9819.4625	13.3152	103....	236.54890	70.37330
48....	9806.1473	14.6994	104....	166.17560	53.73953
49....	9791.4479	16.2244	105....	112.43607	39.73648
50....	9775.2235	17.8887	106....	72.699590	28.215511
51....	9757.3348	19.6708	107....	44.484079	19.040209
52....	9737.6640	21.5689	108....	25.443870	12.052558
53....	9716.0951	23.5712	109....	13.391312	7.039250
54....	9692.5239	25.6852	110....	6.3520620	3.7125389
55....	9666.8387	27.9468	111....	2.6395231	1.7173951
56....	9638.8919	30.3721	112....	0.92212800	0.66831227
57....	9608.5198	32.9764	113....	0.25381573	0.20490950
58....	9575.5434	35.8030	114....	.048906230	.043961077
59....	9539.7404	38.9317	115....	.004945153	.004945153
60....	9500.8087	42.4401			

APPENDIX TABLE 2

1983 Table a
Standard Commutation Columns
Male Lives - 5 Per Cent Interest

Age x	Dx	Nx	Age x	Dx	Nx
5....	7835.2617	158217.5113	61....	455.74688	5961.92871
6....	7459.3407	150382.2496	62....	430.14563	5506.18183
7....	7101.6476	142922.9089	63....	405.67239	5076.03620
8....	6761.2216	135821.2613	64....	382.24771	4670.36381
9....	6436.9921	129060.0397	65....	359.79921	4288.11610
10....	6128.2126	122623.0476	66....	338.26232	3928.31689
11....	5834.1635	116494.8350	67....	317.58031	3590.05457
12....	5554.1570	110660.6715	68....	297.70372	3272.47426
13....	5287.5309	105106.5145	69....	278.59000	2974.77054
14....	5033.6539	99818.9836	70....	260.20412	2696.18054
15....	4791.9187	94785.3297	71....	242.51743	2435.97642
16....	4561.7469	89993.4110	72....	225.50726	2193.45899
17....	4342.5832	85431.6641	73....	209.15670	1967.95173
18....	4133.8993	81089.0809	74....	193.45301	1758.79503
19....	3935.1887	76955.1816	75....	178.38321	1565.34202
20....	3745.9698	73019.9929	76....	163.93485	1386.95881
21....	3565.7887	69274.0231	77....	150.09703	1223.02396
22....	3394.2063	65708.2344	78....	136.86176	1072.92693
23....	3230.8125	62314.0281	79....	124.22473	936.06517
24....	3075.2104	59083.2156	80....	112.18617	811.84044
25....	2927.0262	56008.0052	81....	100.75108	699.65427
26....	2785.9101	53080.9790	82....	89.928403	598.903187
27....	2651.5231	50295.0689	83....	79.729580	508.974784
28....	2523.5505	47643.5458	84....	70.169016	429.245204
29....	2401.6895	45119.9953	85....	61.265570	359.076188
30....	2285.6513	42718.3058	86....	53.039237	297.810618
31....	2175.1585	40432.6545	87....	45.506555	244.771381
32....	2069.9513	38257.4960	88....	38.677235	199.264826
33....	1969.7775	36187.5447	89....	32.550908	160.587591
34....	1874.3971	34217.7672	90....	27.113541	128.036683
35....	1783.5763	32343.3701	91....	22.339311	100.923142
36....	1697.0865	30559.7938	92....	18.193284	78.583831
37....	1614.7083	28862.7073	93....	14.633829	60.390547
38....	1536.2304	27247.9990	94....	11.614674	45.756718
39....	1461.4467	25711.7686	95....	9.0866903	34.1420445
40....	1390.1615	24250.3219	96....	6.9992266	25.0553542
41....	1322.1879	22860.1604	97....	5.3012742	18.0561276
42....	1257.3478	21537.9725	98....	3.9425324	12.7548534
43....	1195.4707	20280.6247	99....	2.8734115	8.8123210
44....	1136.3963	19085.1540	100....	2.0472673	5.9389095
45....	1079.9780	17948.7577	101....	1.4215718	3.8916422
46....	1026.0829	16868.7797	102....	0.95839529	2.47007037
47....	974.59020	15842.69681	103....	0.62448489	1.51167508
48....	925.38824	14868.10661	104....	0.39111964	0.88719019
49....	878.37587	13942.71837	105....	0.23389476	0.49607055
50....	833.45824	13064.34250	106....	0.13247844	0.26217579
51....	790.54942	12230.88426	107....	0.070367879	0.129697346
52....	749.56809	11440.33484	108....	0.034620594	0.059329467
53....	710.43921	10690.76675	109....	0.015530172	0.024708873
54....	673.09176	9980.32754	110....	0.006221668	0.009178701
55....	637.45572	9307.23578	111....	0.002163872	0.002957033
56....	603.46172	8669.78005	112....	0.000627103	0.000793161
57....	571.04203	8066.31834	113....	0.000141938	0.000166058
58....	540.13017	7495.27631	114....	0.000022297	0.000024120
59....	510.65964	6955.14614	115....	0.000001823	0.000001823
60....	482.55779	6444.48650			

APPENDIX TABLE 2 CON'T.

1983 Table a
Standard Commutation Columns
Female Lives - 5 Per Cent Interest

Age x	Dx	Nx	Age x	Dx	Nx
5....	7835.2617	159980.1174	61....	482.24640	6924.10777
6....	7460.7063	152144.8557	62....	457.02812	6441.86137
7....	7104.2977	144684.1494	63....	432.90879	5984.83325
8....	6765.0912	137579.8517	64....	409.82444	5551.92446
9....	6442.0807	130814.7605	65....	387.72007	5142.10002
10....	6134.4805	124372.6798	66....	366.54834	4754.37995
11....	5841.5386	118238.1993	67....	346.26949	4387.83161
12....	5562.5523	112396.6607	68....	326.84938	4041.56212
13....	5296.8477	106834.1084	69....	308.25601	3714.71274
14....	5043.7845	101537.2607	70....	290.44967	3406.45673
15....	4802.7637	96493.4762	71....	273.38313	3116.00706
16....	4573.2007	91690.7125	72....	257.00487	2842.62393
17....	4354.5538	87117.5118	73....	241.26173	2585.61906
18....	4146.3066	82762.9580	74....	226.10131	2344.35733
19....	3947.9591	78616.6514	75....	211.47815	2118.25602
20....	3759.0437	74668.6923	76....	197.35403	1906.77787
21....	3579.1108	70909.6486	77....	183.69826	1709.42384
22....	3407.7361	67330.5378	78....	170.48791	1525.72558
23....	3244.5120	63922.8017	79....	157.70667	1355.23767
24....	3089.0505	60678.2897	80....	145.34127	1197.53100
25....	2940.9820	57589.2392	81....	133.38245	1052.18973
26....	2799.9577	54648.2572	82....	121.82581	918.80728
27....	2665.6451	51848.2995	83....	110.67341	796.98147
28....	2537.7271	49182.6544	84....	99.933983	686.308064
29....	2415.9041	46644.9273	85....	89.623080	586.374081
30....	2299.8878	44229.0232	86....	79.763005	496.751001
31....	2189.4034	41929.1354	87....	70.381888	416.987996
32....	2084.1869	39739.7320	88....	61.512563	346.606108
33....	1983.9891	37655.5451	89....	53.192726	285.093545
34....	1888.5706	35671.5560	90....	45.467571	231.900819
35....	1797.7016	33782.9854	91....	38.383073	186.433248
36....	1711.1636	31985.2838	92....	31.977596	148.050175
37....	1628.7442	30274.1202	93....	26.275777	116.072579
38....	1550.2434	28645.3760	94....	21.284331	89.796802
39....	1475.4685	27095.1326	95....	16.990288	68.512471
40....	1404.2371	25619.6641	96....	13.362004	51.522183
41....	1336.3763	24215.4270	97....	10.351926	38.160179
42....	1271.7199	22879.0507	98....	7.9005308	27.8082528
43....	1210.1117	21607.3308	99....	5.9359171	19.9077220
44....	1151.4017	20397.2191	100....	4.3844097	13.9718049
45....	1095.4480	19245.8174	101....	3.1767553	9.5873952
46....	1042.1132	18150.3694	102....	2.2511003	6.4106399
47....	991.26703	17108.25620	103....	1.5539002	4.1595396
48....	942.78368	16116.98917	104....	1.0396332	2.6056394
49....	896.54329	15174.20549	105....	0.66992974	1.56600618
50....	852.43592	14277.66220	106....	0.41254019	0.89607644
51....	810.35806	13425.22628	107....	0.24040838	0.48353625
52....	770.21369	12614.86822	108....	0.13096006	0.24312787
53....	731.91207	11844.65453	109....	0.065643168	0.112167806
54....	695.36805	11112.74246	110....	0.029654584	0.046524638
55....	660.50031	10417.37441	111....	0.011735815	0.016870054
56....	627.22934	9756.87410	112....	0.003904718	0.005134239
57....	595.47899	9129.64476	113....	0.001023594	0.001229521
58....	565.17648	8534.16577	114....	0.000187838	0.000205927
59....	536.25075	7968.98929	115....	0.000018089	0.000018089
60....	508.63077	7432.73854			

APPENDIX TABLE 3

1983 Table a
Standard Commutation Columns
Male Lives - 7 Per Cent Interest

Age x	Dx	Nx	Age x	Dx	Nx
5....	7129.8618	107335.0733	61....	144.16522	1598.89706
6....	6660.9101	100205.2115	62....	133.52354	1454.73184
7....	6222.9708	93544.3014	63....	123.57292	1321.20830
8....	5813.9239	87321.3306	64....	114.26106	1197.63538
9....	5431.6611	81507.4067	65....	105.54049	1083.37432
10....	5074.4507	76075.7456	66....	97.368399	977.833829
11....	4740.6657	71001.2949	67....	89.706416	880.465430
12....	4428.7830	66260.6292	68....	82.520093	790.759014
13....	4137.3732	61831.8462	69....	75.778587	708.238921
14....	3865.0993	57694.4730	70....	69.454545	632.460334
15....	3610.7071	53829.3737	71....	63.523582	563.005789
16....	3373.0247	50218.6666	72....	57.963963	499.482207
17....	3150.9536	46845.6419	73....	52.756361	441.518244
18....	2943.4677	43694.6883	74....	47.883301	388.761883
19....	2749.6060	40751.2206	75....	43.327943	340.878582
20....	2568.4712	38001.6146	76....	39.074273	297.550639
21....	2399.2281	35433.1434	77....	35.107285	258.476366
22....	2241.0921	33033.9153	78....	31.413244	223.369081
23....	2093.3350	30792.8232	79....	27.979776	191.955837
24....	1955.2727	28699.4882	80....	24.795965	163.976061
25....	1826.2686	26744.2155	81....	21.852290	139.180096
26....	1705.7315	24917.9469	82....	19.140339	117.327806
27....	1593.1054	23212.2154	83....	16.652435	98.187467
28....	1487.8755	21619.1100	84....	14.381665	81.535032
29....	1389.5589	20131.2345	85....	12.322130	67.153367
30....	1297.7039	18741.6756	86....	10.468202	54.831237
31....	1211.8869	17443.9717	87....	8.8136199	44.3630346
32....	1131.7143	16232.0848	88....	7.3509133	35.5494147
33....	1056.8160	15100.3705	89....	6.0709199	28.1985014
34....	986.84589	14043.55452	90....	4.9623018	22.1275815
35....	921.47796	13056.70863	91....	4.0121044	17.1652797
36....	860.40463	12135.23067	92....	3.2064101	13.1531753
37....	803.33809	11274.82604	93....	2.5308794	9.9467652
38....	750.00846	10471.48795	94....	1.9711789	7.4158858
39....	700.16163	9721.47949	95....	1.5133182	5.4447069
40....	653.56097	9021.31786	96....	1.1438791	3.9313887
41....	609.98556	8367.75689	97....	0.85018971	2.78750964
42....	569.22940	7757.77133	98....	0.62046368	1.93731993
43....	531.10008	7188.54193	99....	0.44375620	1.31685625
44....	495.41909	6657.44185	100....	0.31026065	0.87310005
45....	462.02274	6162.02276	101....	0.21141045	0.56283940
46....	430.76107	5700.00002	102....	0.13986461	0.35142895
47....	401.49630	5269.23895	103....	0.089431525	0.211564336
48....	374.10111	4867.74265	104....	0.054964699	0.122132811
49....	348.45841	4493.64154	105....	0.032255237	0.067168112
50....	324.45906	4145.18313	106....	0.017927943	0.034912875
51....	302.00255	3820.72407	107....	0.009344698	0.016984932
52....	280.99475	3518.72152	108....	0.004511602	0.007640234
53....	261.34823	3237.72677	109....	0.001985995	0.003128632
54....	242.98106	2976.37854	110....	0.000780754	0.001142637
55....	225.81547	2733.39748	111....	0.000266468	0.000361883
56....	209.77751	2507.58201	112....	0.000075780	0.000095415
57....	194.79724	2297.80450	113....	0.000016832	0.000019635
58....	180.80843	2103.00726	114....	0.000002595	0.000002803
59....	167.74798	1922.19883	115....	0.000000208	0.000000208
60....	155.55380	1754.45085			

APPENDIX TABLE 3 CON'T.

1983 Table a
Standard Commutation Columns
Female Lives - 7 Per Cent Interest

Age x	Dx	Nx	Age x	Dx	Nx
5....	7129.8618	107967.7216	61....	152.54775	1827.80655
6....	6662.1295	100837.8598	62....	141.86826	1675.25880
7....	6225.2931	94175.7303	63....	131.86947	1533.39054
8....	5817.2513	87950.4372	64....	122.50427	1401.52107
9....	5435.9550	82133.1859	65....	113.73056	1279.01680
10....	5079.6408	76697.2309	66....	105.51050	1165.28624
11....	4746.6585	71617.5901	67....	97.810203	1059.775745
12....	4435.4773	66870.9316	68....	90.598940	961.965542
13....	4144.6634	62435.4543	69....	83.847965	871.366602
14....	3872.8780	58290.7909	70....	77.527787	787.518637
15....	3618.8788	54417.9129	71....	71.608359	709.990850
16....	3381.4939	50799.0341	72....	66.060050	638.382491
17....	3159.6394	47417.5402	73....	60.854333	572.322441
18....	2952.3021	44257.9008	74....	55.964374	511.468108
19....	2758.5290	41305.5987	75....	51.366457	455.503734
20....	2577.4354	38547.0697	76....	47.039817	404.137277
21....	2408.1919	35969.6343	77....	42.966521	357.097460
22....	2250.0254	33561.4424	78....	39.131297	314.130939
23....	2102.2114	31311.4170	79....	35.521087	274.999642
24....	1964.0725	29209.2056	80....	32.124076	239.478555
25....	1834.9760	27245.1331	81....	28.929832	207.354479
26....	1714.3324	25410.1571	82....	25.929376	178.424647
27....	1601.5902	23695.8247	83....	23.115409	152.495271
28....	1496.2340	22094.2345	84....	20.482218	129.379862
29....	1397.7832	20598.0005	85....	18.025577	108.897644
30....	1305.7868	19200.2173	86....	15.742596	90.872067
31....	1219.8234	17894.4305	87....	13.631425	75.129471
32....	1139.4974	16674.6071	88....	11.690947	61.498046
33....	1064.4407	15535.1097	89....	9.9207304	49.8070987
34....	994.30803	14470.66900	90....	8.3214437	39.8863683
35....	928.77570	13476.36097	91....	6.8935383	31.5649246
36....	867.54160	12547.58527	92....	5.6357767	24.6713863
37....	810.32115	11680.04367	93....	4.5443216	19.0356096
38....	756.84980	10869.72252	94....	3.6122600	14.4912880
39....	706.87932	10112.87272	95....	2.8296014	10.8790280
40....	660.17838	9405.99340	96....	2.1837436	8.0494266
41....	616.53133	8745.81502	97....	1.6601859	5.8656830
42....	575.73597	8129.28369	98....	1.2433614	4.2054971
43....	537.60449	7553.54772	99....	0.91671522	2.96213570
44....	501.96081	7015.94323	100....	0.66445147	2.04542048
45....	468.64093	6513.98242	101....	0.47243431	1.38096901
46....	437.49077	6045.34149	102....	0.32851714	0.90853470
47....	408.36655	5607.85072	103....	0.22253167	0.58001756
48....	381.13347	5199.48417	104....	0.14610140	0.35748589
49....	355.66556	4818.35070	105....	0.092386603	0.211384491
50....	331.84694	4462.68514	106....	0.055827930	0.118997888
51....	309.56977	4130.83820	107....	0.031925697	0.063169958
52....	288.73428	3821.26843	108....	0.017066135	0.031244261
53....	269.24741	3532.53415	109....	0.008394433	0.014178126
54....	251.02264	3263.28674	110....	0.003721339	0.005783693
55....	233.97890	3012.26410	111....	0.001445194	0.002062354
56....	218.03969	2778.28520	112....	0.000471855	0.000617160
57....	203.13332	2560.24551	113....	0.000121381	0.000145305
58....	189.19268	2357.11219	114....	0.000021858	0.000023924
59....	176.15447	2167.91951	115....	0.000002066	0.000002066
60....	163.95849	1991.76504			

APPENDIX TABLE 4

1983 Table a
Standard Commutation Columns
Male Lives - 9 Per Cent Interest

Age x	Dx	Nx	Age x	Dx	Nx
5....	6499.3139	78104.1672	61....	46.585909	447.348154
6....	5960.4253	71604.8533	62....	42.355439	400.762245
7....	5466.3662	65644.4280	63....	38.479722	358.406806
8....	5013.3449	60178.0618	64....	34.927231	319.927084
9....	4597.7800	55164.7169	65....	31.669578	284.999853
10....	4216.5945	50566.9369	66....	28.681278	253.330275
11....	3866.9576	46350.3424	67....	25.939479	224.648997
12....	3546.2697	42483.3848	68....	23.423659	198.709518
13....	3252.1408	38937.1151	69....	21.115375	175.285859
14....	2982.3772	35684.9743	70....	18.998104	154.170484
15....	2734.9630	32702.5971	71....	17.056968	135.172380
16....	2508.0489	29967.6341	72....	15.278552	118.115412
17....	2299.9361	27459.5852	73....	13.650742	102.836860
18....	2109.0667	25159.6491	74....	12.162498	89.186118
19....	1934.0103	23050.5824	75....	10.803490	77.023620
20....	1773.4555	21116.5721	76....	9.5641013	66.2201303
21....	1626.2017	19343.1166	77....	8.4354409	56.6560290
22....	1491.1449	17716.9149	78....	7.4093585	48.2205981
23....	1367.2759	16225.7700	79....	6.4784236	40.8112296
24....	1253.6666	14858.4941	80....	5.6359016	34.3328060
25....	1149.4674	13604.8275	81....	4.8756960	28.6969044
26....	1053.9013	12455.3601	82....	4.1922442	23.8212084
27....	966.25343	11401.45882	83....	3.5804035	19.6289642
28....	885.87090	10435.20539	84....	3.0354332	16.0485607
29....	812.15344	9549.33449	85....	2.5530221	13.0131275
30....	744.55023	8737.18105	86....	2.1291103	10.4601054
31....	682.55516	7992.63082	87....	1.7596960	8.3309951
32....	625.70520	7310.07566	88....	1.4407277	6.5712991
33....	573.57420	6684.37046	89....	1.1680257	5.1305714
34....	525.77126	6110.79626	90....	0.93721310	3.96254570
35....	481.93641	5585.02500	91....	0.74384883	3.02533260
36....	441.73805	5103.08859	92....	0.58356442	2.28148377
37....	404.87197	4661.35054	93....	0.45216659	1.69791935
38....	371.05885	4256.47857	94....	0.34570872	1.24575276
39....	340.04173	3885.41972	95....	0.25053846	0.90004404
40....	311.58554	3545.37799	96....	0.19332097	0.63950558
41....	285.47496	3233.79245	97....	0.14104964	0.44618461
42....	261.51287	2948.31749	98....	0.10104848	0.30513497
43....	239.51868	2686.80462	99....	0.070943912	0.204086494
44....	219.32748	2447.28594	100....	0.048691670	0.133142582
45....	200.78947	2227.95846	101....	0.032569546	0.084450912
46....	183.76861	2027.16899	102....	0.021151949	0.051881366
47....	168.14103	1843.40038	103....	0.013276709	0.030729417
48....	153.79366	1675.25935	104....	0.008010156	0.017452708
49....	140.62342	1521.46569	105....	0.004614393	0.009442552
50....	128.53574	1380.84227	106....	0.002517689	0.004928159
51....	117.44428	1252.30653	107....	0.001288232	0.002310470
52....	107.26962	1134.86225	108....	0.000610544	0.001022238
53....	97.938937	1027.592630	109....	0.000263828	0.000411694
54....	89.385183	929.653693	110....	0.000101816	0.000147866
55....	81.546257	840.268510	111....	0.000034112	0.000046050
56....	74.364659	758.722243	112....	0.000009523	0.000011938
57....	67.787207	684.357584	113....	0.000002076	0.000002415
58....	61.764780	616.570377	114....	0.000000314	0.000000339
59....	56.251849	554.805597	115....	0.000000025	0.000000025
60....	51.205594	498.553748			

APPENDIX TABLE 4 CON'T.

1983 Table a
Standard Commutation Columns
Female Lives - 9 Per Cent Interest

Age x	Dx	Nx	Age x	Dx	Nx
5....	6499.3139	78385.1417	61....	49.294658	504.984617
6....	5961.5165	71885.8278	62....	45.002495	455.689959
7....	5468.4061	65924.3113	63....	41.063208	410.687464
8....	5016.2141	60455.9052	64....	37.447009	369.624258
9....	4601.4146	55439.6911	65....	34.127177	332.177247
10....	4220.9072	50838.2765	66....	31.079651	298.050070
11....	3871.8459	46617.3693	67....	28.282767	266.970419
12....	3551.6300	42745.5234	68....	25.716872	238.687652
13....	3257.8711	39193.8934	69....	23.363872	212.970780
14....	2988.3794	35936.0223	70....	21.206401	189.606908
15....	2741.1527	32947.6429	71....	19.227844	168.400507
16....	2514.3462	30206.4902	72....	17.412577	149.172663
17....	2306.2760	27692.1440	73....	15.746097	131.760086
18....	2115.3967	25385.8680	74....	14.215114	116.013989
19....	1940.2865	23270.4713	75....	12.807831	101.798875
20....	1779.6451	21330.1848	76....	11.513805	88.991044
21....	1632.2774	19550.5397	77....	10.323827	77.477239
22....	1497.0889	17918.2623	78....	9.2297952	67.1534118
23....	1373.0736	16421.1734	79....	8.2245350	57.9236165
24....	1259.3088	15048.0998	80....	7.3015158	49.6990815
25....	1154.9479	13788.7910	81....	6.4548414	42.3975553
26....	1059.2154	12633.8431	82....	5.6792242	35.9427244
27....	971.39967	11574.62776	83....	4.9699933	30.2635002
28....	890.84746	10603.22809	84....	4.3230324	25.2935069
29....	816.96025	9712.38063	85....	3.7347193	20.9704745
30....	749.18777	8895.42038	86....	3.2018605	17.2357552
31....	687.02512	8146.23261	87....	2.7216020	14.0338947
32....	630.00834	7459.20749	88....	2.2913441	11.3122927
33....	577.71244	6829.19915	89....	1.9087170	9.0209486
34....	529.74694	6251.48671	90....	1.5716428	7.1122316
35....	485.75316	5721.73977	91....	1.2780700	5.5405888
36....	445.40222	5235.98661	92....	1.0257075	4.2625188
37....	408.39134	4790.58439	93....	0.81188791	3.23681128
38....	374.44353	4382.19305	94....	0.63352434	2.42492337
39....	343.30425	4007.74952	95....	0.48715464	1.79139903
40....	314.74040	3664.44527	96....	0.36906299	1.30424439
41....	288.53840	3349.70487	97....	0.27543103	0.93518140
42....	264.50209	3061.16647	98....	0.20249336	0.65975037
43....	242.45208	2796.66438	99....	0.14655652	0.45725701
44....	222.22357	2554.21230	100....	0.10427765	0.31070049
45....	203.66566	2331.98873	101....	0.072782452	0.206422845
46....	186.63958	2128.32307	102....	0.049682171	0.133640393
47....	171.01819	1941.68349	103....	0.033036319	0.083958222
48....	156.68467	1770.66530	104....	0.021291755	0.050921903
49....	143.53193	1613.98063	105....	0.013216710	0.029630148
50....	131.46247	1470.44870	106....	0.007840128	0.016413438
51....	120.38706	1338.98623	107....	0.004401182	0.008573310
52....	110.22418	1218.59917	108....	0.002309518	0.004172128
53....	100.89912	1108.37499	109....	0.001115154	0.001862610
54....	92.343428	1007.475877	110....	0.000485288	0.000747456
55....	84.494236	915.132449	111....	0.000185005	0.000262168
56....	77.293545	830.638213	112....	0.000059296	0.000077163
57....	70.688067	753.344668	113....	0.000014974	0.000017867
58....	64.628868	682.656601	114....	0.000002647	0.000002893
59....	59.070844	618.027733	115....	0.000000246	0.000000246
60....	53.972272	558.956889			

APPENDIX 5

Effects of Selection

Self-selection by prospective annuitants can have an important effect on annuitant mortality experience. It is evident in the overall mortality of annuitants as a class, in the relatively lower mortality under (i) nonrefund contracts as compared with refund contracts and (ii) payee elections on settlement options vs. nonpayee elections. Selection is evident, too, in the early durations under annuity contracts.

Select mortality in the early contract years affects aggregate mortality if there has been a considerable increase in new issues or if there is an increase in the selectivity exercised by annuitants. Since the effect of selection could be important as to whether an annuity mortality table will be suitable for valuation in the future, an attempt was made to measure changes in selection over an extended period.

Using data published in the report, Mortality Under Individual Immediate Annuities, Life Income Settlements and Matured Deferred Annuities (1979 Reports Number), ratios of the mortality ratios (on the "a" - 1949 Table) in the first five contract years to those of contract years six and over were computed for each study period from 1945 to 1976. These ratios appear in the following tables. 5-1, 5-2 and 5-3. Since long term trends were not readily apparent from these results, averages of the first three periods and the last three periods were calculated.

From these averages it appears that there has been some increase in selection under refund annuities - slight under immediate annuities and for females under settlement options and somewhat greater under matured deferred annuities. Selection also increased somewhat for females under nonrefund immediate annuities. Selection was less for males under nonrefund immediate annuities and for both males and females under nonrefund matured deferred annuities.

On an overall basis, the amount of selection is still not great under the refund experience generally but it bears watching for any continuation of the trend. The trend of selection can be regarded as mixed under the nonrefund experience where the effect of selection is of much greater magnitude.

To the extent that the 1973 to 1983 improvement factors were based mainly on improvement experienced by the United States white population, the factors could be understated if there were an appreciable increase in selection by annuitants. The results of the above analysis, however, indicate that over the ten-year period it is not likely that a change in selection exercised by annuitants would, *in the aggregate*, have exercised much greater influence on the improvement in annuitant mortality than the improvement in the general population death rate which, in the earlier periods, matched rather well with that of aggregate annuitant mortality.

Table 5-4 illustrates the effect on immediate annuity values of 90 percent assumed select mortality over the first five and the first ten years after issue.

APPENDIX TABLE 5-1

Trends in Selection
Based on Ratios of Mortality in Contract Years 1 - 5 to Mortality in Contract Years 6 and Over
Experience Between Anniversaries in Indicated Years
(Based on Amounts of Annual Income)

							AVERAGES	
ATTAINED AGES	1948 -1953	1953 -1958	1958 -1963	1963 -1967	1967 -1971	1971 -1976	1948 -1963	1963 -1976

Immediate Nonrefund Annuities
(Excluding Pension Trust Issues)

MALES

UNDER 60	134%	126%	* %	103%	* %	* %	- %	- %
60 - 69	122	71	57	78	77	82	83	79
70 - 79	65	80	70	93	89	92	72	91
80 PLUS	82	90	50	89	79	69	74	79
ALL AGES (ADJUSTED)	83	85	59	88	90	85	76	88

FEMALES

UNDER 60	84%	110%	157%	321%	153%	* %	- %	- %
60 - 69	85	98	46	69	64	53	76	62
70 - 79	67	86	64	72	49	59	72	60
80 PLUS	62	67	76	73	72	68	68	71
ALL AGES (ADJUSTED)	68	76	72	72	65	65	72	67

Immediate Refund Annuities
(Excluding Pension Trust Issues)

MALES

UNDER 60	140%	135%	102%	70%	273%	50%	126%	131%
60 - 69	101	85	74	73	99	64	87	79
70 - 79	86	94	85	83	86	89	88	86
80 PLUS	109	86	83	73	68	93	93	78
ALL AGES (ADJUSTED)	106	95	87	81	86	88	96	85

FEMALES

UNDER 60	49%	50%	63%	52%	68%	91%	54%	78%
60 - 69	113	90	70	98	109	102	91	103
70 - 79	78	104	96	80	88	92	93	87
80 PLUS	93	79	88	72	78	87	87	79
ALL AGES (ADJUSTED)	93	91	90	79	88	94	91	87

Note: Ratio in italics (underlined) where 10 - 49 contracts terminated by death in numerator, denominator, or both.

* Fewer than 10 contracts terminated by death in numerator or denominator.

APPENDIX TABLE 5-2

Trends in Selection
Based on Ratios of Mortality in Contract Years 1 - 5 to Mortality in Contract Years 6 and Over
Experience Between Anniversaries in Indicated Years
(Based on Amounts of Annual Income)

All Refund Life Income Settlements - Payee Elections
(Excluding Pension Trust Issues)

ATTAINED AGES	1945 -1950	1950 -1955	1955 -1960	1960 -1965	1965 -1970	1971 -1976	AVERAGES 1945 -1960	AVERAGES 1960 -1976
				MALES				
UNDER 60	88%	80%	81%	112%	53%	82%	83%	82%
60 - 70	107	89	89	100	102	84	95	95
70 PLUS	73	98	94	89	104	108	88	100
ALL AGES	92	90	90	96	99	93	91	96
				FEMALES				
UNDER 60	75%	75%	60%	81%	61%	71%	70%	71%
60 - 69	91	86	87	77	81	82	88	80
70 PLUS	85	84	91	79	78	77	87	78
ALL AGES	91	87	88	81	83	83	89	82

Note: Ratios in italics (underlined) where 10 - 49 contracts terminated by death in numerator, denominator, or both.

APPENDIX TABLE 5-3

Trends in Selection
Based on Ratios of Mortality in Contract Years 1 - 5 to Mortality in Contract Years 6 and Over
Experience Between Anniversaries in Indicated Years
(Based on Amounts of Annual Income)

Matured Deferred Annuities
(Excluding Pension Trust Issues)

ATTAINED AGES	1945 -1950	1950 -1955	1955 -1960	1960 -1965	1965 -1970	1971 -1976	AVERAGES 1945 -1960	AVERAGES 1960 -1976
				Nonrefund				
				MALES				
UNDER 60	* %	* %	* %	* %	* %	* %	- %	- %
60 - 69	39	124	71	86	54	96	78	79
70 PLUS	82	48	98	137	78	*	-	-
ALL AGES	69	59	85	109	80	59	71	83

FEMALES

UNDER 60	* %	* %	40%	* %	* %	* %	- %	- %
60 - 69	79	78	77	67	96	82	78	82
70 PLUS	75	119	78	70	49	115	91	78
ALL AGES	80	87	71	71	86	93	79	83

Refund

MALES

UNDER 60	103%	96%	92%	218%	* %	* %	- %	- %
60 - 69	97	114	102	82	132	90	104	101
70 PLUS	87	95	81	108	80	102	88	97
ALL AGES	103	111	94	98	97	97	103	97

FEMALES

UNDER 60	87%	64%	131%	135%	* %	* %	- %	- %
60 - 69	94	115	81	101	105	94	97	100
70 PLUS	104	129	85	78	99	65	106	81
ALL AGES	102	119	91	95	103	84	104	94

Note: Ratio in italics (underlined) where 10 - 49 contracts terminated by death in numerator, denominator, or both.

* Fewer than 10 contracts terminated by death in numerator or denominator.

APPENDIX TABLE 5-4

Test of Effect of Selection on Annuity Values
Select Mortality Assumed Equal to 90% of 1983 Table "a"
5% Interest

Age at Issue	a_x on 1983 Table "a" (1)	5 Year $a_{[x]}$ (2)	Select Period (2) ÷ (1) (3)	10 Year $a_{[x]}$ (4)	Select Period (4) ÷ (1) (5)
		Males			
65	10.918	10.991	100.7%	11.065	101.3%
70	9.362	9.463	101.1	9.557	102.1
75	7.775	7.910	101.7	8.019	103.1
80	6.237	6.406	102.7		
		Females			
65	12.262	12.309	100.4	12.358	100.8
70	10.728	10.793	100.6	10.862	101.2
75	9.016	9.111	101.1	9.204	102.1
80	7.239	7.372	101.8		

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ATTACHMENT FOUR-J

Commonwealth of Pennsylvania
Insurance Department
Strawberry Square
Harrisburg, PA 17120

May 20, 1982

Mr. Ted Becker, Staff Actuary
Texas State Board of Insurance
1110 San Jacinto
Austin, TX 78786

Dear Ted:

It was good talking to you on the phone yesterday. You will recall that we discussed the proposed Actuarial Guideline which interprets the Standard Nonforfeiture Law with respect to the operative date. Enclosed is a copy of the position taken by the Pennsylvania Department on this matter. I will have 20 copies of this for our technical group meeting in Philadelphia.

Sincerely,

J. Alan Lauer
Deputy Insurance Commissioner

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ATTACHMENT FOUR-J1

PENNSYLVANIA INSURANCE DEPARTMENT

Paragraph (11) of subsection (e) of Section 410A (The Standard Nonforfeiture Law for Life Insurance) reads as follows:

> After the effective date of this subsection (e), any company may file with the insurance commissioner a written notice of its election to comply with the provisions of this subsection after a specified date before January 1, 1989, which shall be the operative date of this subsection (e) for such company. If a company makes no such election, the operative date of this subsection (e) for such company shall be January 1, 1989.

The insurance department intends to interpret this paragraph as follows:

> When a company elects an operative date of subsection (e) for a particular policy form, it also elects the same operative date for all policy forms filed at the same time or subsequently. However, the operative date with respect to any form that had previously been approved will be January 1, 1989 unless the company specifically elects an earlier operative date for such form.

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ATTACHMENT FOUR-K

State Board of Insurance
1110 San Jacinto
Austin, Texas 78786

512/475-3325

May 21, 1982

Commissioner J. Richard Barnes
Colorado Department of Insurance
106 State Office Building
Denver, Colorado 80203

Re: Material Recommended for Adoption by the NAIC (A) Life Insurance Committee in June 1982

Dear Commissioner Barnes:

This is a follow-up of my letter of May 10, 1982, which described three specific recommendations to the Life Insurance (A) Committee for adoption in June 1982.

Unfortunately, in connection with the second of the three recommendations, an incorrect version of the Actuarial Guideline II was included with that letter. The enclosed copy does reflect the current wording of this Actuarial Guideline II.

Will you please consider the two pages which are included with this letter as a substitute for the incorrect version?

Very truly yours,

Ted Becker, for the
NAIC Life, A&H Technical
Staff Actuarial Group.

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ATTACHMENT FOUR-K1

ACTUARIAL GUIDELINE II

RESERVE REQUIREMENTS WITH RESPECT TO INTEREST RATE GUARANTEES ON ACTIVE LIFE FUNDS HELD RELATIVE TO GROUP ANNUITY CONTRACTS

As part of the determination of the aggregate minimum group annuity reserves, a computation must be made of minimum reserves for deposit administration group annuity funds with interest rate guarantees including all such funds pertaining to possible purchase of group annuities whether such funds are held in a separate account or in a general account, whether shown as premiums, advance premiums, auxiliary funds, etc. and whether the liability is shown as Exhibit 8 or elsewhere. In making such computation, the procedure and minimum standards described below shall be applicable for the December 31 calendar year "y" valuation giving recognition to the dates deposits were made. Where appropriate and with the approval of the commissioner, recognition may be given to the extent and time of application of active life funds to purchase annuities, expense assessments against the funds, and excess of purchase price over minimum reserves. In no event shall the reserve be less than the transfer value, if any, of the fund. Approximate methods and averages may be employed with the approval of the commissioner.

To the extent that the application of these valuation procedures and standards would require a company to establish aggregate minimum reserves for group annuities and related funds in excess of reserves which it would not otherwise hold if these valuation procedures and standards did not apply, such company shall set up additional reserve liability shown in its general account or in a separate account, whether shown in Exhibit 8 or elsewhere.

The Valuation procedures and standards specified in this guideline shall not be applicable to the extent that the valuation procedures and standards relating to reserves for deposit administration group annuity funds with interest rate guarantees (i.e., group annuity and guaranteed interest contracts) in the amendments to the Standard Valuation Law adopted by the National Association of Insurance Commissioners in December 1980, or in later NAIC amendments, have become applicable in a jurisdiction.

For funds received:

(1) Prior to calendar year 1976, follow the procedure used at that time.

(2) In calendar year 1976 or later, follow the minimum standards described below:

(a) Contracts having no guaranteed interest rates in excess of 6% on future contributions to be received more than one year subsequent to the valuation date.

The minimum reserve shall be equal to the sum of the minimum reserves for funds attributable to contributions received in each calendar year.

Where V_y = Minimum reserve for funds attributable to contributions received in calendar year y

$V_y = [C_y \times (1 + i_{gy})^n] / (1 + i_{py})^n$

C_y = Portion of guaranteed fund attributable to contributions received in calendar year y

i_{gy} = Interest rate guaranteed under the contract with respect to funds attributable to contributions received in calendar year y

i_{py} = Lowest of:

(1) The net new money rate credited by the company on group annuity funds attributable to contributions received in calendar year y less .005; or

(2) i_{gy}; or

(3) i_{my}; where

i_{my} = (i) for calendar years y + 1 through y + 10, the values shown in the table of values of i_{my} distributed each year by the Central Office of the National Association of Insurance Commissioners;

(ii) for calendar years y + 11 and later, .060.

n = Number of guarantee years, and fractions thereof, remaining as of the December 31 valuation.

(b) Contracts having guaranteed interest rates in excess of 6% on future contributions to be received more than one year subsequent to the valuation date.

The same procedures as set forth under (a) above shall be used except that the deduction under (1) of i_{py} shall be .01 instead of .005 and i_{my} for calendar years y + 1 through y + 10 shall be reduced by .005.

Tables of Values i_{my}
(Effective for December 31, 1977 Valuation)

Calendar Year y in which Contributions Were Received[*]		Value of i_{my} for Calendar Years y + 1 Through y + 10
1976	/delete	.089
1977		.087
1978		.081
1979		.084
1980		.100
1981		.124

~~[*Note: These factors were based upon gross new money rates for reporting annuity writing~~ ← delete.

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ATTACHMENT FIVE

Brief Update of Semi-Annual Report
to the (A) Life Insurance Committee by the
Life, A&H Technical Staff Actuarial Group

June 5 and 6, 1982

Our group met on June 5 and 6, 1982, here at the Franklin Plaza Hotel, Philadelphia, Pennsylvania. Life insurance topics were discussed at the session on June 6. Five states were represented at this session: Kentucky, Nevada, New York, Pennsylvania, and Texas.

Topic headings on the agenda for this session were: "Standard Valuation Law and Standard Nonforfeiture Laws," "Minimum Surplus," "Universal Life and Related Plans of Life Insurance and Annuities," "Other Special Plans," "Variable Life and Variable Annuities," "Mortality and Morbidity Studies," and "General Matters Relating to the Life, A&H Technical Staff Actuarial Group."

Here are some matters which developed at the June 6 session that may be of interest to the (A) Committee:

1. In a few weeks, the American Council of Life Insurance (ACLI) should be able to supply a sheet with additional interest rates generated under the Standard Valuation Law and the Standard Nonforfeiture Law for Life Insurance. The group agreed to recommend that tables showing interest rates for 1981, 1982 and subsequent years (as they become available) should be shown in the NAIC Financial Condition Examiners Handbook. This recommendation is intended to be made to the (A) Committee for adoption in December 1982.

2. The group was advised that the American Academy of Actuaries Committee for Liaison (Life Insurance) has reorganized and that it should be more active in the future. The group would like for this American Academy of Actuaries Committee to make comments and recommendations on universal life insurance, using the various documents which are now available or which become available later in 1982. The chairman of the American Academy of Actuaries Committee promised to discuss this matter with his committee August 1982 to see if it is feasible to begin work on the project.

3. There was considerable progress under the subtopic heading "Mortality Studies – Super Select Mortality, Smoker and Non-Smoker." As a temporary "stop-gap" measure, the group agreed to recommend a revision in existing Actuarial Guideline IV to the (A) Committee in December 1982. As stated in our written report, a Society of Actuaries Task Force has also been formed to assist in a longer-range solution to the problem of smoker/non-smoker mortality rates. This Society of Actuaries Task Force is expected to have a report to our Technical Advisory Committee on Dynamic Interest and Related Matters by December 31, 1982.

4. The group does not expect to make any recommendations corresponding to the topic or subtopic headings "Minimum Surplus," "Other Special Plans", "Mortality and Morbidity Studies – Group Annuities" or "Mortality and Morbidity Studies – Credit Life and Credit Disability" during the year 1982, either as a definite proposal or as an exposure draft. However, in the absence of any other instructions from the (A) Committee, the group expects to continue work in all these areas as longer-range projects.

Ted Becker, Texas
State Board of Insurance

LIFE COST DISCLOSURE (A) TASK FORCE

Reference:
1982 Proc. I p. 394

Michael J. Sabbagh, Chairman – Massachusetts
Susan Mitchell, Vice-Chairman – Wisconsin

AGENDA

1. Progress report on the work of the task force.

2. Any other matters brought before the task force.

CONTENTS

The Life Cost Disclosure (A) Task Force met in the Dominion C Room of the Franklin Plaza in Philadelphia, Pennsylvania at 10:30 a.m. on June 8, 1982. A quorum was present and Michael J. Sabbagh chaired the meeting. The following task force members were present: Michael J. Sabbagh, chairman, Massachusetts; William H. L. Woodyard, III, Arkansas; J. Richard Barnes, Colorado; Don H. Miller, Indiana; Patsy Redmond, Nevada; Vicente B. Jasso, New Mexico; J. O. "Bud" Wigen, North Dakota.

The chairman made a comment that Commissioner Barnes, chairman of the (A) Committee, met with the various task force chairpersons regarding a better delineation of future efforts of each task force to avoid future duplication regarding their efforts.

1. Progress Report on the Work of the Task Force

The chairman read a statement which referred to life insurance cost disclosure and its historical background (Attachment One).

The chairman then indicated that he had received a proposed revision of the NAIC life insurance solicitation model regulation submitted by the ACLI. It was emphasized more than once that the report, on behalf of ACLI, was submitted by the staff of the ACLI; and by its receipt the task force has given it no status. The chairman accepted the report which hopefully is the beginning of meaningful future deliberation on life insurance solicitation and cost disclosure. Mr. John Booth, vice president and chief actuary of the ACLI, made several comments regarding the purpose of the draft regulation and he also reiterated that it was a staff project which had not been presented to the members of the ACLI. A motion was made and seconded that the report be accepted by the task force with no status and would be used for future deliberation only (Attachment Two).

The chairman stated that the time parameter to be used by the task force from this date on is as follows: Written material should be submitted to the task force from insurance departments, members of the insurance industry, and anyone else wishing input, and be forwarded to Commissioner Michael J. Sabbagh at 100 Cambridge Street, Boston, Massachusetts, 02022.

This material is to be submitted by July 15, 1982. The task force will meet somewhere around August 15, 1982, to consider the written material presented for its consideration. A status report will be made by the task force at the NAIC meeting to be held in Tennessee in September. Between September and the November meeting in Dallas the task force will again meet and at this time hold a hearing to receive further oral and written material from anyone who so desires to participate. The task force's goal is to present for final consideration a proposed NAIC life insurance solicitation model regulation for the November meeting.

Having no further business, the task force adjourned at 11:10 a.m.

Michael J. Sabbagh, chairman, Massachusetts; Susan Mitchell, vice-chairman, Wisconsin; William H. L. Woodyard, III, Arkansas; J. Richard Barnes, Colorado; Dr. Mary G. F. Bitterman, Hawaii; Don H. Miller, Indiana; Patsy Redmond, Nevada; Joseph F. Murphy, New Jersey; Vicente B. Jasso, New Mexico; J. O. "Bud" Wigen, North Dakota; James M. Thomson, Virginia.

ATTACHMENT ONE

LIFE INSURANCE COST DISCLOSURE -- HISTORICAL BACKGROUND

Traditional Method of Cost Comparison

The cost of life insurance policies depends upon the level of the premiums, dividends, and cash values. In order to avoid having to compare each of these individual items, a figure commonly referred to as an "average annual net cost" was developed that would combine these items into one number that could be used to compare the costs of different policies. The calculation involved adding together the premiums for a period such as twenty years, subtracting the total illustrated dividends for that period and the cash value available at the end of the period, and then dividing by the number of years in the period. The results would usually be computed per $1,000 of insurance. The calculations were easily made and understood, but this "traditional method" of cost comparison was criticized for not reflecting the time when a dollar was paid either by the policyholder to the company or vice versa. By failing to recognize that a dollar paid today is worth more than a promise to pay the same dollar ten or 20 years into the future, the traditional method could present a distorted and unrealistic picture of life insurance costs. Furthermore, the use of the method as a basis for comparing the cost of different policies provided an incentive for companies to pitch their dividend and cash value scales in such a way as to present the most favorable cost figures for the period used in the net cost calculations.

NAIC Model Regulation and Interest-Adjusted Method

With the increase in interest rates that began in the late 1960s, the criticisms against the traditional method of cost comparison became more pronounced. At the same time, greater attention began to be given to assuring that prospective purchasers of life insurance were given the information necessary to make an informed purchase decision. A result was the adoption of a Life Insurance Solicitation Model Regulation by the NAIC, an original version in 1973 and a revised version in 1976.

The current model regulation prescribes the use of the interest-adjusted method of cost comparison, which involves the same elements as the traditional method--premiums, dividends, and cash values--but which provides for an adjustment in the calculation formula to recognize the effect of interest. Thus, the formula takes account not only of the amount that is paid by or to the policyholder but also when it is paid. The model regulation also requires the disclosure of information to the prospective purchaser relating to the benefits and basic features of the policy under consideration. In addition, a Life Insurance Buyer's Guide giving general information about life insurance is required to be furnished to the consumer. Thirty-six states have adopted cost disclosure requirements based on the NAIC model regulation.

Review of Model Regulation by NAIC Task Force

This task force was appointed in 1979 to review the model regulation and recommend any appropriate changes. Following task force meetings and public hearings and the publication of an issues-and-options paper, the task force published a draft of a revised model regulation in November, 1980. The proposed regulation provided for a considerable expansion in the amount of material and data to be furnished to the consumer. The interest-adjusted indexes would be replaced by a large array of numbers and indexes, and separate material would have to be furnished before a prospect signs an application, at the time of policy delivery, and annually after issue of the policy.

The proposed regulation was criticized for a number of reasons. Many persons who testified at a public hearing on November 24, 1980 felt that the large volume of required data would be indigestible to the consumer, and that the regulation would mandate index figures that would have no connection with the actual cost of the policy to the individual. Furthermore, the indexes would be based on mutually-inconsistent assumptions that in many cases would produce spurious and whimsical results. It also was asserted that compliance with the regulation would cause delays in the point at which coverage could become effective, and that a suitability form required by the regulation was oversimplified, incorrect, and inapplicable in over half of the cases. Serious concern was also expressed about the considerable cost to the industry of introducing a system with so many problems to replace one that was in wide use and operating reasonably well.

New Exposure Draft of Revised Model Regulation

A new exposure draft of a revised model regulation has been prepared by the staff of the American Council of Life Insurance. It alleges that the draft regulation provides for more complete disclosure to the consumer and incorporates changes designed to accommodate the broad variety of new life insurance products that have been introduced since the current Model Regulation was developed. I receive this staff report with no intent of support or refute. The following are among the principal features incorporated in the revised draft:

1. The introduction of the concept of a nonguaranteed element to measure the extent to which policy costs can be affected by premiums, benefits, or other items that are subject to change by the company without the consent of the policyholder.

2. A special plans section to accommodate the unique features of nontraditional plans such as universal life insurance.

3. Provision for disclosure of dividend practices to both new and existing policyholders, in accordance with recommendations presented to the NAIC by the Committee on Dividend Principles and Practices of the American Academy of Actuaries.

4. Provision for disclosure to regulators and policyholders of unusual discontinuities in yearly prices, in accordance with recommendations from the NAIC Advisory Committee on Manipulation.

5. Provision for policyholders to request additional information relating to future premiums, benefits, and other items affecting policy costs.

6. A provision to accommodate the features of the NAIC Model Policy Loan Interest Rate Bill, which has been adopted in over 30 states.

7. A revised Buyer's Guide, which is being developed.

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ATTACHMENT TWO

Note: Bracketing [ ] indicates deletion; underlining indicates new material.

Proposed Revision of
NAIC Life Insurance Solicitation Model Regulation

LIFE INSURANCE [SOLICITATION] DISCLOSURE MODEL REGULATION

Table of Contents.

Section 1. Authority.

This rule is adopted and promulgated by (title of supervisory authority) pursuant to sections (4(1)(a) of the Unfair and Deceptive Acts and Practices in the Business of Insurance Act) of the insurance code.

Section 2. Purpose.

(A) The purpose of this regulation is to require insurers to deliver to purchasers of life insurance[,] information which will improve the buyer's ability to select the most appropriate plan of life insurance for his needs, improve the buyer's understanding of the basic features of the policy which has been purchased or which is under consideration, and improve the ability of the buyer to evaluate the relative costs of similar plans of life insurance.

(B) This regulation does not prohibit the use of additional material which is not in violation of this regulation or any other (state) statute or regulation.

Section 3. Scope.

(A) Except [as hereafter exempted] for the exemptions specified in Section 3(B), this regulation shall apply to any solicitation, negotiation or procurement of life insurance occurring within this state. Subsection 5(C) only shall apply to any existing nonexempt policy held by a policyowner residing in this state. This regulation shall apply to any issuer of life insurance contracts, including fraternal benefit societies.

(B) Unless [otherwise] specifically included, this regulation shall not apply to:

1. Annuities

2. Credit life insurance

3. Group life insurance

4. Life insurance policies issued in connection with pension and welfare plans as defined by and which are subject to the federal Employee Retirement Income Security Act of 1974 29 U.S.C. §1001 et seq. (ERISA) as amended

5. Variable life insurance policies which are registered under state or federal securities laws and under which the death benefits and cash values vary in accordance with unit values of investments held in a separate account

Section 4. Definitions.

For the purposes of this regulation, the following definitions shall apply:

[(a)] (A) Buyer's Guide. A Buyer's Guide is a document which contains, and is limited to, the language contained in [the] Appendix A to this regulation or language approved by (title of supervisory authority).

(B) Cash Dividend. A Cash Dividend is the current illustrated dividend which can be applied toward payment of the gross premium.

(C) Contribution Principle. The Contribution Principle is a basic principle of dividend determination adopted by the American Academy of Actuaries with respect to individual life insurance policies issued by mutual companies. The Academy report, The Recommendations of the Committee on Dividend Principles and Practices (January 1981), describes this principle as the distribution of the aggregate divisible surplus among policies in the same proportion as the policies are considered to have contributed to divisible surplus. In a broad sense the contribution principle underlies the essential equity implied by participating business.

(D) Current Dividend Scale. The current Dividend Scale is a schedule that exhibits dividends to be distributed if there is no change in the basis of these dividends after the time of illustration.

(E) Current Rate Schedule. The Current Rate Schedule is a schedule showing the premiums that will be charged or the cash values or death or other benefits that will be available if there is no change in the basis of these items after the time of illustration.

(F) Discontinuity Index. The Discontinuity Index is the sum of the backward second differences squared in the Yearly Prices of Death Benefits (per 1,000) for policy years 8 through 23. Examples of calculations appear in Appendix B of this regulation.

[(C) Equivalent Level Annual Dividend. The Equivalent Level Annual Dividend is calculated by applying the following steps:

1. Accumulate the annual cash dividends at five percent interest compounded annually to the end of the tenth and twentieth policy years.

2. Divide each accumulation of Step 1. by an interest factor that converts it into one equivalent level annual amount that, if paid at the beginning of each year, would accrue to the values in Step 1. over the respective periods stipulated in Step 1. If the period is ten years, the factor is 13.207 and if the period is twenty years, the factor is 34.719.

3. Divide the results of Step 2. by the number of thousands of the Equivalent Level Death Benefit to arrive at the Equivalent Level Annual Dividend.]

[(D)] (G) Equivalent Level Death Benefit. The Equivalent Level Death Benefit of a policy or term life insurance rider is an amount calculated as follows:

1. Accumulate the [guaranteed] amount payable upon death, regardless of the cause of death, at the beginning of each policy year for ten and 20 years at five percent interest compounded annually to the end of the tenth and twentieth policy years respectively.

2. Divide each accumulation of step 1. by an interest factor that converts it into one equivalent level annual amount that, if paid at the beginning of each year, would accrue to the value in step 1. over the respective periods stipulated in step 1. If the period is ten years, the factor is 13.207 and if the period is twenty years, the factor is 34.719.

[(E)] (H) Generic Name. A Generic Name [means] is a short title [which] that is descriptive of the premium and benefit patterns of a policy or a rider.

(I) Investment Generation Method. The Investment Generation Method is the method of determining dividends so that dividends for policies issued in specified years or groups of years reflect investment earnings on funds attributable to those policies.

[(F)] (J) Life Insurance Cost Indexes.

1. Life Insurance Surrender Cost Index. The Life Insurance Surrender Cost Index is calculated by applying the following steps:

   a. Determine the [guaranteed] cash surrender value, if any, available at the end of the tenth and twentieth policy years.

   b. For participating policies, add the terminal dividend payable upon surrender, if any, to the accumulation of the annual Cash Dividends at five percent interest compounded annually to the end of the period selected and add this sum to the amount determined in step a.

   c. Divide the result of step b. (step a. for [guaranteed-cost] nonparticipating policies) by an interest factor that converts it into an equivalent level annual amount that, if paid at the beginning of each year, would accrue to the value in step b. (step a. for [guaranteed cost] nonparticipating policies) over the respective periods stipulated in step a. If the period is ten years, the factor is 13.207 and if the period is 20 years, the factor is 34.719.

   d. Determine the equivalent level premium by accumulating each annual premium payable for the basic policy or rider at five percent interest compounded annually to the end of the period stipulated in step a. and dividing the result by the respective factors stated in step c. ([t] This amount is the annual premium payable for a level premium plan).

   e. Subtract the result of step c. from step d.

   f. Divide the result of step e. by the number of thousands of the Equivalent Level Death Benefit to arrive at the Life Insurance Surrender Cost Index.

2. Life Insurance Net Payment Cost Index. The Life Insurance Net Payment Cost Index is calculated in the same manner as the comparable Life Insurance Surrender Cost Index except that the cash surrender value and any terminal dividend are set at zero.

3. In the calculation of Life Insurance Cost Indexes for policies that have a Nonguaranteed Factor, the amount payable upon death for purposes of Section 4(G)1, the cash surrender value for the purposes of Section 4(J)1.,a., and the annual premium for the purposes of Section 4(J)1.,d., are calculated on the basis of the company's Current Rate Schedule.

(K) Nonguaranteed Factor. A Nonguaranteed Factor is any premium, benefit, or other item entering into the calculation of the Life Insurance Surrender Cost Index that can be changed by the company without the consent of the policyowner.

(L) Nonguaranteed Element. The Nonguaranteed Element is calculated by subtracting (a) the Life Insurance Surrender Cost Indexes for ten- and 20-year periods, calculated as described in (J) above, from (b) the corresponding Life Insurance Surrender Cost Indexes for ten- and 20-year periods calculated on the assumption that the company charges the maximum premiums and provides the minimum cash values and death benefits allowed by the policy, and, if the policy is participating, pays no dividends.

(M) Policy Data. The Policy Data is a display or schedule of numerical values, both guaranteed and nonguaranteed, for each policy year for a series of designated policy years, of the following information: illustrated annual, other periodic, and terminal dividends; premiums; death benefits; cash surrender values; and endowment benefits.

[G] (N) Policy Summary. [For the purposes of this regulation,] The Policy Summary [means] is a written statement describing the elements of the policy, including, but not limited to:

1. A prominently placed title as follows: STATEMENT OF POLICY COST AND BENEFIT INFORMATION.

2. The name and address of the insurance agent[,] or, if no agent is involved, a statement of the procedure to be followed in order to receive responses to inquiries regarding the Policy Summary.

3. The full name and home office or administrative office address of the company in which the life insurance policy is to be or has been written.

4. The Generic Name of the basic policy and each rider.

5. The following amounts, where applicable, for the first five policy years and representative policy years thereafter sufficient to clearly illustrate the premium and benefit patterns, including, but not necessarily limited to, the years for which Life Insurance Cost Indexes are displayed and the earlier of at least one age from 60 through 65 [or] and policy maturity [whichever is earlier] :

   a. The annual premium for the basic policy.

   b. The annual premium for each optional rider.

   c. The [Guaranteed] amount payable upon death, at the beginning of the policy year regardless of the cause of death, other than suicide[,] or other specifically enumerated exclusions, which is provided by the basic policy and each optional rider, with benefits provided under the basic policy and each rider shown separately.

   d. The total [guaranteed] cash surrender values at the end of the year with values shown separately for the basic policy and each rider.

   e. The Cash Dividends payable at the end of the year with values shown separately for the basic policy and each rider. (Dividends need not be displayed beyond the twentieth policy year.)

   f. Any [Guaranteed] endowment amounts payable under the policy which are not included under [guaranteed] cash surrender values above.

   g. If the policy has a Nonguaranteed Factir, the maximum premium, minimum amount payable upon death, minimum cash value, and minimum endowment amounts allowed by the policy. These amounts may be shown in addition on the basis of the company's Current Rate Schedule and Current Dividend Scale.

6. The effective policy loan annual percentage interest rate, if the policy contains this provision, specifying whether this rate is applied in advance or in arrears. If the policy loan interest rate is variable, the Policy Summary [includes the maximum annual percentage rate.] shall indicate that the annual percentage rate will be determined by the company in accordance with the provisions of the policy and the applicable law.

7. The Life Insurance Cost Indexes for ten and 20 years but in no case beyond the premium-paying period. Separate indexes [are] shall be displayed for the basic policy and for each optional term life insurance rider. Such indexes need not be included for optional riders which are limited to benefits, such as accidental death benefits, disability waiver of premium, preliminary term life insurance coverage of less than 12 months and guaranteed insurability benefits, nor for [the] any basic policies or optional riders covering more than one life.

8. [The Equivalent Level Annual Dividend, in the case of participating policies and participating optional term life insurance riders,] If the policy has a Nonguaranteed Factor:

   a. The Nonguaranteed Element under the same circumstances and for the same durations at which the Life Insurance Surrender Cost Indexes are displayed. The Policy Summary may include in addition a Nonguaranteed Element calculated assuming all cash surrender values and terminal dividends to be zero.

[9. A Policy Summary which includes dividends shall also include a statement that dividends are based on the company's current dividend scale and are not guaranteed in addition to a statement in close proximity to the Equivalent Level Annual Dividend as follows: An explanation of the intended use of the Equivalent Level Annual Dividend is included in the Life Insurance Buyer's Guide.]

b. A statement indicating which cost factor is not guaranteed and that such factor is based on the company's Current Dividend Scale or Current Rate Schedule.

c. This statement in close proximity to the Nonguaranteed Element: "An explanation of the intended use of the Nonguaranteed Element is included in the Life Insurance Buyer's Guide."

[10.] 9. [A] This statement in close proximity to the Life Insurance Cost Indexes [as follows] : "An explanation of the intended use of these indexes is provided in the Life Insurance Buyer's Guide."

[11.] 10. The date on which the Policy Summary is prepared. The Policy Summary must consist of a separate document. All information required to be disclosed must be set out in such a manner as to not minimize or render any portion thereof obscure. Any amounts which remain level for two or more years of the policy may be represented by a single number if it is clearly indicated what amounts are applicable for each policy year. Amounts in item five of this section shall be listed in total, not on a per thousand nor per unit basis. If more than one insured is covered under one policy or rider, [guaranteed] death benefits shall be displayed separately for each insured or for each class of insureds if death benefits do not differ within the class. Zero amounts shall be displayed [as zero and shall not be displayed] as a blank space.

(O) Portfolio Average Method. The Portfolio Average Method is the method of determining dividends so that dividends reflect investment earnings on funds attributable to all policies whenever issued.

(P) Yearly Price of Death Benefits. The Yearly Price of Death Benefits per $1,000 is calculated by applying the following formula:

YP = (P-Dv-(CVCv-CVP))/(F(.001))

Where YP = Yearly Price of Death Benefits per $1,000
P = Annual premium
CVP = Sum of the cash value and terminal dividend at the end of the preceding year
CVC = Sum of the cash value and terminal dividend at the end of the current year
D = Annual dividend
F = Face amount
V = 1/(1.05)

Section 5. [Disclosure Requirements.] Duties of Insurers.

(A) Requirements Applicable Generally.

[(A)] 1. The insurer shall provide, to all prospective purchasers, a Buyer's Guide and a Policy Summary prior to accepting the applicant's initial premium or premium deposit, provided however that:

a. [unless] If the policy for which application is made or its Policy Summary contains an unconditional refund provision of at least ten days [or unless the Policy Summary contains such an unconditional refund offer in which event], the Buyer's Guide and Policy Summary must be delivered with the policy or prior to delivery of the policy.

[(C)] b. [In the case of policies whose] If the Equivalent Level Death Benefit of the policy for which application is made does not exceed $5,000, the requirement for providing a Policy Summary will be satisfied by delivery of a written statement containing the information described in Section 4 [(G)] (N), items 2, 3, 4, 5a, 5b, 5c, 6, 7, 8, 9, and 10 [,11].

[(B) The insurer shall provide a Buyer's Guide and a Policy Summary to any prospective purchaser upon request.]

2. If any prospective purchaser requests a Buyer's Guide, a Policy Summary, or Policy Data for policy years one through thirty, the insurer shall provide the item or material requested.

3. If the Discontinuity Index of any policy exceeds:

   a. Any of the test limits for discontinuity set forth in Appendix C herein, the insurer shall provide the following information to the (title of supervisory authority) prior to the sale of any such policy:

      i. The Policy Data for policy years one through 30,

      ii. The Discontinuity Index and its component calculations, and

      iii. A statement identifying as accurately as possible the specific policy premium or benefit causing the policy's Discontinuity Index to exceed the test limits.

   b. The test limit set forth in Appendix C herein for the applicant's issue age, the insurer shall provide:

      i. The following statement displayed prominently on the Policy Summary and on all other sales material that show or incorporate the Surrender Cost Index, the Net Payment Index, or the Nonguaranteed Element: "This summary cost information may reflect year-to-year costs inaccurately. This policy has an unusual pattern of premiums or benefits that may make comparison with the cost indexes of other policies unreliable. You should discuss this with your agent or this company. A statement of year-by-year information is available."

      ii. If the prospective purchaser requests it, a statement identifying as accurately as possible the specific policy premium or benefit causing the policy's Discontinuity Index to exceed the applicable test limit.

(B) Requirements Applicable to Participating Policies.

1. If a mutual life insurance company illustrates policyowner dividends that are calculated in a manner or on a basis that:

   a. Deviates substantially from the Contribution Principles, the Policy Summary and all other sales material showing illustrated policyowner dividends must display prominently the following statement: "The illustrated dividends for this policy have been determined in a manner inconsistent with generally accepted practices. Read the Buyer's Guide and contact this company for further information."

   b. Uses the Portfolio Average Method, the Policy Summary and all other sales material showing illustrated policyowner dividends must include the following statement: "Illustrated dividends reflect current investment earnings on funds applicable to all policies and are based on the Current Dividend Scale. Refer to your Buyer's Guide for further information."

   c. Uses the Investment Generation Method, the Policy Summary, and all other sales material showing illustrated policyowner dividends must include the following statement: "Illustrated dividends reflect current investment earnings on funds attributable to policies issued since 19 * and are based on the current dividend scale. Refer to your Buyer's Guide for further information." *Drafting note: Insert at * the earliest year of the issue-year grouping used to determine the investment earnings on currently issued policies.

2. If a stock life insurance company illustrates policyowner dividends that are calculated in a manner or on a basis that deviates substantially from the Contribution Principle applicable to dividend determinations by mutual life insurers, the Policy Summary and all other sales material showing illustrated policyowner dividends must display prominently the following statement: "The illustrated dividends on this policy are determined according to standards which are different from those applicable to a mutual company."

(C) Requirements Applicable to Existing Policies

1. If a policyowner residing in this state requests it, the insurer shall provide Policy Data for that policy for thirty consecutive years beginning with the previous policy anniversary. The statement of Policy Data shall include cash dividends according to the Current Dividend Scale, the amount of outstanding policy loans, and the current policy loan interest rate. Policy values shown shall be based on the dividend option in effect at the time of the request. The insurer may charge a reasonable fee, not to exceed $X, for the preparation of the statement.

2. If a mutual life insurance company:

a. Deviates substantially from the Contribution Principle, it shall annually provide each affected policyowner residing in this state the following notice: "The dividend paid this year was determined in a manner inconsistent with generally accepted practices. Contact this company for further information."

b. Is determining dividends, as of the effective date of this regulation, using the Investment Generation Method, it shall, within 18 months of such date, provide each affected policyowner residing in this state the following notice: "The dividend for this policy reflects current investment earnings on funds applicable to policies issued from 19* through 19*." Drafting Note: Insert at * the applicable years of issue.

c. Changes its method of determining dividend scales on existing policies from or to the Investment Generation Method, it shall:

i. File with the (title of supervisory authority) for his or her approval a notice describing such change and its implication on dividends payable on affected policies. For purposes of this subsection, if the (title of supervisory authority) fails to approve or disapprove such notice within sixty days of its initial or subsequent submission, the notice shall be deemed approved.

ii. Send to each affected policyowner residing in this state, no later than the first policy anniversary when the dividend is payable on the new basis, such notice as approved.

Section 6. **Special Plans.** This section modifies the application of this regulation as indicated for certain special plans of life insurance:

(A) Enhanced Ordinary Life Policies. An Enhanced Ordinary Life Policy is a participating policy which has the following characteristics for all issue ages:

1. The basic policy has a guaranteed death benefit that reduces after an initial period of one or more years to a basic amount; and

2. A special dividend option that provides (a) a combination of immediate paid-up additions and one-year term insurance or (b) deferred paid-up additions, either of which on the basis of the Current Dividend Scale will provide a combined death benefit (reduced basic amount plus paid-up additions plus one-year term insurance) at least equal to the initial face amount.

For these policies:

1. The cash value of benefits purchased by dividends payable on or before the crossover point is included in the cash surrender value for the purpose of Section 4(J)1.,a.

2. The death benefit purchased by dividends payable on or before the crossover point is included in the amount payable upon death for the purpose of Section 4(G) 1.

3. Dividends payable after the crossover point are assumed to be paid in cash for the purpose of Section 4(J)1.,b.

(B) Flexible Premium and Benefit Policies. For policies, commonly called "universal life insurance policies," which:

1. Permit the policyowner to vary, independently of each other, the amount or timing of premium payments, or the amount payable on death; and

2. Provide for a cash value that is based on separately identified interest credit and mortality and expense changes made to the policy:

All indexes and other data shall be displayed assuming specific schedules of anticipated premiums and death benefits at issue. If no specific schedules of anticipated premiums and death benefits are indicated in the Policy Summary, all indexes and other data shall be displayed assuming an annual premium of $ ______ and a level amount payable on death of $ ______ .

In addition to all other information required by this regulation, the Policy Summary shall indicate when the policy will expire based on the interest rates and mortality and other charges guaranteed in the policy and the anticipated or assumed annual premiums shown in the Policy Summary.

(C) Multitrack Policies. For policies which allow a policyowner to change or convert the policy from one plan or amount to another, the Policy Summary:

1. Shall display all indexes and other data assuming that the option is not exercised; and

2. May display all indexes and other data using a stated assumption about the exercise of the option.

(D) Policies with Any Rate Subject to Continued Insurability. For policies which allow a policyowner a reduced premium rate if the insured periodically submits evidence of continued insurability, the Policy Summary:

1. Shall display cost indexes and other data assuming that the insured always qualifies for the lowest premium;

2. Shall display cost indexes and other data assuming that the company always charges the highest premiums allowable; and

3. Shall indicate the conditions that must be fulfilled for an insured to qualify periodically for the reduced rate.

Section 7 [6]. General Rules.

(A) Each insurer shall maintain, at its home office or principal office, a complete file containing one copy of each document authorized and used by the insurer [for use] pursuant to this regulation. Such file shall contain one copy of each authorized form for a period of three years following the date of its last authorized use.

(B) An agent shall inform the prospective purchaser, prior to commencing a life insurance sales presentation, that he is acting as a life insurance agent and inform the prospective purchaser of the full name of the insurance company which he is representing to the buyer. In sales situations in which an agent is not involved, the insurer shall identify its full name.

(C) Terms such as financial planner, investment advisor, financial consultant, or financial conseling shall not be used in such a way as to imply that the insurance agent is primarily [generally] engaged in an advisory business in which compensation is unrelated to sales unless such is actually the case.

(D) Any reference to a [policy] dividend[s] or other nonguaranteed factor must include a statement that such item is [dividends are] not guaranteed[.] and is based on the company's Current Dividend Scale or Current Rate Schedule.

(E) A system or presentation which does not recognize the time value of money through the use of appropriate interest adjustments shall not be used for comparing the cost of two or more life insurance policies. Such a system may be used for the purpose of demonstrating the cash-flow pattern of a policy if such presentation is accompanied by a statement disclosing that the presentation does not recognize that, because of interest, a dollar in the future has less value than a dollar today.

(F) A presentation of costs or benefits, other than that required pursuant to this regulation, shall not display guaranteed and nonguaranteed factors [benefits] as a single sum unless they are shown separately in close proximity thereto.

(G) Any statement regarding the use of the Life Insurance Cost Indexes or Nonguaranteed Element shall include an explanation to the effect that the indexes or nonguaranteed element are useful only for the comparison of the relative costs of two or more similar policies.

(H) A Life Insurance Cost Index which reflects a Nonguaranteed Element [dividends or an Equivalent Level Annual Dividend] shall be accompanied by a statement that it is based on the company's Current [d] Dividend Scale or Current Rate Schedule and is not guaranteed.

[(I) For the purposes of this regulation, the annual premium for a basic policy or rider, for which the company reserves the right to change the premiums, shall be the maximum annual premium.]

Section [7] 8. Failure to Comply.

Failure of an insurer to provide or deliver [A Buyer's Guide, or a Policy Summary as provided in Section 5] any information required by this regulation shall constitute an omission which misrepresents the benefits, advantages, conditions or terms of an insurance policy.

Section 9. Separability. If any provisions of this rule be held invalid, the remainder shall not be affected.

Section [8] 10. Effective Date. This rule shall [apply to all solicitations of life insurance which commence on or after] become effective (insert a date at least six months following adoption by the regulatory authority.)

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APPENDIX A

Life Insurance Buyer's Guide
(To be redrafted)

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APPENDIX B

Examples of Calculations of the Discontinuity Index

Example 1

The first example is a participating whole life policy issued to a male aged 35. The calculation is made on a per $1,000 basis:

Policy Year	Guaranteed Cash Value	Illustrated Annual Dividend	Illustrated Terminal Dividend	Premium
1	0.0	0.0	0.00	21.40
2	8.77	2.40	0.00	21.40
3	31.27	2.65	0.00	21.40
4	54.28	2.90	0.00	21.40
5	77.82	3.16	0.00	21.40
6	94.24	3.16	0.00	21.40
7	110.93	3.16	0.00	21.40
8	127.88	3.41	0.00	21.40
9	145.09	3.41	0.00	21.40
10	162.54	3.66	8.00	21.40
11	180.22	4.16	8.00	21.40
12	198.11	4.67	8.00	21.40
13	216.20	5.17	8.00	21.40
14	234.46	5.68	8.00	21.40
15	252.88	6.18	8.00	21.40
16	271.43	6.69	8.00	21.40
17	290.10	7.19	8.00	21.40
18	308.87	7.95	8.00	21.40
19	327.73	8.46	8.00	21.40
20	346.65	9.47	25.00	21.40
21	365.62	10.48	25.00	21.40
22	384.60	11.49	25.00	21.40
23	403.57	12.50	25.00	21.40
24	422.50	13.51	25.00	21.40
25	441.37	14.52	25.00	21.40
26	460.14	15.53	25.00	21.40
27	478.78	16.54	25.00	21.40
28	497.28	17.55	25.00	21.40
29	515.60	18.56	25.00	21.40
30	533.70	19.57	25.00	21.40

The yearly prices, (backward) second differences in yearly prices, and their squares for this policy are:

Policy Year	(1) Yearly Price	(2) Second Difference in Yearly Price	(3) Second Difference Squared
1	21.40	-	NA
2	10.76	-	NA
3	-2.13	-2.25	NA
4	-1.79	13.23	NA
5	-1.44	.01	NA
6	6.46	7.55	NA
7	6.98	-7.38	NA
8	7.29	-.21	.0441
9	7.85	.25	.0625
10	.59	-7.82	61.1524
11	8.72	15.39	236.8521
12	8.88	-7.97	63.5209
13	9.06	.02	.0004
14	9.28	.04	.0016
15	9.52	.02	.0004
16	9.78	.02	.0004
17	10.08	.04	.0016
18	10.15	-.23	.0529
19	10.47	.25	.0625
20	-5.84	-16.63	276.5569
21	11.05	33.20	1,102.2400
22	10.98	-16.96	287.6416
23	10.93	.02	.0004
24	10.91	.03	NA
25	10.91	.02	NA
26	10.94	.03	NA
27	11.00	.03	NA
28	11.06	.00	NA
29	11.15	.03	NA
30	11.27	.03	NA

The column (1) yearly prices are the values of the Yearly Price of Death Benefits per (1000).

Column (2) is calculated by subtracting the change observed in the yearly price in year t-1 from the change observed in the yearly price in year t. For example, the second difference of -16.63 in year 10 is calculated:

$$-16.63 = (-5.84-10.47) - (10.47-10.15)$$

$$= -16.31-.32$$

$$= -16.63$$

Column (3), second difference squared, is the square of the figure in column (2). The sum of the squared second differences between years 8 and 23 is 2028. This sum exceeds by 1528 the test limit for issue age 35 of 500.

The second example is a guaranteed cost policy issued to a male age 25. It has a six percent policy loan rate. The calculation is made on a per $1,000 basis.

Example 2

Policy Year	Guaranteed Cash Value	Illustrated Annual Dividend	Illustrated Terminal Dividend	Premium
1	0.0	0.0	0.0	11.34
2	0.0	0.0	0.0	11.34
3	0.02	0.0	0.0	11.34
4	9.77	0.0	0.0	11.34
5	19.84	0.0	0.0	11.34
6	30.23	0.0	0.0	11.34
7	40.95	0.0	0.0	11.34
8	52.01	0.0	0.0	11.34
9	63.41	0.0	0.0	11.34
10	75.17	0.0	0.0	11.34
11	87.27	0.0	0.0	11.34
12	99.71	0.0	0.0	11.34
13	112.48	0.0	0.0	11.34
14	125.54	0.0	0.0	11.34
15	138.90	0.0	0.0	11.34
16	152.53	0.0	0.0	11.34
17	166.43	0.0	0.0	11.34
18	180.59	0.0	0.0	11.34
19	195.03	0.0	0.0	11.34
20	224.12	0.0	0.0	11.34
21	230.80	0.0	0.0	11.34
22	253.71	0.0	0.0	11.34
23	268.85	0.0	0.0	11.34
24	284.20	0.0	0.0	11.34
25	299.73	0.0	0.0	11.34
26	315.43	0.0	0.0	11.34
27	331.29	0.0	0.0	11.34
28	347.29	0.0	0.0	11.34
29	363.43	0.0	0.0	11.34
30	379.67	0.0	0.0	11.34

Policy Year	(1) Yearly Price	(2) Second Difference in Yearly Price	(3) Second Difference Squared
1	11.34	--	NA
2	11.34	--	NA
3	11.32	-.02	NA
4	2.06	-9.24	NA
5	2.21	9.41	NA
6	2.33	.03	NA
7	2.57	.00	NA
8	2.76	.01	.0001
9	2.96	.01	.0001
10	3.16	.00	.0000
11	3.40	.04	.0016
12	3.65	.01	.0001
13	3.93	.03	.0009
14	4.26	.05	.0025
15	4.59	.00	.0000
16	4.97	.05	.0025
17	5.37	.02	.0004
18	5.78	.01	.0001
19	6.19	.00	.0000
20	-7.08	-17.68	187.1424
21	15.65	36.00	1,296.0000
22	.51	-37.87	1,434.1369
23	9.00	23.63	558.3769
24	9.52	-7.97	NA
25	10.08	.04	NA
26	10.66	.02	NA
27	11.26	.02	NA
28	11.88	.02	NA
29	12.51	.01	NA
30	13.18	.04	NA

The sum of the squared second differences between years 8 and 23 for example two is 3476. It exceeds by 3176 the test limit for issue age 25 of 300.

APPENDIX C

Test Limits for Discontinuity

Issue Age	Test Limit
25 and under	300
26	325
27	348
28	371
29	392
30	413
31	432
32	451
33	468
34	485
35	500
36	515
37	528
38	541
39	552
40	563
41	572
42	581
43	588
44	595
45 and over	600

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ATTACHMENT THREE

LIFE COST DISCLOSURE (A) TASK FORCE

Oklahoma City, Oklahoma
April 5, 1982

The Life Cost Disclosure (A) Task Force met in the 18th Century Room of the Sheraton in Oklahoma City, Oklahoma at 3:45 p.m. on April 5, 1982. A quorum was present and Michael J. Sabbagh chaired the meeting. The following committee members were present: Michael J. Sabbagh, chairman (Massachusetts); Susan Mitchell, vice-chairman (Wisconsin); William H. L. Woodyard, III (Arkansas); J. Richard Barnes (Colorado); Don H. Miller (Indiana); Patsy Redmond (Nevada); J. O. ("Bud") Wigen (North Dakota).

The meeting was called to order by Chairman Michael J. Sabbagh and the agenda items were as follows:

1. Progress Report on Cooperation Between This Task Force and the Securities and Insurance Regulation (EX) Task Force

The chairman declared that he would follow the agenda as published. Thereupon, Commissioner Bruce Foudree, chairman of the Securities and Insurance Regulation (EX) Task Force, summarized the work of his task force at the October meeting in Burlington, Vermont and at the December meeting in New Orleans. Included in his discussion was an explanation of the principal features found in new life products. He also reported no resolution with regard to the question of whether these products are securities or insurance. The attempt to distinguish between the two continues. His task force's principal concern, however, is to implement the regulation of such products for the benefit of consumers. Cost disclosure is paramount and of principal importance to his committee.

Commissioner Foudree reported the existence of some fundamental differences with regard to the regulation of new life products within the NASAA/NAIC joint committees. The two committees have not been able to resolve their differences and have, therefore, decided not to continue their joint relationships. He also stated that the NASAA committee may now have been dissolved.

Commissioner Foudree next called to the task force's attention that Professor Joseph Long has drafted a proposal to amend the Uniform Securities Act.

Following Commissioner Foudree's synopsis, Commissioner Barnes of Colorado inquired relative to "a timing target" for this task force to complete its assignment. Commissioner Foudree brought out in his comments that the Securities and Insurance Regulation Task Force will be meeting tomorrow, Tuesday April 6, to consider the position of the NAIC on amendments to the Uniform Securities Act. He pointed out the difficulties in establishing a kind of uniform disclosure regulation because of a variety of new life insurance products now in existence.

Following Commissioner Foudree's decision, John Booth, of the American Council on Life Insurance (ACLI) notified the task force that he would make available ACLI's paper that was presented at the New Orleans meeting and summarized the elements of the new life products to expedite these considerations in this area. He noted that Universal Life Phase II may be considered a security by the SEC and would therefore be exempt from any cost disclosure regulation otherwise applicable to new life products.

Mr. Tom Hefty, representing Wisconsin, noted two problems with regard to disclosure: 1) that the calculation of surrender charges differs by company and 2) that presentation of cash values were inconsistent. There was a suggestion that the "model" should be clarified to account for the significant differences in cash value.

It was mentioned that the NAIC Buyer's Guide is clear that the surrender charges should be deducted. Perhaps illustrations would clarify the problem.

Mr. Keith Sloan, of the Kentucky Insurance Department, reported that even though Kentucky has not adopted a disclosure regulation that he, as the examiner of new products filing has adopted some standards for reviewing such filings.

Commissioner Sabbagh then asked if there were any other comments. None were made and the meeting was adjourned at 4:20 p.m.

Michael J. Sabbagh, chairman, Massachusetts; Susan Mitchell, vice-chairman, Wisconsin; William H. L. Woodyard, Arkansas; J. Richard Barnes, Colorado; Dr. Mary G. F. Bitterman, Hawaii; Don H. Miller, Indiana; Patsy Redmond, Nevada; Joseph F. Murphy, New Jersey; Vincente B. Jasso, New Mexico; J. O. ("Bud") Wigen, North Dakota; James M. Thomson, Virginia.

MANIPULATION, LAPSATION, DIVIDEND PRACTICES AND ANNUITY DISCLOSURE (A) TASK FORCE

Reference:
1982 Proc. I p. 412

Patsy Redmond, Chairman -- Nevada
Thomas J. Caldarone, Jr., Vice-Chairman -- Rhode Island

AGENDA

1. Report on proposed amendments to the NAIC Model Annuity Disclosure Regulation and Buyer's Guide.

2. Report on the proposed amendments to Schedule M on dividend disclosure.

3. Report on the proposed lapsation disclosure recommendation.

4. Any other matters brought before the task force.

CONTENTS

The Manipulation, Lapsation, Dividend Practices and Annuity Disclosure (A) Task Force met in Dominion B Room of the Franklin Plaza Hotel in Philadelphia, Pennsylvania, at 3:00 p.m. on June 8, 1982. A quorum was present, and Patsy Redmond chaired the meeting. The following task force members were present: Patsy Redmond, chairman, Nevada; Thomas J. Caldarone, Jr., vice-chairman, Rhode Island; J. Richard Barnes, Colorado; Joseph C. Mike, Connecticut; Philip R. O'Connor, Illinois; Don H. Miller, Indiana; Sherman A. Bernard, Louisiana; Joseph F. Murphy, New Jersey; James M. Thomson, Virginia.

Absent was Trent M. Woods, Idaho.

1. Report on Proposed Amendments to the NAIC Model Annuity Disclosure Regulation and Buyer's Guide

William Snell, chairman of the advisory committee to recommend amendments to the NAIC Model Annuity Disclosure Regulation and Buyer's Guide submitted the completed recommendations of his committee for the review of the task force. Mr. Snell states the amendments did provide for rate of return disclosure on all annuities to which the regulation applies. Norman Martin, chairman of the American Council of Life Insurance Subcommittee on Cost Disclosure, spoke in favor of the proposed amendments, but suggested the ACLI would prefer not to show rate of return on gross premiums when rate of return was not used in the solicitation of the product. The recommendations are attached as Attachment One. Mr. Snell requested that his advisory committee be dismissed. The task force voted to dismiss the advisory committee.

2. Report on the Proposed Amendments to Schedule M on Dividend Disclosure

Ted Becker, of the Texas State Board of Insurance, reported on the assignment given him at the last task force meeting to work with John Harding, chairman of the American Academy of Actuaries Committee on Dividend Principles and Practices, to prepare a format for the modification of Schedule M in the life insurance company annual statement blank acceptable to the Blanks Task Force. Mr. Becker reported he expected to work with Tony Spano, of the ACLI, and John Montgomery of the California Department of Insurance, to have a correct format ready for the 1982 winter meeting. Mr. Harding gave a statement about the suggestions made by his committee in modification of Schedule M. He stated that Schedule M disclosure is critical to the continued fair treatment of participating policyholders and to the integrity of any cost disclosure system which relies upon the use of dividends. Mr. Harding's complete statement is attached as Attachment Two.

3. Report on the Proposed Lapsation Disclosure Recommendation

Keith Sloan, of the Kentucky Insurance Department, a member of the advisory committee on this topic, gave a brief background of the Lapsation Study. *(Attachment Three)* The full study can be found in the NAIC Proceedings. *(1981 Proceedings II p. 649)* Mr. Sloan stated that he felt the lapsation disclosure information would be most effective if it were made available to the commissioners through the use of the services of the NAIC Support and Services Office. Tony Spano, ACLI, gave a statement commending the report of the work of the advisory committee. He stated he had reservations about the uses that would be made of the information and about the value of it to the consumer if it were made available through the annual statement. A copy of Mr. Spano's statement is attached as Attachment Four.

Having no further business to come before the task force, the task force adjourned at 4:00 p.m.

Patsy Redmond, chairman, Nevada; Thomas J. Caldarone, Jr., vice-chairman, Rhode Island; J. Richard Barnes, Colorado; Joseph C. Mike, Connecticut; Trent M. Woods, Idaho; Philip R. O'Connor, Illinois; Don H. Miller, Indiana; Sherman A. Bernard, Louisiana; Joseph F. Murphy, New Jersey; James M. Thomson, Virginia.

ATTACHMENT ONE

The Northwestern Mutual Life Insurance Company
720 East Wisconsin Avenue
Milwaukee, WI 53202

William M. Snell, F.S.A.
Managing Actuary

REPORT OF THE ANNUITY ADVISORY COMMITTEE

June 8, 1982

The Annuity Advisory Committee has met again since your open hearing in Oklahoma City in April 1982. We have reviewed the suggestions made there, and have modified our proposed regulation, as follows:

1. We added a phrase making it clear that this model regulation also applies to annuity riders.

2. We adopted the suggestion made by the American Council of Life Insurance that optional benefits are excluded from the contract summary, except for a showing of the premium amount.

3. We also made grammatical changes in the proposed regulation.

We discussed for almost half a day, the concept of gross yield on contributions. Should this be required in all cases, or only when the interest rate is emphasized in the sales process?

After carefully weighing both sides of the question, the advisory committee recommends that it be required in all cases. Hence that part of the proposed regulation is unchanged.

I am enclosing with my report revised copies of both the regulation and the Buyer's Guide.

We have enjoyed working with the task force. The committee members have worked hard at preparing this report on schedule. We believe we have completed our assignment.

Unless your task force has other questions to ask us, we request that we be discharged after acceptance of our report.

William M. Snell
Chairman

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ATTACHMENT ONE-A

STATEMENT ON BEHALF OF THE AMERICAN COUNCIL OF LIFE INSURANCE TO THE NAIC (A) COMMITTEE'S TASK FORCE ON MANIPULATION, LAPSATION, DIVIDEND PRACTICES AND ANNUITY DISCLOSURE

April 6, 1982

My name is Norman K. Martin. I am vice president of State Farm Life Insurance Company. I am also chairman of the Subcommittee on Cost Comparisons of the American Council of Life Insurance. I am appearing today on behalf of the council, whose 524 companies account for about 96 percent of the total life insurance in force in this country.

We appreciate this opportunity to appear today and to comment on the proposed amendments to the NAIC Model Annuity and Deposit Fund Disclosure Regulation that have been developed by your Advisory Committee on Annuity Disclosure. We feel the advisory committee is to be commended for suggesting changes in the model regulation that should enhance the likelihood that meaningful and useful information will be provided to prospects for annuity contracts and deposit funds. The revised Contract Summary and the new Buyer's Guide to Annuities should be very useful in this respect. We do, however, have several suggested improvements to the advisory committee's proposals, both with respect to the body of the regulation and to the Buyer's Guide, and we will now proceed to discuss these suggestions.

Regulation

1. Our principal comment on the regulation concerns the statement of interest rates and the yields on gross considerations that would be required in the Contract Summary under Section 5.A, items 12 and 13. We agree that the required disclosure of interest rates and yield figures is shown in an annuity sales presentation. However, we would be concerned about this type of required disclosure where an annuity is presented strictly as an income vehicle and without any emphasis on the interest accumulation aspects. To require companies and agents to introduce interest and yield figures in those situations would only serve to complicate the sales presentation needlessly at the expense of possibly confusing the purchaser and thus negating some of the benefits of the disclosure process.

   We feel it would be far preferable to require this information only where an interest rate or yield figure is shown in an annuity sales presentation. This is the type of requirement currently in effect in Wisconsin, the one state that has adopted a regulatory provision concerning yield disclosure. In that state, Administrative Code Section Ins. 2.15 provides that:

   > "Any sales presentation for an arrangement subject to the provisions of this section which purports to show a yield, or return or any items of similar import must disclose in an at least equally prominent manner the Effective Yields at Maturity."

2. While the Buyer's Guide refers to the disability waiver of premium benefit that is sometimes offered with annuity contracts, the regulation is silent as to how the premiums for this benefit, or for any optional benefit, should be handled in developing the Contract Summary. Affected are Contract Summary item 9a, relating to the amount of the gross consideration, and item 13, relating to the yield on the gross considerations.

   We would suggest an approach consistent with that adopted for the NAIC Life Insurance Solicitation Model Regulation. Under that model regulation, premiums are required to be shown separately for the basic policy and for each optional rider, but life insurance cost indexes are not required for optional riders limited to benefits such as disability waiver of premium and accidental death benefits. A consistent treatment for the proposed Contract Summary would involve showing the annuity considerations separately for the basic contract and for any optional benefits, and for basing the yield on gross considerations only on that part of the considerations applicable to the basic contract benefits (i.e., after excluding any considerations applicable to optional benefits).

3. There are two typographical items we would like to point out:

   Section 5.B, sentence beginning on the fifth line - Item 4 should be excluded from the items included in this sentence since item 4 does not refer to any amounts and is therefore inapplicable in the context of this sentence.

   Section 7.F, third line - In the two places where it appears on this line, the word "saving" should read "savings."

Buyer's Guide

1. It would be helpful to include a statement under Types of Annuity Contracts regarding the possible availability of tax-deferred retirement programs. Reference to these arrangements is made toward the end of the Buyer's Guide under Other Points to Consider, but we feel that the addition of an earlier reference would enhance the potential impact on the prospect. Such a reference could be included immediately before the final paragraph of Types of Annuity Contracts and could be phrased along the following lines:

   > "Annuity contracts are often sold in connection with Individual Retirement Account (IRA) or other tax-deferred retirement programs. Consider taking advantage of these if you are eligible."

2. Under Annuity Contract Features, we would suggest a statement in the first paragraph of the charges section to the effect that some charges are fixed by the contract while others may be changed by the company from time to time. Such a statement would be consistent with the approach followed in, for example, the interest section and the benefits section, where the reader is advised as to whether particular items are of a guaranteed nature or subject to change.

In concluding, we wish once again to applaud the work of the advisory committee and to express our agreement with a substantial part of the proposed amendments. If modified as we have suggested, we feel that the committee's proposals should be very helpful in improving the effectiveness of the model regulation.

We thank you for your attention and will be glad to answer any questions you may have.

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ATTACHMENT ONE-B

MODEL ANNUITY AND DEPOSIT FUND DISCLOSURE REGULATION

(As proposed June 1982 by NAIC Advisory Committee on Annuity Disclosure)

Basic text is that adopted by NAIC, June 1978 and modified December 1979
New material is underlined. Bracketed material is deleted.

Section 1. Authority

This rule is adopted and promulgated by (title of supervisory authority) pursuant to sections (insert sections corresponding to Section 4(1)(a) of the Model Unfair and Deceptive Acts and Practices in the Business of Insurance Act) of the Insurance Code.

Section 2. Purpose

A. The purpose of this regulation is to require insurers to deliver to prospects for annuity contracts, for annuity riders to life insurance policies, or for deposit funds accepted in conjunction with life insurance policies or annuity contracts, information which helps the prospect select an annuity or deposit fund, or both, appropriate to the prospect's needs, improves the prospect's understanding of the basic features of the plan under consideration and improves the prospect's ability to evaluate the relative benefits of similar plans.

B. This regulation does not prohibit the use of additional material which is not in violation of this regulation or any other (state) statute or regulation.

Section 3. Scope

A. To the extent hereinafter provided, this regulation shall apply to any solicitation, negotiation or procurement of annuity contracts, or deposit funds accepted in conjunction with individual life insurance policies or with annuity contracts which are subject to this regulation, occurring within this state. The regulation shall apply to any issuer of life insurance policies or annuity contracts, including fraternal benefit societies. <u>For the purpose of this regulation, annuity contracts include annuity contracts to life insurance policies.</u>

B. This regulation shall apply to:

1. Individual deferred annuities and group annuities other than contracts exempted by Section 3 C below.

2. Deposit funds (i.e. arrangements under which amounts to accumulate at interest are paid in addition to life insurance premiums or annuity considerations under provisions of individual life insurance policies or annuity contracts).

C. This regulation shall not apply to:

1. Individual deferred annuity contracts and group annuity contracts which are: (a) variable annuities; (b) [investment annuities; (c)] contracts registered with the Federal Securities and Exchange Commission; [d] (c) contracts which have variable annuity features available at the option of the contract owner.

2. Group annuity contracts whose cost is borne in whole or in part by the annuitant's employer or by an association of which the annuitant is a member. The cost of a contract shall not be deemed to be borne by an annuitant's employer to the extent the annuitant's salary is reduced or the annuitant foregoes a salary increase.

3. Immediate annuity contracts.

4. Policies or contracts issued in connection with employee benefit plans as defined by section 3(3) of the federal Employee Retirement Income Security Act of 1974 (ERISA) as amended from time to time.

5. Individual retirement accounts and individual retirement annuities as described in section 408 of the federal Internal Revenue Code.

6. A single advance payment of specific premiums equal to the discounted value of such premiums.

7. A policyholder's deposit account established primarily to facilitate payment of regular premiums and where the anticipated balance of such account does not exceed twice the sum of the premiums payable in one year on all policies for which premiums are being paid from such account.

<u>Section 4. Buyer's Guide to Annuities</u>

<u>For purposes of this regulation, "Buyer's Guide to Annuities" means the document which contains, and is limited to, the language set forth in the Appendix to this regulation or language approved by (state regulatory authority).</u>

Section [4] <u>5</u>. Contract Summary

A. [The] <u>For</u> purposes of this regulation, "Contract Summary" means a written statement describing the elements of the annuity contract and deposit fund, including but not limited to <u>where applicable, the following</u> items:

1. A prominently placed title as follows: ["Statement of Benefit Information"] <u>"Contract Summary."</u> (This shall be followed by an indentification of the annuity contract or deposit fund, or both, to which the [statement] <u>summary</u> applies.)

2. The name and address of the insurance agent or, if no agent is involved, a statement of the procedure to be followed in order to receive responses to inquiries regarding the Contract Summary.

3. The full name and home office or administrative office address of the insurer which will issue the annuity contract or administer the deposit fund.

[4. The death benefits for the deposit fund, and for the annuity contract during the deferred period, and the form of the annuity payout. In the case where a choice of annuity payout form is provided, this item shall show the payout options guaranteed and the form of annuity payout selected for items 6, 7 and 9 of this section.]

4. <u>One of the options under the contract available for annuity payout. This form of annuity payout should be used for providing information in items 6, 7 and 9 of this section.</u>

5. A prominent statement that the contract does not provide cash surrender values if such is the case.

6. The amount of the guaranteed annuity payments at the scheduled commencement of the annuity, based on the assumption that all scheduled considerations are paid and there are no prior withdrawals from or partial surrender of the contract and no indebtedness to [ths] <u>the</u> insurer on the contract.

7. On the same basis as for item 6 except for guarantees, illustrative annuity payments not greater in amount than those based on (1) the current dividend scale and the interest rate currently used to accumulate dividends under such contracts, or the current excess interest rate credited by the insurer, and (2) current annuity purchase rates. A dividend scale or excess interest rate which has been publicly declared by the insurer with an effective date not more than two months subsequent to the date of declaration shall be considered a current dividend scale or current excess interest rate.

8. For annuity contracts or deposit funds for which guaranteed cash surrender values at any duration are less than the total considerations paid, a prominent statement that such contract or fund may result in loss if kept for only a few years, together with a reference to the schedule of guaranteed cash surrender values required by item 9c of this section.

9. The following amounts, where applicable, for the first [five] <u>ten</u> contract years and representative contract years thereafter sufficient to clearly illustrate the patterns of considerations and benefits, including but not limited to, the [tenth and] twentieth contract [years] <u>year</u> and at least one age from 60-[65 or] <u>70 and</u> at the scheduled commencement of annuity payments: [if any, whichever is earlier:]

   a. The gross annual or single consideration for the annuity contract. <u>Any additional considerations for optional benefits, such as disability premium waiver, should be shown separately.</u>

   b. Scheduled annual or single deposit for the deposit fund, if any.

   c. The total guaranteed <u>death benefit and</u> cash surrender value at the end of the year or, if no guaranteed cash surrender values are provided, the total guaranteed paid-up annuity at the end of the year. Values for a deposit fund must be shown separately from those for a basic contract.

   d. The total illustrative [cash] <u>death benefit and cash surrender</u> value or paid-up annuity at the end of the year, not greater in amount than that based on (1) the current dividend scale and the interest rate currently used to accumulate dividends under such contracts or the current excess interest rate credited by the insurer, and (2) current annuity purchase rates. A dividend scale or excess interest rate which has been publicly declared by the insurer with an effective date not more than two months subsequent to the date of declaration shall be considered a current dividend scale or current excess interest rate.

10. For a Contract Summary which includes values based on the current dividend scale or the current dividend accumulation or excess interest rate, a statement that such values are illustrations and are not guaranteed.

<u>11.</u> <u>A statement of all fees, charges, and loading amounts that are or may be deducted from initial or subsequent considerations paid or that are or may be deducted from the contract or fund values prior to or at contract maturity, including but not limited to any surrender penalties, discontinuance fees, partial surrender or withdrawal penalties or fees, transaction fees, and account maintenance fees.</u>

<u>12.</u> <u>A statement of the interest rates used in calculating the guaranteed and illustrative contract or fund values.</u>

<u>13.</u> <u>The yield on gross considerations at the end of 10 years (if the annuity payments have not yet commenced) and at the scheduled commencement of annuity payments. These yield figures shall be shown on both a guaranteed and illustrative basis. They represent the effective annual interest rates at which the accumulation of 100% of all gross considerations would be equal to the guaranteed and illustrative cash surrender values at the points specified. For contracts without surrender values the yields shall be figured on the basis of the contract values used to determine annuity payments at the points specified.</u>

[11]. <u>14.</u> The date on which the Contract Summary is prepared.

B. The Contract Summary must be a separate document. All information required to be disclosed must be set out in such a manner as not to minimize or render any portion thereof obscure. Any amounts which remain level for two or more contract years may be represented by a single number if it is clearly indicated what amounts are applicable for each contract year. Amounts in items 4, 6, 7, [and] 9, <u>and 13</u> of this section shall, in the case of flexible premium annuity contracts, be determined either according to an anticipated pattern of consideration payments or on the assumption that considerations payable will be $100 a month or $1000 per year. If not specified in the contract, annuity payments shall be assumed to commence at age 65 or ten years from issue, whichever is later. Zero amounts shall be displayed as zero and shall not be displayed as blank spaces.

Section [5] 6. Disclosure Requirements

A. The insurer shall provide to all prospective purchasers a Buyer's Guide to Annuities and a Contract Summary prior to accepting the applicant's initial consideration for the annuity contract, or in the case of a deposit fund, prior to acceptance of the applicant's initial consideration for the associated life insurance policy or annuity contract, unless the annuity contract or associated life insurance policy for which application is made provides for an unconditional refund period of at least ten days or unless the Contract Summary contains such an unconditional refund offer, in which event the Buyer's Guide to Annuities and the Contract Summary must be delivered with or prior to the delivery of the annuity contract or associated life insurance policy.

B. The insurer shall provide a Buyer's Guide to Annuities and a Contract Summary to any prospective purchaser upon request.

Section [6] 7. General Rules

A. Each insurer shall maintain at its home office or principal office, a complete file containing one copy of each document authorized by the insurer for use pursuant to this regulation. Such file shall contain one copy of each authorized form for a period of at least three years following the date of its last authorized use.

B. An agent shall inform the prospective purchaser, prior to commencing a sales presentation, that the agent is acting as a life insurance agent and shall inform the prospective purchaser of the full name of the insurance company which the agent is representing to the buyer. In sales situations in which an agent is not involved, the insurer shall identify its full name.

C. Terms such as financial planner, investment advisor, financial consultant or financial counseling shall not be used in such a way as to imply that the insurance agent is generally engaged in an advisory business in which compensation is unrelated to sales, unless such is actually the case.

D. Any reference to dividends or to excess interest credits must include a statement that such dividends or excess interest credits are not guaranteed.

E. A presentation of benefits shall not display guaranteed and nonguaranteed benefits as a single sum unless guaranteed benefits are shown separately in close proximity thereto and with equal prominence.

F. Sales promotion literature and contract forms shall not state or imply that annuity contracts or deposit funds are the same as savings accounts or deposits in banking or savings institutions. The use of passbooks which resemble savings bank passbooks is prohibited.

Section [7] 8. Failure to Comply

Failure of an insurer to provide or deliver a Buyer's Guide to Annuities and a Contract Summary as provided in section [5] 6 shall constitute an omission which misrepresents the benefits, advantages, conditions or terms of an annuity contract or of an insurance policy.

Section [8] 9. Effective Date

This rule shall apply to all solicitations which commence on or after (insert a date at least six months following adoption by the regulatory authority).

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ATTACHMENT ONE-C

WHAT IS AN ANNUITY?

An annuity is a series of payments made at regular intervals. You can buy annuity contracts from life insurance companies. In return for premiums that you pay, the company will pay you an annuity. The main reason to buy an annuity contract is to obtain an income, usually for retirement purposes. An annuity contract is not a life insurance policy or a health insurance policy. It is not a savings account or savings certificate, nor should it be bought for short term purposes.

TYPES OF ANNUITY CONTRACTS

Annuity contracts may be classified in a number of ways. The most common classifications are set out below.

Annuity contracts may be either immediate or deferred. Immediate annuity contracts provide income payments that start shortly after you pay the premium. Deferred annuity contracts provide income payments that start later, often many years later.

Annuity contracts may be either single premium or installment premium. Single premium contracts require you to pay the company only one premium. Installment premium contracts are designed for a series of premiums. Most of these are flexible premium contracts; they allow you to pay as much as you wish whenever you wish, within specified limits. Others are scheduled premium contracts, which specify the size and frequency of your premiums.

Annuity contracts may be either individual or group. Individual contracts cover only one or two persons. Group contracts cover a specified group of people.

Annuity contracts may be fixed, variable, or a combination of both. During the deferred period of a fixed annuity contract, premiums (less charges) are accumulated at rates of interest set by the company. The amount of each annuity payment is determined when payments begin. During the deferred period of a variable annuity, the value of the accumulated premiums (less charges) varies with the performance of a specified pool of investments. The amount of annuity payments also varies with the performance of the pool. Combination annuities allow you to put part of your premium in a fixed annuity and part in a variable annuity.

Some companies offer deposit fund arrangements under the provisions of their life insurance policies or annuity contracts. These arrangements allow you to pay amounts, in addition to your premiums, which will be accumulated at interest in much the same way as under a deferred fixed annuity contract. The balance of this Buyer's Guide deals specifically with deferred fixed annuity contracts and, therefore, is generally applicable to deposit fund arrangements also.

ANNUITY CONTRACT FEATURES

Your value in the contract consists of the premiums you have paid, less charges, plus interest credited. This value is used to calculate the amount of most benefits that you will receive. Charges, interest, and benefits are explained below.

CHARGES

Considerable diversity exists in the types and amounts of charges. Some charges may be fixed at issue; others may be changed by the company from time to time. A typical contract might contain one or more of the following types of charges. Companies may refer to these charges by different names.

Percentage of Premium Charge. This charge, often called a "load," is deducted from each premium paid. The percentage may reduce after the contract has been in force for a certain number of years or after total premiums paid have reached a certain level.

Contract Fee. This is a flat dollar amount charged either once at issue or annually.

Transaction Fee. This is a charge per premium payment or other transaction.

Surrender Charge. This charge is usually a percentage of the value of the contract or of premiums paid. The percentage may be reduced or eliminated after the contract has been in force for a certain number of years. Sometimes the charge takes the form of a reduction in the interest rate credited. In some cases, the charge is eliminated if the interest rate declared by the company falls below a certain level.

INTEREST

The interest rate used to accumulate contract values may never be less than the guaranteed rate stated in the contract. In practice, the interest rate actually used by a company, usually referred to as the "current" rate, is often higher. The company may change the current rate from time to time, but it cannot be lower than the guaranteed rate. Companies differ substantially in their methods of determining the current rate.

BENEFITS

Annuity contracts provide a number of benefits. While the annuity income benefit is the primary one, the other benefits set out below are also important.

ANNUITY INCOME BENEFIT

Income payments are usually made monthly, although other frequencies are available. The amount of the annuity payments is based on both the value of the contract and the contract's "benefit rate" when annuity payments begin. This benefit rate depends on your age and sex, and the annuity form you have chosen.

Annuity contracts contain a table of guaranteed benefit rates. Most companies periodically develop "current" benefit rates as well; these rates are subject to change by the company at any time. When annuity payments begin, the company will determine the amount of each payment according to the current benefit rates then in effect if these are more favorable to you. If the guaranteed benefit rates would provide higher income payments, those rates will be used. Once payments begin, they are unaffected by any future benefit rate changes.

The most commonly available annuity forms are:

Straight Life. The annuity is paid as long as you are alive. There are no further payments to anyone after your death.

Life With Period Certain. The annuity is paid as long as you are alive. If you die before the end of the period referred to as the "certain period," the annuity will be paid to your beneficiary for the rest of that period. Typical certain periods are 10 or 20 years.

Joint and Survivor. The annuity is paid as long as either you or another named annuitant is still alive. In some variations, the annuity is decreased after the first death. A period certain may also be available with this form.

DEATH BENEFIT

Most contracts provide that, if you die before the annuity payments start, the contract value will be paid to your beneficiary. Some contracts provide that the death benefit will be the total premiums paid if that amount is greater than the value of the contract at death.

SURRENDER BENEFIT

Most annuity contracts allow you to surrender your contract if income payments have not yet started. Upon surrender, the contract terminates. The surrender benefit is equal to your contract value less surrender charge, if any.

Many annuity contracts also provide that you may withdraw a portion of your contract value, under certain conditions, without terminating the contract. A surrender charge may be deducted from the amount withdrawn.

WAIVER OF PREMIUM BENEFIT

Some companies offer a benefit which will pay premiums for you if you become disabled. A charge is made for this benefit.

HOW MUCH SHOULD I BUY?

Before buying, ask yourself these questions:

1. How much annuity income will I need in addition to social security, pensions savings, and investments?

2. Will I need an income only for myself or for someone else also?

3. How much can I afford to pay in premiums?

4. How will the annuity contract fit in with my total financial planning?

HOW TO BUY AN ANNUITY

Buying an annuity contract is a major financial decision which should be considered carefully.

CONTRACT SUMMARY

You will receive a Contract Summary when an annuity contract is delivered to you, or you can ask for one now. You should review this statement thoroughly.

Accumulated values and surrender values under the contract are illustrated for various years on this statement. During the first few years, these values may be less than premiums paid. This is why an annuity contract should not be purchased for short term purposes.

Also illustrated is the yield on gross premium at the end of 10 years and at the time income payments are scheduled to begin. Since it takes into account not only the interest credited under the contract, but also the effect of all charges, the yield on gross premiums is a figure you can use to compare annuity contracts. Be careful in comparing this figure with yields available on investments. The tax treatment of annuity earnings is usually substantially different from that of earnings from investments. Also, only annuity contracts offer life income and waiver of premium benefits.

As stated at the beginning of this guide, the main reason to buy an annuity contract is to obtain an income. Therefore, you should also review the life income figures shown in the Contract Summary.

You will note that all values and income figures are shown on both a "guaranteed" and a "current" basis. Illustrations on the guaranteed basis show the minimum values and income which could be paid under the contract. Illustrations on the current basis show the values and income which would be paid if the current interest and benefit rates for the contract were to continue in effect for the period shown. Since it is impossible to predict the future course of interest and benefit rates, you will have to decide for yourself how much to rely on the current basis values when making your purchase decision.

OTHER POINTS TO CONSIDER

Be certain that you understand the effect of all charges that will be made under the contract.

Check whether the annuity contract allows you to change the amount of your premium payments. Find out what happens if you stop paying premiums altogether.

You may want to obtain and compare Contract Summaries for similar contracts from several companies. Comparing these should help you select a good buy.

If you are buying an annuity contract for an Individual Retirement Account (IRA) or another tax deferred retirement program, make sure that you are eligible. Also, make sure that you understand any restrictions connected with the program.

If you are shown a presentation which illustrates tax savings, find out what assumptions are used. Be sure the assumptions apply in your case.

A good agent can help you choose the right annuity contract. Remember that the quality of service that you can expect from the life insurance company and the agent is an important factor also.

READ THE CONTRACT

When you receive your new annuity contract, read it carefully. Ask the agent and company for an explanation of anything you do not understand.

If you have a specific complaint or cannot get the answers you need from the agent or company, please contact your state insurance department.

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ATTACHMENT TWO

Report on the Proposed Amendments to Schedule M on Dividend Disclosure

I am John Harding, senior vice-president and actuary of National Life of Vermont and chairman of the American Academy of Actuaries Committee on Dividend Principles and Practices.

On June 2, 1981, I gave a report to your task force on the results of our work. There were three major areas to consider:

1. Academy adoption of dividend principles and practices

2. Suggestions to you with respect to related consumer disclosures

3. Suggestions to you with respect to related disclosures in Schedule M of the annual statement

The full text of this report can be found in your June 1981 Proceedings. However, I would like to focus on the key elements:

1. Dividend Principles and Practices. Starting with the 1982 dividend scale, the mutual company actuary must write a report to his company that disclosures the basis for the recommended scale and its conformance with the principles and practices.

2. Consumer Disclosure. The intent of our consumer disclosure system is to educate the buyer about different kinds of policies and to provide insight into differences in cost. The existence of the dividend principles and practices provides the opportunity to give more informative, reliable cost comparisons. Our suggestions were made for the purpose of allowing you to take advantage of this opportunity.

3. Schedule M Disclosure. While the Academy of Actuaries can require the actuary to make a written report to company management about a recommended dividend scale, the academy cannot require the company to accept that dividend scale. Therefore, to assure that policyholders are being treated fairly and that dividend illustrations are in fact what they appear to be, we suggest that the actuary be required to disclose the facts in the annual statement. Our suggestion includes a summary of the practices used, a highlighting of any changes in practices, a quantification of changes in a dividend scale and a certification by the actuary that the dividends have been determined, except as disclosed, in accordance with the academy principles and practices. I believe that this Schedule M disclosure is critical to the continued fair treatment of policyholders and to the integrity of any cost disclosure system which relies on the use of dividends.

While there has been some progress since last June, we would antagonize only those who regret the passage of time. There are several areas of progress:

First, our suggestions to you were circulated to Academy of Actuaries membership for informational purposes. While no comment was requested nor received, actuaries are not normally reticent about voicing objection.

Second, the board of the American Council of Life Insurance voted to endorse our suggested modification of Schedule M. John Montgomery has expressed some concern with the form, though not the content of our suggestions. Tony Spano of the ACLI has discussed the problem with John, and we had hoped to resolve the problem with him during this meeting. Since John could not be here, Tony will work with him for a resolution before your next meeting.

Third, our suggestions with respect to consumer disclosure were also endorsed by the ACLI Board. The proposal made this morning at the Life Cost Disclosure Task Force incorporated the academy suggestions. It should work well. I must emphasize, however, that the credibility of dividend illustrations incorporated in that disclosure will be impaired until Schedule M disclosure is mandated.

While we work to resolve the dividend issues, there are those who say that we are at best deciding what color to paint a dinosaur. The pricing issues are similar for such products as universal life and indeterminate premium life. A committee of the Society of Actuaries is actively working on the development of principles and practices for pricing of these emerging products. They hope to publish their report this fall. At the appropriate time, the academy will commence work similar to what we have done with the dividend issues.

However, we should not wait for the resolution of these emerging issues. We should proceed as soon as possible with the dividend problem, establishing regulatory support in Schedule M and enhancing consumer disclosure.

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EXHIBIT B

Possible Schedule M Disclosure
Statement Year 1981

Identify the participating ordinary life business which is not subject to the actuarial principles and practices of the American Academy of Actuaries applicable to the determination of dividends paid by mutual companies. Answer the questions and state the opinion below which apply with respect to any other participating business.

<u>Process of Dividend Determination</u>

Describe the general methods and procedures used to determine dividends.

<u>Description of Experience Factors</u>

Describe the basis used in making any distinction in experience factors which underlie the determination of dividends. The description should specifically include:

a. investment income factors
b. claims factors
c. expense factors
d. termination factors
e. any other factors which have a material effect on the dividends of any group of policies

Also, describe in a qualitative way any material changes made in the bases used to determine those factors since this schedule was last filed.

<u>General Interrogatories</u>

1. Has the contribution principle been followed in determining dividends?

   If no, describe.

2. Since this schedule was last filed, has any material change occurred with respect to the determination of policy factors?

   If yes, describe.

3. a. Since this schedule was last filed, have there been any changes in the scales of dividends on new or existing business authorized for illustration by the company?

   If yes, describe in general the changes that were made.

   b. Since this schedule was last filed, have there been any changes in the scales of dividends apportioned for payment?

   If yes, describe in general the changes that were made.

   c. For each major block of business, indicate when the dividend scale was last changed (including changes described in b. above) and indicate the extent of such change in terms of the percentage by which dividends payable under the new scale exceeded or were less than those which would have been paid in the year of change had the scale not been changed.

4. Does the dividend scale incorporate the use of projections or forecasts of experience factors for any period in excess of two years beyond the effective date of the scale?

   If yes, describe.

5. In the basis of determining investment income experience factors, state whether the company uses (a) a portfolio average approach, (b) an investment generation approach, or (c) a combination of the two approaches.

   If (b) and (c), describe the general basis used, including the issue year groupings.

6. With respect to policy loan provisions:

   a. Describe how differences in such provisions affect dividends.

   b. Does the dividend scale contain any provision for varying the amount of dividend in accordance with the extent to which an individual policy's loan provision is utilized?

   If yes, indicate the blocks of business where this treatment pertains, and describe the basis of variation used.

7. Does the company pay termination dividends on its policies? If yes:

   a. Are they payable on death, surrender and maturity?

   b. Are they payable or credited either upon the commencement of non-forfeiture insurance or upon termination thereof by death, surrender, or maturity?

   c. Do they reflect the incidence, size, and growth of amounts which may be attributed to the policies in question?

   If the answer to a., b., or c. is no, describe the basis used.

8. Does the undersigned believe dividends illustrated on new or existing business can be paid if current experience continues?

   If no, explain why.

9. Does the undersigned believe there is a substantial probability that because of the expected deterioration of experience, the dividends illustrated on new or existing business cannot be maintained for at least two years?

   If yes, explain why.

10. Describe any aspects of the determination of the dividend scale not covered above which involve material departures from the actuarial principles and practices of the American Academy of Actuaries applicable to the determination of dividends paid by mutual companies.

11. Describe any material changes in the basis of determination of the dividend scale which were made since this schedule was last filed and which are not covered above.

Actuarial Opinion

I, ________________ (name, title) ________________ , am ________________ (relationship to company) and a member of the American Academy of Actuaries. I have examined the actuarial assumptions and methods used in determining dividends under the dividend scale for the individual participating life insurance policies of the company issued for delivery in the United States. The dividends encompassed by this scale are both:

i) those apportioned for payment during 1982; and

ii) those in effect as of January 1, 1982 which are illustrated for payment on new or existing business in 1983 and later and which are authorized for illustration by the company.

My examination included such review of the actuarial assumptions and methods of the underlying basic records and such tests of the actuarial calculations as I considered necessary. In my opinion, these dividends have been determined in accordance with actuarial principles and practices of the American Academy of Actuaries applicable to the determination of dividends paid by mutual companies, except as described above.

Date ________________ Name and Title ________________

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ATTACHMENT THREE

SYNOPSIS

The (C3) Cost Disclosure Task Force accepted the initial report of the NAIC Advisory Committee on Policy Lapsation covering a lapse disclosure system, and then asked the advisory committee to proceed to test the technical adequacy of the proposal. Questionnaires were developed by the advisory committee for the purpose of collecting industry lapse data and auxiliary information. In the fall of 1979, the questionnaires were mailed from the NAIC Central Office to 1,100 life insurance companies.

Following are the main findings and recommendations from the information received and the tests made of the proposed system.

Costs of the Proposal and Time Needed to Implement It

The cost of developing the system for companies that do not have similar lapse monitoring procedures in place averages about $20,000. For many companies the time needed to develop systems where none exist is about one year. Subsequent ongoing costs average about $3,000 per year.

A three-year introduction period is recommended to permit adequate time for companies to develop necessary procedures and accustom themselves to the requirements. During this period, companies would submit annually either the required numerical report or a narrative report describing their progress toward installing the system.

Verification of Test Data

Usable lapse data were received from companies that have 72 percent of the total ordinary insurance in force in the United States. Various tests indicated that the data were representative not only of the industry as a whole but also of various segments of the industry.

The effect of subdividing the calculations into a two-dimensional breakdown -- by type of business and duration -- was tested and compared with the effect of using only a single aggregate lapse rate. Clearly, lapse experience varies for different lines of business and for business with different lengths of time in force. A single rate would not properly recognize this. Additional characteristic breakdowns (e.g., mode, age) would provide further insights, but practical considerations strongly suggest that a tradeoff of accuracy for simplicity is appropriate.

Reporting Forms

The form shown in Exhibit 1 is recommended for reporting lapse results in the form of ratios of actual experience to standard experience based on industry norms. It is further recommended that the report be submitted to the insurance commissioner of the state of domicile separately from the annual statement and be due in September of each year following the year of exposure, e.g., 1981 lapse report due September 1982.

Standard lapse rates, as shown in Exhibit 2, are recommended for use in calculation of lapse ratios. These standard lapse rates are calculated from data reported by companies for the test purposes, weighted by their respective amounts in force; i.e., standard lapse rates in each report cell are generally determined as if the industry were one giant company. To reduce the possibility of over-representation, however, the exposure of any company in any one cell has been limited to ten percent of the total observed.

As a practical matter, it is suggested that the standards be held constant for a period of years and updated only periodically as the need arises.

The advisory committee recommends that under this system, companies be considered for lapse review when the "all policy years" lapse ratio for any of the tabular lines of business is 200 percent or more; that is, the company's actual lapse experience is twice the standard. Companies whose critical ratios touch the trigger point may attach to their regular submission additional analyses and/or corrective action plans for consideration.

Insurance Industry Profile

Chapter III provides an industry profile of the companies that submitted responses to the auxiliary questionnaire. These companies represent 99 percent of the ordinary insurance in force in the United States. The profile gives perspective to the types of operations and the diverse persistency practices in the industry.

INTRODUCTION

A. Background Information

In November 1977, the Life Insurance (C3) Cost Comparison Task Force[1] formed the Advisory Committee on Policy Lapsation and assigned the following charge to the committee:

1. To develop a lapse rate disclosure system.

2. To reply to the following global lapse questions:

    a. Is there a lapse problem?
    b. How extensive is the lapse problem?
    c. What are the factors affecting persistency?
    d. What effect do lapses have on rates for all other insureds?
    e. What is the extent of injury to consumers where a high lapse rate exists?
    f. What possible solutions may we find?

The advisory committee completed its given assignments and submitted a report to the (C3) Cost Disclosure Task Force in December 1978. A summary of this report may be found in Appendix A, while the report in its entirety may be found in the NAIC Proceedings.[2]

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1. In 1980, following reallocation of NAIC task force assignments, this task force was renamed the Manipulation, Lapsation, Dividend Practices, and Annuity Disclosure Task Force and is under the continued leadership of Ms. Erma Edwards, CLU, FLMI, of the Nevada Insurance Division.

2. 1979 Volume I, page 575.

B. Supplementary Assignment to Advisory Committee

In its December 1978 report, the advisory committee recommended that the National Association of Insurance Commissioners (NAIC) not take action on the report for at least a six-month exposure period and then, if the disclosure system seemed appropriate, ascertain that the system is thoroughly tested before further NAIC action is taken.

Position papers and verbal responses concerning the proposed lapse disclosure system were presented by insurance industry representatives at the June 2, 1979, (C3) Cost Disclosure Task Force meeting. In closed session following this meeting, the task force voted to ask the advisory committee to test the technical adequacy of its lapse disclosure system by collecting the required data from a broad range of companies using the Life Insurance Marketing and Research Association (LIMRA) as the data collection and analysis center, and to submit the results to the task force along with guidelines for its use.

The (C3) Cost Disclosure Task Force planned, in turn, to circulate this supplementary report to the commissioners and ask their response as to the usefulness of the disclosure information to their departments.

C. Advisory Committee Activities

In order to implement this new charge without delay, the advisory committee held a full-day meeting on June 28, 1979, at the Metropolitan Life Insurance Company to develop procedures to be used in testing the advisory committee's proposed lapse rate disclosure system. The committee decided that each company should receive the following in the testing procedure:

1. A reference description of the lapse disclosure system developed by the advisory committee.

2. A questionnaire concerning company informational items, persistency practices, and cost and time factors of the proposed lapse disclosure system.

3. Reporting forms for the lapse disclosure test data along with a questionnaire for auxiliary information that may be useful in explaining lapse variances.

In the ensuing months, the committee developed these testing vehicles and on September 28, 1979, the NAIC Central Office mailed the material with a cover letter from J. Richard Barnes, CLU,[3] chairman of the NAIC Life Insurance (C3) Subcommittee, to the 1,101[4] legal reserve life insurance companies actively selling ordinary life insurance in the United States (Appendix B). Commissioner Barnes directed companies to send questionnaire responses and test data to LIMRA within specified time periods.

From October 1979 through May 1980, LIMRA collected and edited company responses, replied to company inquiries, established and programmed the analytical procedures for data tabulations, and made initial observations and interpretations of the questionnaire and test data results. The advisory committee then met on May 27 and 28, 1980, at LIMRA headquarters for a day and a half to interpret the results, to make decisions concerning the proposed disclosure system, and to begin making an outline of the second report to the (C3) Cost Disclosure Task Force.

The committee presented progress reports to the (C3) Cost Disclosure Task Force at the following meetings:

September 25, 1979 -- Detroit, Michigan
March 26, 1980 -- Tampa, Florida
June 15, 1980 -- Denver, Colorado
November 30, 1980 -- New York, New York

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3. Commissioner of the Colorado Insurance Division

4. The total of 1,870 United States legal reserve life insurance companies quoted in the American Council of Life Insurance's 1980 Fact Book (page 89) as being in business at the end of 1979 includes companies writing other than direct-written ordinary life insurance; i.e., reinsurance companies, credit life companies, industrial companies, and group companies.

D. The Current Report

This report begins with a section that lists the highlights of the current report. The body of the report contains the results of the feasibility test and a full report on the recommended administrative procedures. In addition, the report includes one section describing the market characteristics of the insurance industry and another section outlining the current persistency practices within the industry. The report concludes with an appendix of supplementary material.

E. Commentaries

While testing the feasibility of the lapse disclosure system, the advisory committee has continued to serve the NAIC in a purely technical capacity. The committee believes that the system it developed is an equitable and practical response to its charge.

It is an established fact that company lapse[5] rates will differ according to market characteristics, types of products sold, and the experience of the agency force. The lapse disclosure system developed by the advisory committee is not intended to recognize all of these market, product, and agency force differences but is intended only to assist the NAIC in discerning possible persistency problems within the industry.

F. Acknowledgements

The committee wishes to note LIMRA's contribution to the feasibility study by acting, in response to the NAIC's request, as the collection and analysis center during the testing period, and to acknowledge the special technical contributions of Joseph R. Brzezinski, ASA, director -- actuarial research, LIMRA, during this period.

The committee also wishes to mention the following nonmembers who attended and participated in committee meetings: Eugene W. Bates,[6] senior vice president, Western-Southern Life Insurance Company; John K. Booth, vice president and chief actuary, ACLI; Ronald J. Doane,[7] assistant general counsel, Equitable Life Assurance Society of the United States; Anthony T. Spano, associate actuary, ACLI; and Elizabeth Tovian, assistant vice president -- financial research, LIMRA.

G. Advisory Committee to the NAIC on Policy Lapsation

Helen T. Noniewicz -- Chairman
Assistant Vice President --
Manpower and Market Research
Life Insurance Marketing and Research Association

Howard D. Allen, FSA, MAAA
Senior Vice President -- Technical Services
(Alternate member:
Jan C. Brown, FSA, MAAA
Associate Actuary)
John Hancock Mutual Life Insurance Company

Wilson L. Forker, CLU
Second Vice President -- Marketing
(Alternate member:
Thomas J. Young, FSA
Actuarial Vice President)
Equitable Life Insurance Company of Iowa

William M. Snell, FSA, MAAA
Associate Actuary
The Northwestern Mutual Life Insurance Company

Roger Stroud, CLU
Director, Sales Development
(Alternate member:
Alf H. Anderson, ASA
Associate Actuary)
IDS Life Insurance Company

Bert van Uitert, FLMI
Second Vice President, Marketing Research & Planning
(Alternate member:
Jon Humphries
Director, Marketing Research & Planning)
New England Mutual Life Insurance Company

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5. Lapse references in this report pertain to surrenders as well as lapses for no value.

6. Chairman, American Council of Life Insurance (ACLI) Task Force on Lapsation Study

7. Committee member, ACLI Task Force on Lapsation Study

Bartley L. Munson, FSA, MAAA
Vice President and Actuary -- Insurance Products
(Alternate member:
Larry Peterson, FSA, MAAA
Associate Actuary)
Aid Association for Lutherans

Julius Vogel, CLU, FSA, MAAA
Senior Vice President and Chief Actuary
(Alternate member:
Harold R. Greenlee, FSA, MAAA
Vice President and Assistant Actuary)
The Prudential Insurance Company of America

W. Keith Sloan, FCA, MAAA, FLMI
Assistant Actuary
Lumberman's Mutual Casualty Insurance Company
(Alternate member:
James F. Allen, FSA
Associate Actuary
Federal Kemper Life Assurance Company)

Frank Zaret, FSA, MAAA
Actuary
Metropolitan Life Insurance Company

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EXHIBIT 1

Company ____________
Reported by ____________
Title ____________
Date ____________

NAIC Group Code ____________
NAIC Company Code ____________
Federal Employer Identification Number ____________

SUMMARY FOR YEAR ________

Ratios of Actual to Standard Lapses for
Insurance Products by Policy Duration
Based on Amounts of Insurance in the United States

Type of Product

Policy Years	Debit Ordinary (Worksheet A)	Pension Trust (Worksheet B)	Permanent Ordinary (Worksheet C)	Term Ordinary (Worksheet D)
1	______ %	______ %	______ %	______ %
2	______	______	______	______
3-5	______	______	______	______
6-10	______	______	______	______
11+	______	______	______	______
All Durations	______ %	______ %	______ %	______ %

REMINDERS

1. *Place an asterisk (*) next to any lapse ratio based on an exposure of less than 100 policies.*

2. *If a product was combined with another product due to a small (less than 5 percent) representation of the company's total volume in force, please so indicate in the appropriate column.*

3. *Exhibit 1 is to be mailed to the commissioner of insurance in the state of domicile by September 1 of each year.*

INTERROGATORIES

1. a. Reporting basis:

☐ Calendar-Year Exposure

☐ Policy-Year Exposure

b. Has the method of calculating exposures changed since your last report?

☐ Yes ☐ No

2. a. Data basis for your exposures and lapses:

☐ Face Amounts

☐ Premium Amounts

☐ Number of Policies

b. Has your data basis changed since your last report?

☐ Yes ☐ No

3. Is the "all durations" ratio 200 percent or greater on any type of product for which more than 100 policies are exposed?

☐ Yes ☐ No

4. If the answer to question 3 above is "yes":

a. Is any further analysis of additional market characteristics (such as age, occupation, mode of premium payment, etc) that may affect persistency attached?

☐ Yes ☐ No

Or being prepared? ☐ Yes ☐ No

b. Has any plan of corrective action already been undertaken with insurance department knowledge?

☐ Yes ☐ No

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EXHIBIT 2

LAPSE DISCLOSURE RECORDS

WORKSHEET A

UNITED STATES DEBIT ORDINARY BUSINESS

plus ______________
(if applicable)

Calculation of Ratios of Actual to Standard Lapses for the Year _____by Policy Duration:

Policy Years	(1) Amount Exposed (incl. Riders)	(2) Standard Lapse Rate	(3) Standard Lapses (1) x (2)	(4) Actual Lapses	(5) Actual to Standard Lapse Ratio (4) ÷ (3)
1	$ ______	.341	$ ______	$ ______	______ %
2	______	.221	______	______	______
3-5	______	.105	______	______	______
6-10	______	.060	______	______	______
11+	______	.036	______	______	______
All Durations	$ ______	xxxx	$ ______ (6)	$ ______ (7)	______ % (8) (7) ÷ (6)

WORKSHEETS B, C, and D follow the same format as WORKSHEET A with a change in the name of the type of product and the following standard lapse rates:

	Type of Product*		
Policy Years	Pension Trust	Permanent Ordinary	Term Ordinary
1	.149	.173	.162
2	.139	.100	.151
3-4	.105	.062	.108
6-10	.082	.043	.076
11+	.080	.027	.054

*All types of products include attached riders

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EXHIBIT 3

INSTRUCTIONS AND DEFINITIONS

EXHIBIT 1

a. Mail to the commissioner of insurance of your state of domicile by September 1 of each year.

b. The summary table shows the column five entries of worksheets A, B, C, and D from Exhibit 2. If any product category contains less than five percent of your total volume in force, you have the option of combining that product with another. If this is done, so indicate on the report form. Also, identify with an asterisk (*) any lapse ratio in any cell where the exposure is based on less than 100 policies.

c. Enter the year that the report covers.

d. Complete the interrogatories in every case. A ratio of 200 percent of higher may be eliminated by further analysis, as shown in Exhibit 4. A company may submit the supplementary analysis with the basic summary table.

EXHIBIT 2

a. Calculation of Exposure and Lapses

Amounts exposed and lapsed and allocation of exposure and lapses to particular policy year or policy-year grouping should be accomplished using one of several accepted actuarial methods. Techniques described in the Society of Actuaries' syllabus of examinations for measurement of mortality could be adopted for this purpose, substituting lapses for deaths, and deaths and other terminations for withdrawals.

Appendix F gives an introduction to long-term lapse measurement based on the assumption that individual policy records are available. If grouped data are to be applied in the calculation process, the following references may be used for the group method:

1. Measurement of Mortality, H. Gershenson (Society of Actuaries)

2. Mortality Table Construction, R. W. Batten (Prentice-Hall, Inc.)

b. Definitions of Data

Include face amount direct-written (i.e., including reinsurance ceded but excluding reinsurance assumed) ordinary business on residents of the United States. Exclude credit life and industrial life.

1. Exposures

Include:

(a) Premium-paying business only

(b) Term rider coverage with the basic policy

Exclude:

(a) Policies with preliminary term coverage for less than one year, during the preliminary term period

(b) Group conversions

Scheduled changes in coverage may be leveled by using average amounts.

2. Lapses

Lapsation means termination by lapse, surrender, or application of reduced paid-up or extended term options for premium-paying policies only.

Include as lapses:

(a) The nonrenewal of renewable term insurance

(b) The amount of insurance reduced in partial surrenders or in policy plan changes

Do not include as lapses:

(a) Policies terminated by death, maturity, expiry, transfer to automatic premium loan status, or the end of the stipulated premium-paying period

(b) The lapsation of term policies due to conversion to permanent insurance

Lapses must be based on the same block of business as defined in the exposures. Reinstatement should be handled in a manner consistent with the treatment of the original lapse; i.e., the amount reinstated should be the same as originally lapsed and should be assigned to the same policy year as the original lapse duration.

c. Actual to Standard Lapse Ratio (Column 5) is calculated by dividing actual lapses (Column 4) by standard lapses (Column 3). The ratio of actual to standard lapses for the all durations line (Item 8) is found when the total of actual lapses (Item 7) for all durations is divided by the total of standard lapses (Item 6).

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EXHIBIT 4

PROCEDURE FOR ADDITIONAL NORMALIZATION OF LAPSE DATA

Suppose that a company's actual to standard lapse ratio under the disclosure formula is 120 percent for policy year one, an amount that the company may consider to be on the high side.

TYPE OF PRODUCT – POLICY YEAR 1

Mode of Premium Payment	(1) Amount Exposed (incl. Riders)	(2) Standard Lapse Rate	(3) Standard Lapses (1) x (2)	(4) Actual Lapses	(5) Actual to Standard Lapse Ratio (4) ÷ (3)
			Basic Disclosure Formula		
All Modes Combined	1,000	.17	170	204	120% (= a non-normalized ratio as to premium mode)

The company feels that its modal distribution (namely, annual, semiannual, quarterly, and monthly) is different from the industry's, causing its higher than normal actual to standard lapse ratio. In order to study the modal effects on first-year lapse rates, the company may proceed as follows:

Mode of Premium Payment	Amount Exposed (incl. Riders)	Standard Lapse Rate	Standard Lapses (1) x (2)	Actual Lapses	Actual to Standard Lapse Ratio (4) ÷ (3)
		Basic Disclosure Formula Expanded to Reflect Modal Variations			
Annual	300	.12	36	30	83%
Semiannual	100	.16	16	14	88
Quarterly	200	.22	44	40	91
Monthly	400	.26	104	120	115
All Modes Combined	1,000	xxx	200	204	102% (= a normalized ratio as to premium mode)

The lapse ratio further normalized for mode of premium payment becomes 102 percent, suggesting that the company's first-year lapse rate is quite normal. The reason for the actual to standard ratio of 120 percent on the nonnormalized premium mode basis is the disparity in distribution of first-year business by mode between the company and the industry, and this is not recognized in the simplified disclosure calculation.

Actually, the components of the calculation show that the company is not "quite normal." Its poorer than average experience on monthly business is balanced by superior performance on the other modes. The place to start to improve persistency in duration one is with the monthly mode.

The method described above is equally applicable to other characteristics, individually or in combination. It should be understood that the more factors simultaneously taken into account, the more complex will be the calculation. Also, industry standard lapse rates would have to be available for items under review.

The additional analysis of variables affecting persistency may be submitted with the lapse disclosure report (Exhibit 1) to explain lapse ratios in the critical review range.

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ATTACHMENT FOUR

STATEMENT ON BEHALF OF THE
AMERICAN COUNCIL OF LIFE INSURANCE
TO THE
NAIC (A) COMMITTEE'S MANIPULATION,
LAPSATION, DIVIDEND PRACTICES AND
ANNUITY DISCLOSURE TASK FORCE

June 8, 1982

My name is Anthony T. Spano, actuary with the American Council of Life Insurance. This statement is presented on behalf of the council, whose 529 member companies account for about 96 percent of the life insurance in force in the United States.

We appreciate this opportunity to comment on the lapse disclosure system proposed by your Advisory Committee on Policy Lapsation. Our statement today incorporates many of the remarks we presented at your task force meeting on June 2, 1979 and which we have reiterated at subsequent meetings, but also contains some new observations that have a significant bearing on this subject.

Comments on Proposed Lapse Disclosure System

As we have indicated, we are in basic agreement with much of the advisory committee's first report, presented in December, 1978, and feel that it furnishes an excellent analysis of the subject. In particular, we think that the information in Chapter VI of the report concerning techniques for improving policy persistency can be very useful to companies experiencing lapse problems. On the other hand, we must emphasize our serious and increased concerns with the proposed disclosure system described in the advisory committee's reports of December, 1979 and June, 1981. The following are some of our continued misgivings:

1. Serious questions about the potential value of the required data to the regulators, especially since we are not aware of any information concerning the extent to which regulators feel the proposed system would be useful.

2. Susceptibility of the data to abuse and misuse on account of the information being available for public use without appropriate interpretation.

3. Failure of the proposed system to recognize many characteristics that are highly influential in determining lapse rate levels.

4. Concern that adoption of the proposed system might induce companies to abandon or not enter some legitimate and socially desirable markets, in order to avoid the risk of high lapse experience.

5. Questions as to the credibility of the data that would be produced, especially in the case of smaller companies.

6. Concern about the cost of producing the required data, especially for smaller companies.

In addition to these concerns that we have been expressing since this disclosure system was first recommended, we feel that recent changes in the insurance marketplace have served to magnify the shortcomings of the proposed system. The introduction of a wide variety of new life insurance products and the increase in policy replacement activity clearly have reduced further the extent to which the system could be at all effective in interpreting and improving persistency experience. As examples of the additional problems resulting from these recent events, we cite the following:

1. The product commonly referred to as "universal life insurance" has aroused considerable attention and is being marketed to an increasing extent. Under a universal life insurance policy, the insured has considerable flexibility with respect to the amount and timing of premium payments. It is possible for the insured to skip premium payments and still have the policy continue in force, even until the point at which the policy expires or matures. Under these circumstances, when is a policy to be considered as having lapsed for the purpose of the proposed disclosure system? How about the situation where a premium is paid, but at a substantially lower level than the policyholder had been paying? Should this be considered a partial lapse and, if so, how should the amount lapsed be measured?

2. Another recent product is "adjustable life insurance." The policyholder must pay premiums on the specified due dates but can request changes in the amount of the premium, the amount of insurance, or the plan of insurance. The policy thus can be changed from a permanent insurance plan to a term plan, and vice versa. How are such policies to be handled under the advisory committee's proposed system, which calls for a separation of the experience between permanent and term insurance?

3. Nonparticipating insurance is now being written on an adjustable-premium or "indeterminate-premium" basis, under which the company can change the premium rate after issue subject to a maximum premium rate guaranteed in the policy. Lapse experience under these policies would be expected to be different from the experience under corresponding policies issued on the traditional "guaranteed-cost" basis, which do not provide for premium rate changes after issue. Under the advisory committee's proposal, experience under these two different types of plans would be grouped into one reporting category, thus further reducing the possibility of any meaningful interpretation of the results.

4. Another recent marketplace phenomenon has been a sharp increase in replacement activity, with indications that perhaps half of all lapses involve replacement situations. The revised NAIC Life Insurance Replacement Model Regulation adopted in 1978 is based on a recognition that a replacement is not necessarily disadvantageous to a policyholder, i.e., some replacements are well-justified and definitely in the consumer's interest. One can see the

obvious conflict between a company trying to maintain good persistency, which would mean combating all replacement activity, and trying to promote the policyholder's best interest, which sometimes would mean not resisting a replacement. The higher the volume of replacements, the more serious would be the company's dilemma.

With all these disadvantages and problems, we feel it is not possible, especially in today's economic times, to justify a requirement that companies comply with the proposed lapse disclosure system. Using the advisory committee's estimate that the average cost per company of developing the proposed system is $20,000, it is clear that the cost for the industry would run well into the multimillion dollar range. Certainly, it is to a company's best interest to improve policy persistency, and the advisory committee's original report points out that companies use many means to improve their lapse experience. In lieu of the advisory committee's proposal, which would add needlessly to company expense without producing meaningful and useful results, we would urge an alternate approach that would make use of mechanisms and procedures that many companies already have in place and that would be effective in helping to analyze and improve lapse experience.

Recommended Alternate Approach

The following are the features of the council's recommended alternative to the advisory committee's proposal:

1. Lapse performance would be reviewed as part of the periodic examination of companies by insurance departments. This would enable regulators to make meaningful analyses of both the level of the company's lapse experience and the effectiveness of its efforts to control this experience. They also will be able to determine whether company sales practices are causing excessive lapses.

2. Regulators would conduct special reviews between examination intervals to handle critical problems that might arise for a particular company and that require immediate attention.

3. Companies would be asked to develop lapse rates and make them available for examination by the regulators. It is recommended that lapse rates be required only for the first policy year. The greatest losses to policholders and companies arise from first-year lapses, and such lapses are more amenable to company control than those occurring in later policy years. Given these factors and especially considering the volume of recent replacement activity, the development of lapse rates for policy years after the first would add to the efforts required of the companies without producing comparably valuable information for the regulators.

4. With the level of lapse experience influenced by numerous characteristics, the calculation of actual-to-expected ratios as suggested by the advisory committee would carry with it the strong possibility of producing distorted conclusions about the quality of a company's performance. For this reason, we recommend that companies not be asked to calculate actual-to-expected ratios. Instead, we propose that a table be developed showing appropriate first-year lapse rate ranges for the major characteristics that affect policy persistency. This table would be in a form that can be used by regulators in interpreting a company's experience. In this connection, the general trend of a company's experience should be an important element of this interpretation.

5. The advisory committee's proposal calls for a subdivision of lapse results into four categories of business: debit ordinary, pension trust, permanent ordinary, and term ordinary. While these classifications seem reasonable, companies should be free to develop data for different or additional classifications that might facilitate a more meaningful analysis of their experience, particularly where companies already have in place an effective lapse analysis system. The recent introduction of many varieties of nontraditional products gives additional importance to this consideration.

6. Companies and regulators should be encouraged to study and make use of the material presented in Chapter VI of the advisory committee's first report. This chapter contains an excellent description of techniques that can be effective in improving persistency experience.

This alternate approach would enable that full collective effort between the company and the regulator that is so important in achieving common goals. By providing meaningful and timely information, this recommended approach should be effective in helping to achieve a general improvement of lapse experience to the benefit of the industry, the regulator, and the consumer.

We thank you for your attention and will be glad to answer any questions you may have.

VARIABLE LIFE INSURANCE (A) TASK FORCE

Reference:
New task force

Robert C. Quinn, Chairman -- California
William H. L. Woodyard, III, Vice-Chairman -- Arkansas

AGENDA

1. Review of advisory committee reports.

2. Any other matters brought before the task force.

CONTENTS

The Variable Life Insurance (A) Task Force met in Dominion B Room of the Franklin Plaza Hotel in Philadelphia at 1:00 p.m. on June 7, 1982. A quorum was present and Robert C. Quinn chaired the meeting. The following task force members were present: Robert C. Quinn, California; William H. L. Woodyard, III, Arkansas; Johnnie L. Caldwell, Georgia; Bruce W. Foudree, Iowa; Don H. Miller, Indiana; Michael J. Sabbagh, Massachusetts; Albert B. Lewis, New York; and Lyndon L. Olson, Jr., Texas.

1. Review of Advisory Committee Report

The chairman first noted that the task force had met in Oklahoma City *(Attachment One)* and received a report on the ACLI task force progress on a draft variable life insurance regulation *(Attachment Two)*. Jerry Rosenblum of CIGNA presented the ACLI task force exposure draft of variable life regulations which encompass flexible premium insurance *(Attachment Three)*. Gary Hughes of the ACLI then gave a section summary analysis of the proposed regulation *(Attachment Four)*. Commissioner Foudree suggested an amendment to the exposure draft in Article 6 section 6 (A) providing for notice to the commissioner of insurance of the filing but not mandating that the commissioner approve the filing.

The task force ~~adopted~~ [received as an exposure draft] the report and exposure draft with the above amendment for review in time for the NAIC meeting in Nashville. Ted Becker of the Life Insurance Staff Actuarial Group offered to help the task force review the exposure draft. The chairman agreed to make this offer a part of the record. *[Editor's Note – Material lined through was deleted and material bracketed was added by the Executive Committee. See p. 14]*

There being no further business, the task force adjourned.

Robert C. Quinn, chairman, California; William H. L. Woodyard, III, vice-chairman, Arkansas; Johnnie L. Caldwell, Georgia; Bruce W. Foudree, Iowa; Don H. Miller, Indiana; Michael J. Sabbagh, Massachusetts; Albert B. Lewis, New York; Lyndon L. Olson, Jr., Texas.

ATTACHMENT ONE

VARIABLE LIFE INSURANCE REGULATION (A) TASK FORCE

Oklahoma City, Oklahoma
April 5, 1982

The Variable Life Insurance Regulation (A) Task Force met in the Venetian Room of the Skirvin Plaza in Oklahoma City, Oklahoma at 10:15 a.m. on April 5, 1982. A quorum was present and Robert C. Quinn chaired the meeting. The following committee members were present: Robert C. Quinn, chairman (California); William H. L. Woodyard, III, vice-chairman (Arkansas); Bruce W. Foudree (Iowa); Don H. Miller (Indiana); Albert B. Lewis (New York); Lyndon L. Olson, Jr. (Texas).

The meeting was called to order by Chairman Robert C. Quinn and the agenda items are as follows:

1. Report by (A) Committee Staff-Actuaries Group

Mr. Becker, on behalf of the Actuarial Committee, requested guidance from the task force on further involvement. This matter will be reported to the (A) Committee. The task force received the report.

2. The Report by the American Council of Life Insurance

Jack Blaine, general counsel, and Jerry Rosenblum of CIGNA reported on industry activities to conform the variable life regulations for flexible premium insurance. They indicated a draft to this task force would be ready for the June NAIC meeting. There is an apparent duality of regulation between security and insurance regulators. The task force acted by receiving the report.

3. Report by Ad Hoc Universal Life II Committee

Paul Mason spoke, See Attachment One-A.

Jerry Golden of the Variable Life Products Committee reported on variable life regulation activity. He indicated a lack of current actuarial questions. Definition of variable life insurance is included in his March 22, 1982 letter to the Actuary Advisory Committee (Attachment One-B). He mentioned four long term projects and they are as follows:

a. Reserves for incidental charges for insurance benefits for the separate accounts.

b. How to divide investments by general kind other than special enumeration.

c. Development of group permanent variable life.

d. Review of standards of illustration for these products.

The task force took action by receiving the report.

4. Discussion of Projects and Timetable for Completion

Exposure draft to be submitted by ACLI to task force at the June, 1982 meeting for possible adoption at the December meeting.

There being no further business, the meeting adjourned at 11:15 a.m.

Robert C. Quinn, chairman, California; William H. L. Woodyard, III, vice-chairman, Arkansas; Johnnie L. Caldwell, Georgia; Bruce W. Foudree, Iowa; Don H. Miller, Indiana; Michael J. Sabbagh, Massachusetts; Albert B. Lewis, New York; Lyndon L. Olson, Jr., Texas.

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ATTACHMENT ONE-A

STATEMENT OF PAUL J. MASON
BEFORE THE NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

Spring Quarterly Meeting
Oklahoma City, Oklahoma
April 5, 1982

Good morning. I am Paul J. Mason, a partner in the law firm of Sutherland, Asbill & Brennan, Washington, D.C. I very much appreciate the opportunity to appear before the Variable Life Insurance Regulation Task Force of the Life Insurance (A) Committee to summarize briefly our firm's representation of a group of companies having a potential interest in a variable universal life (or "universal life phase two") product.

The "universal life phase two group" that our firm represents is currently composed of the following 27 member companies:

The Acacia Group
Aetna Life Insurance Company
Connecticut General Life Insurance Company and Life Insurance Company of North America (CIGNA)
Connecticut Mutual Life Insurance Company
E. F. Hutton Life Insurance Company
The Equitable Life Assurance Society of the United States
Fireman's Fund American Life Insurance Company
Great Southern Life Insurance Company
Great-West Life Assurance Company
Hartford Life Insurance Company
IDS Life Insurance Company
Life Insurance Company of Virginia
Lincoln National Life Insurance Company
Maccabees Mutual Life Insurance Company
Metropolitan Life Insurance Company
Minnesota Mutual Life Insurance Company
Monarch Resources, Inc.
Nationwide Life Insurance Company
New England Mutual Life Insurance Company
New York Life Insurance Company
Northwestern National Life Insurance Company
The Penn Mutual Life Insurance Company
Protective Life Insurance Company
Southwestern Life Insurance Company
Sun Life Assurance Company of Canada
The Travelers Insurance Company
United Investors Life Insurance Company

The group had its genesis during the summer of 1981, when our firm was approached by several companies interested in developing a separate account universal life product under which the death benefit and cash value would vary in accordance with investment experience. Tentative discussions among these companies coalesced in the formation of the group in the late fall. The articulated purpose of the group was to study the issues that a variable universal life product design might raise under state and federal law and to seek the regulatory approvals necessary to market such a product.

Our work has proceeded at a quick and intensive pace over the last several months. We have focused upon, among other things, the NAIC Variable Life Insurance Model Regulation and have considered revisions that might have to be made in the model regulation to accommodate a variable universal product. As representatives on behalf of the American Council of Life Insurance have already noted, our group has worked in close cooperation with ACLI staff and the ACLI Task Force on Flexible Premium Registered Life Insurance in developing an exposure draft of a proposed amended model regulation which, it is hoped, will be presented to your task force at the NAIC Summer Annual Meeting in June of this year.

We intend to continue to work closely with the ACLI and would be pleased to assist in any way deemed useful.

Thank you very much.

****

ATTACHMENT ONE-B

Monarch Resources, Inc.
111 Broadway
New York, NY 10006

March 22, 1982

Mr. Ted E. Becker
State of Texas
State Board of Insurance
1110 San Jacinto Street
Austin, TX 78786

Re: Revisions to NAIC Model Regulation

Dear Ted:

At John Montgomery's suggestion, I have put together this letter and attachments to be discussed at the April 3, 1982 meeting of your committee.

The letter describes the NAIC Model VLI Regulation as modified through the New Orleans meeting and gives status reports on several long term projects assigned to the Variable Products Advisory Committee.

NAIC Model VLI Regulation

Attachment A is a marked-up copy of the proposed VLI Regulations starting with the draft attached to my October 15, 1981 letter to you and modified to reflect changes one through six specified in my December 4, 1981 letter. Item seven of that letter is discussed below as one of our longer term projects. The regulation has also been modified to reflect the changes agreed to in New Orleans as follows:

1. Page 270-33, Article IV, Section 4.b. The language has been changed to accommodate flexible premium designs so that loans are required only after the policy has been "in force" for a minimum number of years as opposed to the requirement that "premiums having been paid" for a minimum period.

2. Page 270-34, Article IV, Section 4.b. We decided to retain paragraphs four and five rather than delete them as previously recommended.

3. Page 270-37, Article IV, Section 5.c. We modified paragraph to include "variable additions", deleted paragraph three and modified paragraph six to indicate that a dividend might be other than a "deposit" to the account.

4. Page 270-50, Article VI, Section 7.a. We modified paragraph three to delete "tabular costs," and to add "charges for incidental insurance benefits" and "contractual charges." We also added a requirement in paragraph four that charges for investment management expenses be "reasonable."

5. Page 270-51, Article VI, Section 7.a. In paragraph five we added language to permit charges for "contingencies and profits."

6. Page 270-57, Article VII, Section 4. We replaced the requirement for disclosure of "commissions" to disclosure of "all contractual charges."

7. Page 270-60, Article IX. We modified the new language to refer to the assumed investment rate rather than a "guaranteed" interest rate.

Long Term Projects

Set forth below is a progress report on the following long term projects:

Deduction of charges for incidental insurance benefits from the separate account

A question has been raised as to whether the deduction of charges for incidental insurance benefits from the cash value of a Variable Life Insurance policy changes the nature of the reserve in the separate account. The specific question is whether a portion of that separate account reserve is, in fact, supporting the incidental insurance benefits. Ross Hanson of our committee in his March 15, 1982 memorandum suggests that there is no such effect in the separate account. He analogizes the deduction of the charge for the incidental insurance benefits to a partial withdrawal. Although we have reached no firm conclusion, our committee seems to lean toward Ross's interpretation.

Requirements as to liquidity for permissible investments

In the proposed regulation, we have deleted the laundry list of permitted investments and have included criteria based on "liquidity" and "readily ascertainable market value." The objective would be to permit investments such as real estate and private placements. We have only begun discussions in this area, but have identified a series of questions:

1. Should we require a minimum percentage of liquid investments in an account invested primarily in illiquid investments?

2. Should we permit a different deferment provision for policies funded in such separate accounts?

3. Should we permit the company to do a special valuation of the assets if a cash flow crisis occurs?

4. Should we require a special reserve to be set up in the general account but funded by separate account operations? It would be similar to, but larger than, New York's special contingent reserve fund.

5. Should we restrict the availability of this type of account to certain markets or policyholders?

6. Should we permit the separate and general accounts to share an illiquid investment?

In general, we believe we could develop rules to take care of normal cash flow situations. Our problem is with the abnormal situations that might occur.

Group permanent universal variable life insurance

A suggestion has been made that we delete the requirement that variable life be restricted to "individual" policies. Ross Hanson in his March 15, 1982 memorandum records some of the issues involved. An important one not addressed is whether any changes in the variable contract law would be required.

Standards for illustrations

As I've mentioned in previous meetings, illustrations for universal variable life insurance policies must be prepared on a standard basis from company to company. With the probability of relatively few guarantees in a universal variable life policy, it becomes essential that clients understand the differences between hypothetical results, guaranteed results, current results and illustrative dividend results. Our initial view is that since these products will be registered with the SEC, it may be appropriate to rely on the SEC to develop a federal standard for these products. We're concerned about the possibility of requirements varying state by state.

I look forward to seeing you in Houston.

Sincerely,

Jerome S. Golden
Chairman
Variable Products Advisory Committee

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ATTACHMENT TWO

PROPOSED AMENDED
VARIABLE LIFE INSURANCE MODEL REGULATION

Draft
May 26, 1982

Language to be deleted from the current model is enclosed by brackets; new matter is underscored

ARTICLE I: AUTHORITY

Section 1. Authority.

The following regulations applicable to variable life insurance policies are promulgated under the authority of Section (insert applicable section), of the Insurance Laws of (insert state), and are effective (insert date).

ARTICLE II: DEFINITIONS

As used in this regulation:

Section 1. Affiliate.

"Affiliate" of an insurer means any person, directly or indirectly, controlling, controlled by, or under common control with such insurer; any person who regularly furnishes investment advice to such insurer with respect to its [variable life insurance] separate accounts for which a specific fee or commission is charged; or any director, officer, partner, or employee of any such insurer, controlling or controlled person, or person providing investment advice or any member of the immediate family of such person.

Section 2. Agent.

"Agent" means any person, corporation, partnership, or other legal entity which is licensed by this state as a life insurance agent.

Section 3. Assumed Investment Rate.

"Assumed investment rate" means the rate of investment return which would be required to be credited to a variable life insurance policy, after deduction of charges for taxes, investment expenses, and mortality and expense guarantees to maintain the variable death benefit equal at all times to the amount of death benefit, other than incidental insurance benefits, which would be payable under the plan of insurance if the death benefit did not vary according to the investment experience of the separate account.

Section 4. Benefit Base.

"Benefit base" means the amount, [not less than the amount specified under Section 2b of Article VI, specified by the terms of the variable life insurance policy] to which [the difference between] the net investment return [and the assumed investment rate] is applied. [in determining the variable benefits of the policy.]

Section 5. Commissioner.

"Commissioner" (Director, Superintendent) means the Insurance Commissioner (Director, Superintendent) of this state.

Section 6. Control.

"Control" (including the terms "controlling," "controlled by" and "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract other than a commercial contract for goods or non-management services, or otherwise, unless the power is the result of an official position with or corporate office held by the person. Control shall be presumed to exist if any person, directly or indirectly, owns, controls, holds with the power to vote, or holds proxies representing more than ten (10) percent of the voting securities of any other person. This presumption may be rebutted by a showing made to the satisfaction of the Commissioner that control does not exist in fact. The Commissioner may determine, after furnishing all persons in interest notice and opportunity to be heard and making specific findings of fact to support such determination, that control exists in fact, notwithstanding the absence of a presumption to that effect.

Section 7. Flexible Premium Policy.

"Flexible premium policy" means any variable life insurance policy other than a scheduled premium policy as specified in Section 15 of this Article II.

Section [7.] 8. General Account.

"General account" means all assets of the insurer other than assets in separate accounts established pursuant to Section (insert applicable section) of the Insurance Laws of this state, or pursuant to the corresponding section of the Insurance Laws of the state of domicile of a foreign or alien insurer, whether or not for variable life insurance.

Section [8.] 9. Incidental Insurance Benefit.

"Incidental insurance benefit" means all insurance benefits in a variable life insurance policy, other than the variable death benefit and the minimum death benefit, including but not limited to accidental death and dismemberment benefits, disability income benefits, guaranteed insurability options, family income, or [fixed benefit] term riders.

Section [9.] 10. May.

"May" is permissive.

Section [10.] 11. Minimum Death Benefit.

"Minimum death benefit" means the amount of the guaranteed death benefit, other than incidental insurance benefits, payable under a variable life insurance policy regardless of the investment performance of the separate account.

Section [11.] 12. Net Investment Return.

"Net investment return" means the rate of investment return in a separate account to be applied to the benefit base. [after deduction of charges for taxes, investment expenses and mortality and expense guarantees in accordance with the terms of the policy.]

Section [12.] 13. Person.

"Person" means an individual, corporation, partnership, association, trust, or fund.

Section 14. Policy Processing Day.

"Policy processing day" means the day on which charges authorized in the policy are deducted from the policy's cash value.

Section 15. Scheduled Premium Policy.

"Schedule premium policy" means any variable life insurance policy under which the amount and timing of premium payments are specified under the terms of the policy.

Section [13.] 16. Separate Account.

"Separate account" means a separate account established (under) [for variable life insurance] pursuant to Section – of the Insurance Laws of this state or pursuant to the corresponding Section of the Insurance Laws of the state of domicile of a foreign or alien insurer.

Section [14.] 17. Shall.

"Shall" is mandatory.

Section [15.] 18. Variable Death Benefit.

"Variable death benefit" means the amount of the death benefit, other than incidental insurance benefits, payable under a variable life insurance policy dependent on the investment performance of the separate account, which the insurer would have to pay in the absence of [the] any minimum death benefit.

Section [16.] 19. Variable Life Insurance Policy.

"Variable life insurance policy" means any individual policy which provides for life insurance the amount or duration of which varies according to the investment experience of any separate account or accounts established and maintained by the insurer as to such policy, pursuant to Section (insert applicable Section) of the Insurance Laws of this state or pursuant to the corresponding section of the Insurance Laws of the state of domicile of a foreign or alien insurer.

ARTICLE III: QUALIFICATION OF INSURER TO ISSUE VARIABLE LIFE INSURANCE

The following requirements are applicable to all insurers either seeking authority to issue variable life insurance in this state or [which have] having authority to issue variable life insurance in this state.

Section 1. Licensing and Approval to Do Business in This State.

An insurer shall not deliver or issue for delivery in this state any variable life insurance policy unless:

a. The insurer is licensed or organized to do a life insurance business in this state;

[b. either (1) the state of domicile of such insurer requires that permissible investments be substantially the same as provided in Section 3 of Article VI and that changes in the investment policy of the variable life insurance separate account be regulated in a manner substantially similar to that required under Article VI for such separate accounts operated by insurers domiciled in this state; or (2) the insurer's investment policy, as described in the statement required to be filed under Subsection 2c of this Section, conforms to Section 3 of Article VI, and the Commissioner is satisfied that the procedures for changing the investment policy of a variable life insurance separate account, as described in the statement required to be filed under Subsection 2c of this Section, provide safeguards consistent with those provided under Section 6 of Article VI; and] b.[c.] the insurer has obtained the written approval of the Commissioner for the issuance of variable life insurance policies in this state. The Commissioner shall grant such written approval only after he has found that:

(1) the plan of operation for the issuance of variable life insurance policies is not unsound;

(2) the general character, reputation, and experience of the management and those persons or firms proposed to supply consulting, investment, administrative, or custodial services to the insurer are such as to reasonably assure competent operation of the variable life insurance business of the insurer in this state; and

(3) the present and foreseeable future financial condition of the insurer and its method of operation in connection with the issuance of such policies is not likely to render its operation hazardous to the public or its policyholders in this state. The Commissioner shall consider, among other things:

(A) the history of operation and financial condition of the insurer;

(B) the qualifications, fitness, character, responsibility, reputation, and experience of the officers and directors and other management of the insurer and those persons or firms proposed to supply consulting, investment, administrative, or custodial services to the insurer;

(C) the applicable law and regulations under which the insurer is authorized in its state of domicile to issue variable life insurance policies. The state of entry of an alien insurer shall be deemed its state of domicile for this purpose; and

(D) if the insurer is a subsidiary of, or is affiliated by common management or ownership with another company, its relationship to such other company and the degree to which the requesting insurer, as well as the other company, meet these standards.

Section 2. Filing for Approval to Do Business in This State.

[Before any insurer shall deliver or issue for delivery any variable life insurance policy in this state, it must] The Commissioner may, at his discretion, require that an insurer, before it delivers or issues for delivery any variable life insurance policy in this state, file with this Department the following information for the consideration of the Commissioner in making the determination required by Section 1, subsection b of this Article:

a. copies of and a general description of the variable life insurance policies it intends to issue;

b. a general description of the methods of operation of the variable life insurance business of the insurer, including methods of distribution of policies and the names of those persons or firms proposed to supply consulting, investment, administrative, [or] custodial or distribution services to the insurer;

c. with respect to any separate account maintained by an insurer for any variable life insurance policy, a statement of the investment policy the issuer intends to follow for the investment of the assets held in such separate account, and a statement of procedures for changing such investment policy. The statement of investment policy shall include a description of the investment objectives [and orientation] intended for the separate account;

d. a description of any investment advisory services contemplated as required by Section 10 of Article VI;

e. [if requested by the Commissioner,] a copy of the statutes and regulations of the state of domicile of the insurer under which it is authorized to issue variable life insurance policies; and

f. [if requested by the Commissioner,] biographical data with respect to officers and directors of the insurer on the National Association of Insurance Commissioners Uniform Biographical Data Form.

g. A statement of the insurer's actuary describing the mortality and expense risks which the insurer will bear under the policy.

Section 3. Standards of Suitability.

Every insurer seeking approval to enter into the variable life insurance business in this state shall establish and maintain [adopt by formal action of its Board of Directors and file with the Commissioner] a written statement specifying the Standards of Suitability to be used by the insurer. [and applicable to its officers, directors, employees, affiliates, and agents with respect to the suitability of variable life insurance for the applicant.] Such Standards of Suitability shall [be binding on the insurer and those to whom it refers, and shall] specify that no recommendations shall be made to an applicant to purchase a variable life insurance policy and that no variable life insurance policy shall be issued in the absence of reasonably grounds to believe that the purchase of such policy is not unsuitable for such applicant on the basis of information furnished after reasonable inquiry of such applicant concerning the applicant's insurance and investment objectives, financial situation and needs, and any other information known to the insurer or to the agent making the recommendation. [Lapse rates for variable life insurance within the first two policy years which are significantly higher than both those encountered by the insurer or an affiliate thereof for corresponding fixed benefit life insurance policies and lapse rates of other insurers issuing variable life insurance policies shall be considered by the Commissioner in determining whether the guidelines adopted by the insurer are reasonable and also whether the insurer and its agents are engaging, as a general business practice, in the sale of variable life insurance to persons for whom it is unsuitable. For purposes of this section, conversions from variable life insurance to fixed benefit life insurance policies pursuant to this regulation shall not be considered lapses.]

Section 4. Use of Sales Materials.

An insurer authorized to transact variable life insurance business in this state shall not use any sales material, advertising materials, or descriptive literature or other materials of any kind in connection with its variable life insurance business in this state which is false, misleading, deceptive, or [insurance] inaccurate

[a. Until two years after delivery of its first variable life insurance policies in this state, and during any subsequent period upon the written request of the commissioner, an insurer shall file all variable life insurance sales material, advertising material, and descriptive literature (xx business days prior to use) (within xx business days after use) with the commissioner. The commissioner shall require an insurer to cease the use of any such materials upon finding that any such materials are false, misleading, deceptive, or inaccurate. Revised versions of such materials containing changes of substantial import from versions on file with the commissioner shall be filed with the commissioner.]

[b.] a. Variable life insurance sales material, advertising material, and descriptive literature shall be subject to the additional requirements of (insert citation to the life insurance advertising rules as adopted by the NAIC).

Section 5. Requirements Applicable to Contractual Services.

[a.] Any material contract between an insurer and suppliers of consulting, investment, administrative, sales, marketing, custodial, or other services [which are material] with respect to variable life insurance operations shall be in writing and provide that the supplier of such services shall furnish the Commissioner with any information or reports in connection with such services which the Commissioner may request in order to ascertain whether the variable life insurance operations of the insurer are being conducted in a manner consistent with these regulations and any other applicable law or regulations.

[b. Such contract shall be fair and equitable to all parties and not endanger any policyholders of the insurer in this state.]

[c. Such contract shall not relieve the insurer from any responsibilities or obligations imposed upon the operations of its variable life insurance business by this regulation or any other law or regulation.]

Section 6. Reports to the Commissioner.

Any insurer authorized to transact the business of variable life insurance in this state shall submit to the Commissioner, in addition to any other materials which may be required by this regulation or any other applicable laws or regulations:

a. an Annual Statement of the business of its [variable life insurance] separate account or accounts in such form as may be prescribed by the National Association of Insurance Commissioners; and

b. prior to the use in this state any information furnished to applicants as provided for in Article VII; and

c. prior to the use in this state the form of any of the Reports to Policyholders as provided for in Article IX; and

d. such additional information concerning its variable life insurance operations or its [variable life insurance] separate accounts as the Commissioner shall deem necessary,

[e.] Any material submitted to the Commissioner under this Section shall be disapproved if it is found to be false, misleading, deceptive, or inaccurate in any material respect and, if previously distributed, the Commissioner shall require the distribution of [an] amended [report.] material.

Section 7. Authority of Commissioner to Disapprove.

Any material required to be filed with and approved by the Commissioner[, or approved by him,] shall be subject to disapproval if at any time it is found by him not to comply with the standards established by this regulation.

ARTICLE IV: INSURANCE POLICY REQUIREMENTS

Policy Qualification. The Commissioner shall not approve any variable life insurance form filed pursuant to this regulation unless it conforms to the requirements of this Article.

Section 1. Filing of Variable Life Insurance Policies.

All variable life insurance policies, and all riders, endorsements, applications and other documents which are to be attached to and made a part of the policy and which relate to the variable nature of the policy, shall be filed with the Commissioner and approved by him [in writing] prior to delivery or issuance for delivery in this state.

a. The procedures and requirements for such filing and approval shall be, to the extent appropriate and not inconsistent with this regulation, the same as those otherwise applicable to other life insurance policies.

b. The Commissioner may approve variable life insurance policies and related forms with provisions the Commissioner deems to be not less favorable to the policyholder and the beneficiary than those required by this regulation.

[c. The requirements of Sections 2a, 2d, 3e(1) and 3p of this Article shall not apply to variable life insurance policies and related forms issued in connection with pension, profit sharing and retirement plans if separate accounts for such policies are exempt pursuant to Section 3(c)(11) of the Investment Company Act of 1940.]

Section 2. Mandatory Policy Benefit and Design Requirements.

Variable life insurance policies delivered or issued for delivery in this state shall comply with the following minimum requirements.

a. [Coverage shall be provided for the lifetime of the insured with The] Mortality and expense risks shall be borne by the insurer. The mortality and expense charges shall be subject to the maximums stated in the contract.

[b. Gross premiums for death benefits shall be a level amount for the duration of the premium payment period, but this subsection shall not be construed to prohibit temporary or permanent additional premiums for incidental insurance benefits or substandard risks. This subsection shall not be deemed to prohibit the use of fixed benefit preliminary term insurance for a period not to exceed 120 days from the date of the application for a variable life insurance policy. The premium rate for such preliminary term insurance shall be stated separately in the application or receipt.]

b. [c.] For scheduled premium policies, a minimum death benefit shall be provided in an amount at least equal to the initial face amount of the policy so long as premiums are duly paid (subject to the provisions of Section 4b of this Article);

[d. The amount payable upon the death of the insured so long as premiums are duly paid (subject to the provisions of Section 4b of this Article) shall be not less than a minimum multiple of the gross premium payable in that year, exclusive of that portion allocable to any incidental insurance benefit, by a person who meets standard underwriting requirements, as shown in the following table:

ISSUE AGE	MULTIPLES
0-5	80
6-10	71
11-15	63
16-20	55
21-25	47
26-30	40
31-35	33
36-40	27
41-45	21
46-50	15
51-55	13
56-60	11
61-65	9
66-70	8
70 and over	7]

[e.] c. The policy shall [provide that the variable death benefit shall] reflect the investment experience of one or more [the variable life insurance] separate accounts established and maintained by the insurer. The insurer must demonstrate that the reflection of investment experience in variable life insurance policy is actuarially sound. [and that the excess, positive or negative, of the net investment return over the assumed investment rate, as applied to the benefit base of each variable life insurance policy, shall be used to provide either:]

[(1) fully paid-up variable life insurance providing coverage for the same period as the basic insurance under the policy or fully paid-up insurance amounts for a term of annual periods of not less than one year nor more than five years, positive or negative, as the case may be, or a combination thereof; or variable life insurance amounts, positive or negative, as the case may be, so that the reserve maintains the same percentage relationship to the variable death benefit as it would have on a corresponding fixed benefit policy.]

[f.] d. Each variable life insurance policy shall be credited with the full amount of the net investment return applied to the benefit base.

[g.] e. Any changes in variable death benefits of each variable life insurance policy shall be determined at least annually.

[h.] f. The cash value of each variable life insurance policy shall be determined at least monthly. The method of computation of cash values and other non-forfeiture benefits, as described either in the policy or in a statement filed with the Commissioner of the state in which the policy is delivered, or issued for delivery, shall be in accordance with actuarial procedures that recognize the variable nature of the policy. The method of computation must be such that, if the net investment return credited to the policy at all times from the date of issue should be equal to the assumed investment rate with premiums, and benefits determined accordingly under the terms of the policy, then the resulting cash values and other non-forfeiture benefits must be at least equal to the minimum values required by Section (insert applicable Section) of the Insurance Laws of this state (Standard Non-Forfeiture Law) for a [fixed benefit] general account policy with such premiums, and benefits. The assumed investment rate shall not exceed the maximum interest rate permitted under the Standard Non-Forfeiture Law of this state. If the policy does not contain an assumed investment rate this demonstration shall be based on the maximum interest rate permitted under the Standard Non-Forfeiture Law. The method of computation may disregard incidental minimum guarantees as to the dollar amounts payable. Incidental minimum guarantees include, for example, but are not to be limited to, a guarantee that the amount payable at death or maturity shall be at least equal to the amount that otherwise would have been payable if the net investment return credited to the policy at all times from the date of issue had been equal to the assumed investment rate.

[i.]g. The computation of values required for each variable life insurance policy may be based upon such reasonable and necessary approximations as are acceptable to the Commissioner.

[j. (1) if the gross premiums for any variable life insurance policy delivered or issued for delivery in this state produce an excess of (A) or (B) as defined in (2) below, the present value as of the date of issue of the adjusted premiums used in determining the minimum cash values required by Section 2h of Article IV shall be decreased by such excess by decreasing each adjusted premium by a uniform percentage.

(2) The excess of (A) over (B) referred to in subsection (1) above shall be determined as of the date of issue on the basis of the mortality table and maximum rate of interest permitted by Section (insert applicable section) of Insurance Laws of this state (Standard Non-Forfeiture Law); and

(a) is the present value of the gross premiums for the policy, decreased by one dollar per thousand of equivalent uniform amount for policies with an annual basis (exclusive of those portions of the gross premiums allocable to any incidental insurance benefits) by a person who meets standard underwriting requirements; and

(b) is the product of (1) times (2) where (1) is the present value of the maximum premium rates per thousand of insurance shown below payable at the beginning of each policy year to attained age 65 of the insured for issue ages below age 51, for fifteen years for issue ages 51 to 70 and for life for issue ages above age 70 and (2) is the ratio of (i) the present value of the benefits under the policy to (ii) the present value of an insurance of one thousand for the whole of life.

TABLE OF RATES

Age at Issue	Premium Rate	Age at Issue	Premium Rate
0	11.50	21	18.74
1	11.60	22	19.34
2	11.76	23	19.97
3	11.97	24	20.62
4	12.22	25	21.28
5	12.50	26	21.95
6	12.80	27	22.64
7	13.11	28	23.37
8	13.43	29	24.15
9	13.75	30	25.00
10	14.08	31	25.92
11	14.42	32	26.91
12	14.77	33	27.97
13	15.13	34	29.10
14	15.49	35	30.30
15	15.87	36	31.55
16	16.27	37	32.84
17	16.70	38	34.17
18	17.16	39	35.56
19	17.65	40	37.04
20	18.18	41	38.65

Age at Issue	Premium Rate	Age at Issue	Premium Rate
42	40.45	61	94.45
43	42.51	62	98.25
44	44.89	63	102.31
45	47.62	64	106.61
46	50.71	65	111.11
47	54.17	66	115.48
48	58.00	67	119.39
49	62.18	68	122.51
50	66.67	69	124.50
51	68.58	70	125.00
52	70.54	71	128.86
53	72.57	72	123.96
54	74.69	73	129.66
55	76.92	74	135.96
56	79.29	75	142.86
57	81.84	76	150.36
58	84.61	77	158.46
59	87.63	78	167.16
60	90.91	79	176.46
		80	186.36

(3) For purposes of this Section, any portion of the premium set aside to support a guarantee that any surrender value shall not be less than a specified amount or for any other benefit that the Commissioner shall deem to be excludable, shall not be included.

k. In determining the net investment return to be applied to the benefit base the insurer may deduct only the charges described in paragraphs (1), (2), (4), and (5) of Article VI, Section 7a.]

Section 3. Mandatory Policy Provisions.

Every variable life insurance policy filed for approval in this state shall contain at least the following:

a. The cover page or pages corresponding to the cover page of each such policy shall contain:

(1) A prominent statement [in either contrasting color or in boldface type at least four points larger than the type size of the largest type used in the text of any provision on that page,] that the amount or duration of death benefit may be variable or fixed under specified conditions;

(2) A prominent statement [in either contrasting color or in boldface type at least four points larger than the type size used in the text of any provision on that page] that cash values may increase or decrease in accordance with the experience of the separate account subject to any specified minimum guarantees;

(3) A statement [that the] describing any minimum death benefit required pursuant to Section 2b of this Article IV; [will be at least equal to the initial face amount at the date of issue if premiums are duly paid and if there are no outstanding policy loans, partial withdrawals, or partial surrenders;]

(4) The [rule] method, or a reference to the policy provision which describes the method, for determining the [variable] amount of insurance payable at death;

(5) [A captioned provision which provides that the policyholder may return the variable life insurance policy within 45 days of the date of the execution of the application or within 10 days of receipt of the policy by the policyholder, whichever is later, and receive a refund of all premium payments for such policy; and]

To the extent permitted by state law, a captioned provision that the policyholder may return the variable life insurance policy within 10 days of receipt of the policy by the policyholder, and receive a refund equal to the sum of (A) the difference between the premiums paid including any policy fees or other charges and the amounts allocated to any separate accounts under the policy and (B) the value of the amounts allocated to any separate accounts under the policy, on the date the returned policy is received by the insurer or its agent. Until such time as state law authorizes the return of payments as calculated in the preceding sentence, the amount of the refund shall be the total of all premium payments for such policy.

(6) Such other items as are currently required for fixed benefit life insurance policies and which are not inconsistent with this regulation.

b. (1) For scheduled premium policies, a provision for a grace period of not less than thirty-one days from the premium due date which shall provide that where the premium is paid within the grace period, policy values will be the same, except for the deduction of any overdue premium, as if the premium were paid on or before the due date[;].

(2) For flexible premium policies, a provision for a grace period beginning on the policy processing day when the cash value is insufficient to pay all charges, authorized by the policy, necessary to keep the policy in force until the next policy processing day, and ending on a date not less than 61 days after the mailing date of the Report to Policyholders required by Section 3 of Article IX.

The death benefit payable during the grace period will equal the death benefit in effect immediately prior to such period less any overdue charges. If the policy processing days occur monthly, the insurer may require the payment of not more than 3 times the charges which were due on the policy processing day when the cash value was insufficient to pay all charges authorized by the policy that are necessary, to keep such policy in force until the next policy processing day.

c. For schedule premium policies, a provision that the policy will be reinstated at any time within two years from the date of default upon the written application of the insured and evidence of insurability, including good health, satisfactory to the insurer, unless the cash surrender value has been paid or the period of extended insurance has expired, upon the payment of any outstanding indebtedness arising subsequent to the end of the grace period following the date of default together with accrued interest thereon to the date of reinstatement and payment of an amount not exceeding the greater of:

(1) All overdue premiums with interest at a rate not exceeding ____percent per annum compounded annually and any indebtedness in effect at the end of the grace period following the date of default with interest at a rate not exceeding ____percent per annum compounded annually; or

(2) 110% of the increase in cash [surrender] value resulting from reinstatement plus all overdue premiums for incidental insurance benefits with interest at a rate not exceeding ____percent per annum compounded annually.

d. A full description of the benefit base and of the method of calculation and application of any factors used to adjust variable benefits under the policy;

e. A provision designating the separate account to be used and stating that:

[(1) Such separate account shall be used to fund only variable life insurance benefits, except to the extent permitted by Section 5c(6) of this Article;]

[(2)] (1) The assets of such separate account shall be available to cover the liabilities of the general account of the insurer only to the extent that the assets of the separate account exceed the liabilities of the separate account arising under the variable life insurance policies supported by the separate account[; and].

[(3)] (2) The assets of such separate account shall be valued at least as often as any policy benefits vary but at least monthly.

f. A provision [that the policy and any papers attached thereto by the insurer, including the application if attached,] specifying what documents constitute the entire insurance contract under state law;

g. A designation of the officers who are empowered to make an agreement or representation on behalf of the insurer and an indication that statements by the insured, or on his behalf, shall be considered as representations and not warranties;

h. An identification of the owner of the insurance contract;

i. A provision setting forth conditions or requirements as to the designation, or change of designation, of a beneficiary and a provision for disbursement of benefits in the absence of a beneficiary designation;

j. A statement of any conditions or requirements concerning the assignment of the policy;

k. A description of any adjustments in policy values to be made in the event of misstatement of age or sex of the insured;

l. A provision that the policy shall be incontestable by the insurer after it has been in force for two years during the lifetime of the insured[;], provided, however, that any increase in the amount of the policy's death benefits subsequent to the policy issue date, which increase occurred upon a new application or request of the owner and was subject to satisfactory proof of the insured's insurability, shall be incontestable after any such increase has been in force, during the lifetime of the insured, for two years from the date of issue of such increase;

m. A provision stating that the investment policy of the separate account shall not be changed without the approval of the Insurance Commissioner of the state of domicile of the insurer, and that the approval process is on file with the Commissioner of this state;

n. A provision that payment of variable death benefits in excess of [the] any minimum death benefits, cash values, policy loans, or partial withdrawals (except when used to pay premiums) or partial surrenders may be deferred:

(1) For up to six months from the date of request, if such payments are based on policy values which do not depend on the investment performance of the separate account, or

(2) Otherwise, for any period during which the New York Stock Exchange is closed for trading (except for normal holiday closing) or when the Securities and Exchange Commission has determined that a state of emergency exists which may make such payment impractical.

o. If settlement options [which] are provided, at least one such option shall be provided on a fixed basis only;

p. A description of the basis for computing the cash value and the surrender value under the policy shall be included. [Such surrender value may be expressed as either:

(1) A schedule of cash value amounts per one thousand dollars of variable face amount at each attained age or policy year for at least 20 years from issue, or for the premium paying period, is less than 20 years; or

(2) One cash value schedule as described in paragraph (1) for the death benefit, or for each one thousand dollars of death benefit, which would be in effect if the net investment return is always equal to the assumed investment rate and a second schedule applicable to any adjustments to the death benefit (disregarding the minimum death benefit guarantee and term insurance amounts) if the net investment return does not equal the assumed investment rate at each age for at least 20 years from issue, or for the premium paying period if it is less than 20 years.]

[r.] q. Premiums or charges for incidental insurance benefits shall be stated separately;

[s.] r. Any other policy provision required by this regulation;

[t.] s. Such other items as are currently required for fixed benefit life insurance policies and are not inconsistent with this regulation.

[Section 4. Non-Forfeiture, Partial Withdrawal, Policy Loan, and Partial Surrender Provisions.]

[Every variable life insurance policy delivered or issued for delivery in this state shall contain provisions that are not less favorable to the policyholder than the following:]

[a.] t. A provision for non-forfeiture insurance benefits. [so that at least one such benefit is offered on a fixed basis from the due date of the premium in default.

(1) Vairable extended term insurance may not be offered.

(2) A given non-forfeiture option need not be offered on both a fixed and a variable basis.

(3)] The insurer may establish a reasonable minimum cash [surrender] value below which any [such] non-forfeiture insurance options will not be available.

NOTE: Subparagraph 4(a) becomes subparagraph 3(t). This subparagraph (a) of Section 4 of Article IV is in fact a mandatory policy provision that should be treated as such and placed under Section 3 of Article IV.

Section 4. Policy Loan Provisions.

Every variable life insurance policy, other than term insurance policies and pure endowment policies, delivered or issued for delivery in this state shall contain provisions which are not less favorable to the policyholder than the following:

[b.] a. A provision for policy loans after the policy has been in force for [(insert number of years specified by state law provision on availability of policy loans for fixed benefit life insurance)] ____ full years' [premiums have been paid (which may at the option of the insurer be entitled and referred to as a partial withdrawal provision) not less favorable to the policyholder than] which provides the following:

(1) [Up to] At least 75% [but if the loan is made from the general account not more than 90%] of the policy's cash surrender value may be borrowed;

[(2) The amount borrowed, or any repayment thereof, shall not affect the amount of the premium payable under the policy.]

[(3)] (2) The amount borrowed shall bear interest at a rate not to exceed [___ percent per year compounded annually] that permitted by state insurance law.

[(4)] (3) Any indebtedness shall be deducted from the proceeds payable on death.

[(5)] (4) Any indebtedness shall be deducted from the cash surrender value upon surrender or in determining any non-forfeiture benefit.

[(6)] (5) Whenever the indebtedness exceeds the cash surrender value, the insurer shall give notice of any intent to cancel the policy if the excess indebtedness is not repaid within thirty-one days after the date of mailing of such notice.

[(7)] (6) The policy may provide that if, at any time, so long as premiums are duly paid, the variable death benefit is less than it would have been if no loan or withdrawal had ever been made, the policyholder may increase such variable death benefit up to what it would have been if there had been no loan or withdrawal by paying an amount not exceeding 110% of the corresponding increase in cash value and by furnishing such evidence of insurability as the insurer may request.

[(8)] (7) The policy may specify a reasonable minimum amount which may be borrowed at any time but such minimum shall not apply to any automatic premium loan provision.

[(9)] (8) No policy loan provision is required if the policy is under extended insurance non-forfeiture option.

[(10) In addition to the foregoing, the policy may contain a partial surrender provision; however, any such provision shall provide that the policyholder may request part of the cash value and both the variable and minimum death benefits will be reduced in proportion to the percentage of the cash value received by the policyholder and the premium for the reamining amount of insurance will also be reduced to the appropriate rates for the reduced amount of insurance. The policy may provide that a partial surrender provision shall not require the insurer to reduce the amount of the minimum death benefit to less than the lowest amount of minimum death benefit which would have been issued to the insured under the insurance plans of the insurer at the time the policy was issued. The policy must clearly provide that the policyholder has the option of electing to exercise the cash value privileges of the policy loan or partial withdrawal provision rather than the partial surrender provision.]

[(11)] (9) [All] The policy loan[, partial withdrawal, or partial surrender] provisions shall be constructed so that variable life insurance policyholders who have not exercised such provisions are not disadvantaged by the exercise thereof.

[(12)] (10) [Monies] Amounts paid to the policyholders upon the exercise of any policy loan[, partial withdrawal, or partial surrender] provision shall be withdrawn from the separate account and shall be returned to the separate account upon repayment except that a stock insurer may provide the [monies] amounts for policy loans from the general account.

Section 5. Other Policy Provisions.

The following provision may in substance be included in a variable life insurance policy or related form delivered or issued for delivery in this state:

a. An exclusion for suicide within (insert "two" or other number of years) years of the [policy] issue date of the policy; provided, however, that to the extent of the increased death benefits only, the policy may provide an exclusion for suicide within two years of any increase in death benefits which results from an application of the owner subsequent to the policy issue date;

b. incidental insurance benefits may be offered on a fixed or variable basis [only];

c. policies issued on a participating basis shall offer to pay dividend amounts in cash. In addition, such policies may offer the following dividend options:

   (1) the amount of the dividend may be credited against premium payments;

   (2) the amount of the dividend may be applied to provide paid-up amounts of additional fixed benefit whole life insurance;

   (3) the amount of the dividend may be applied to provide paid-up amounts of additional variable life insurance;

   (4) the amount of the dividend may be deposited in the general account at a specified minimum rate of interest;

   (5) the amount of the dividend may be applied to provide paid-up amounts of fixed benefit one-year term insurance;

   (6) the amount of the dividend may be deposited as a variable deposit in a [the] separate account [if the separate account is exempt pursuant to Section 3(c)(11) of the Investment Company Act of 1940.]

d. A provision allowing the policyholder to elect in writing in the application for the policy or thereafter an automatic premium loan on a basis not less favorable than that required of policy loans [or partial withdrawals] under Section 4 of this Article, except that a restriction that no more than two consecutive premiums can be paid under this provision may be imposed;

e. A provision allowing the policyholder to make partial withdrawals;

f. Any other policy provision approved by the Commissioner.

ARTICLE V: RESERVE LIABILITIES FOR VARIABLE LIFE INSURANCE

1. Reserve liabilities for variable life insurance policies shall be established under the Standard Valuation Law in accordance with actuarial procedures that recognize the variable nature of the benefits provided and any mortality guarantees.

2. For scheduled premium policies, reserve liabilities for the guaranteed minimum death benefit shall be the reserve needed to provide for the contingency of death occurring when the guaranteed minimum death benefit exceeds the death benefit that would be paid in the absence of the guarantee, and shall be maintained in the general account of the insurer and shall be not less than the greater of the following minimum reserves:

   a. 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 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 rate; or

   b. The aggregate total of the "attained age level" reserves on each variable life insurance contract. The "attained age level" reserve on each variable life insurance contract shall not be less than zero and shall equal the "residue," as described in paragraph (1), 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 described in paragraph (2) below.

      (1) the "residue" of the prior year's "attained age level" reserve on each 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.

      (2) the payment referred to in Subsection 2b of this Article 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 (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 death benefits that would be payable in the absence of such guarantee, and (C) is any "residue," as described in paragraph (1), 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 (A) minus (B) minus (C). The amounts of future death benefits referred to in (B) shall be computed assuming a net investment return of the separate account which may differ from the assumed investment rate and/or the valuation interest rate but in no event may exceed the maximum interest rate permitted for the valuation of life contracts.

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

3. For flexible premium policies, reserve liabilities for any guaranteed minimum death benefit shall be maintained in the general account of the insurer and shall be not less than the following minimum reserve. The aggregate total of the term costs, if any, covering the period provided for in the guarantee not otherwise provided for by the reserves held in the separate account 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 valuation interest rate.

The valuation interest rate and mortality table used in computing this additional reserve, if any, shall conform to permissable standards for the valuation of life insurance contracts. In determining such minimum reserve, the company may employ suitable approximations and estimates, including but not limited to groupings and averages.

[3.] 4. Reserve liabilities for all fixed incidental insurance benefits shall be maintained in the general account, and reserve liabilities for all variable incidental insurance benefits may be maintained in a separate account, in amounts determined in accordance with the actuarial procedures appropriate to such benefit.

ARTICLE VI: SEPARATE ACCOUNTS

The following requirements apply to the establishment and administration of variable life insurance separate accounts by any domestic insurer:

Section 1. Establishment and Administration of Separate Accounts.

[An] Any domestic insurer issuing variable life insurance [in this state] shall establish one or more separate accounts pursuant to Sections (insert appropriate sections) of the Insurance Laws of this state.

a. If no law or other regulation provides for the custody of separate account assets and if [the] such insurer [itself] is not the custodian of such separate account assets, all contracts for [such] custody of such assets shall be in writing and the Commissioner [of the insurer's state of domicile] shall have authority to review and approve of both the terms of any such contract and the proposed custodian prior to the transfer of custody.

b. [An] Such insurer shall not without the prior written approval of the Commissioner employ in any material connection with the handling of separate account assets any person who:

(1) within the last ten years has been convicted of any felony or a misdemeanor arising out of such person's conduct involving embezzlement, fraudulent conversion, or misappropriation of funds or securities or involving violation of Sections 1341, 1342, or 1343 of Title 18, United State Code: or

(2) within the last ten years has been found by any state regulatory authority to have violated or has acknowledged violation of any provision of any state insurance law involving fraud, deceit, or knowing misrepresentation; or

(3) within the last ten years has been found by federal or state regulatory authorities to have violated or has acknowledged violation of any provision of federal or state securities laws involving fraud, deceit, or knowing misrepresentation.

c. All persons with access to the cash, securities, or other assets of the separate account shall be under bond in the amount of not less than $ (insert appropriate amount).

[d. If an insurer establishes more than one separate account for variable life insurance, justification for the establishment of each additional separate account shall also be filed with the Commissioner and shall be subject to his approval. The creation of additional separate accounts to avoid lower maximum charges against the separate account is prohibited.]

[e.] d. The assets of such separate accounts [established for variable life insurance policies] shall be valued at least as often as variable benefits are determined but in any event at least monthly.

[f. A separate account exempt pursuant to Section 3(c)(11) of the Investment Company Act of 1940 because of the tax qualified status of the policies funded thereby shall not be used to fund other variable life insurance policies.]

[g. Except for separate accounts exempt pursuant to Section 3(c)(11) of the Investment Company Act of 1940, variable life insurance separate accounts shall not be used for variable annuities or for the investment of funds corresponding to dividend accumulations or other policyholder liabilities not involving life contingencies.]

Section 2. Amounts in the Separate Account.

[a.] The insurer shall maintain in each [variable life insurance] separate account assets with a [fair market] value at least equal to the greater of the valuation reserves for the variable portion of the variable life insurance policies or the benefit base for such policies.

[b. The benefit base of any variable life insurance policy as of the beginning of any valuation period shall not be less than the sum of the following factors after deducting amounts of any indebtedness pursuant to Section 4b of Article IV:

(1) the valuation net premium for such period, for the variable portion of the policy, minus the discounted cost of term insurance for such period, based on the tabular mortality and interest rates used in determining valuation reserves; and

(2) the valuation terminal reserve, for the variable portion of the policy at the end of the immediately preceding valuation period adjusted for the net investment return of such preceding period.

c. In lieu of the minimum benefit base requirement specified above, an insurer may otherwise qualify under this Section if it can be demonstrated, to the satisfaction of the Commissioner, that the policy benefits obtained over a 20-year period from the date of issue by the use of the insurer's benefit base are at least substantially equivalent in value to the benefits obtained by the use of the minimum benefit base specified above. The Commissioner may specify the range of net investment return to be used in this demonstration.

d. Notwithstanding the actual reserve basis used for policies that do not meet standard underwriting requirements, the benefit base for such policies may be the same as for corresponding policies which do meet standard underwriting requirements.]

Section 3. Investments by the Separate Account.

a. No sale, exchange, or other transfer of assets may be made by an insurer or any of its affiliates between any of its separate accounts or between any other investment account and one or more of its separate accounts unless:

(1) in case of a transfer into a separate account, such transfer is made solely to establish the account or to support the operation of the policies with respect to the separate account to which the transfer is made; and

(2) such transfer, whether into or from a separate account, is made by a transfer of cash; but other assets may be transferred if approved by the Commissioner in advance.

b. The separate account shall have sufficient net investment income and readily marketable assets to meet anticipated withdrawals under policies funded by the account.

[b. Assets allocated to a variable life insurance separate account shall be held in cash or investment having a reasonably ascertainable market price. For purposes of this subsection, only the following shall be considered "investments having a reasonably ascertainable market price:"

(1) liens in favor of the insurer against separate account policy reserves resulting from use by policyholders of cash values;

(2) securities listed and traded on the New York Stock Exchange, the American Stock Exchange, or regional stock exchanges or successors to such exchanges having the same or similar qualifications;

(3) securities listed on the NASDAQ System;

(4) shares of an investment company registered pursuant to the Investment Company Act of 1940. Where such an investment company issue book shares in lieu of share certificates, such book shares shall be deemed to be adequate evidence of ownership;

(5) obligations of or guaranteed by the United States Government, the Canadian government, any state, or municipality or governmental subdivision of a state;

(6) commercial paper issued by business corporations when the total of such paper issued by the corporation does not exceed in value a guaranteed short line of credit by a bank;

(7) certificates of deposit issued by financial institutions the deposits of which are insured by the FDIC or FSLIC; and

(8) new bond or debt issues which may reasonably be expected to be listed on an exchange regulated by the Securities Exchange Act of 1934.]

[c. Notwithstanding any other provision of law or the provisions of subsection b above, assets allocated to a variable life insurance separate account shall not be invested in:

(1) commodities or commodity contracts;

(2) put and call options or combinations of such options;

(3) short sales;

(4) purchases on margins;

(5) letter or restricted stock;

(6) units or other evidences of ownership of a separate account of another insurer, except those registered under the Investment Company Act of 1940; or

(7) real estate other than shares of a real estate investment trust listed as described in subsection] Note: At its meeting on February 11 the Task Force did not reach a consensus on what action, if any, to recommend regarding this Subsection C of Section 3 of Article VI. Thus, the deletion of this Subsection is for discussion purposes only.]

Section 4. Limitations on Ownership.

a. A [variable life insurance] separate account shall not purchase or otherwise acquire the securities of any issuer, other than securities issued or guaranteed as to principal and interest by the United States, if immediately after such purchase or acquisition the value of such investment, together with prior investments of such account in such security valued as required by these regulations, would exceed 10% of the value of the assets of the separate account. The Commissioner may waive this limitation in writing if he believes such waiver will not render the operation of the separate account hazardous to the public or the policyholders in this state.

b. No separate account shall purchase or otherwise acquire the voting securities of any issuer if as a result of such acquisition the insurer and its separate accounts, in the aggregate, will own more than 10% of the total issued and outstanding voting securities of such issuer. The Commissioner may waive this limitation in writing if he believes such waiver will not render the operation of the separate account hazardous to the public or the policyholders in this state or jeopardize the independent operation of the issuer of such securities.

c. The percentage limitation specified in subsection a of this Section shall not be construed to preclude the investment of the assets of separate accounts in shares of investment companies registered pursuant to the Investment Company Act of 1940 or other pools of investment assets if the investments and investment policies of such investment companies or asset pools comply substantially with the provisions of Section 3 of this Article and other applicable portions of this regulation.

Section 5. Valuation of [Assets of a Variable Life Insurance] Separate Account Assets.

[a.] Investments of the separate account shall be valued at their market value on the date of valuation[.], or at amortized cost if it approximates market value.

[(1) Market value for investment traded on the recognized exchanges means the last reported sale price on the date of valuation. If there has been no sale on that date, the market value means the last reported bid quotation on the date of valuation.

(2) Market value for investments listed on the NASDAQ System means the last representative bid quotation on the valuation date. If an investment ceases to be listed but continues to be traded over the counter, it shall be valued at the lowest bid quotation as it appears on the National Quotation Bureau sheets.

(3) If the valuation date referred to in paragraphs (1) and (2) above is a day when the exchange or the NASDAQ System is not open for business, the valuation date shall be the last date when the exchange or the NASDAQ System was open for business.]

[b. If an investment ceases to be traded, it shall be valued at fair value as determined in good faith by or at the direction of the Board of Directors of the insurer but not in excess of the last reported bid quotation. Within thirty days, notification of cessation of trading of any investment shall be reported by the insurer to the Insurance Commissioner of the state of domicile of the insurer. Such Commissioner shall within a reasonable period of time determine the method of valuation or disposition of such investment.]

<u>Section 6.</u> <u>Separate Account Investment Policy.</u>

[a.] The investment policy of a separate account operated by a domestic insurer filed under Section 2c of Article III shall not be changed without the approval of the Insurance Commissioner.

(1) Such approval shall be deemed to be given sixty days after the date the request for approval was filed with the Commissioner, unless he notifies the insurer before the end of such sixty-day period of his determination that the proposed change is a material change in the investment policy.

(2) If the change is deemed material by the Commissioner, he shall approve such change [only if] <u>unless</u> he determines [, after a public hearing,] that the change <u>is</u> [does not appear] detrimental to the interests of the policyholders [of the insurer] <u>participating in such separate account.</u>

(3) At least thirty days prior to any public hearing under paragraph (2), the insurer shall mail a notice to each policyholder and to the Insurance Commissioner of each state in which the affected variable life insurance policies are being sold. Such notice shall describe the proposed change in investment policy, list the reasons therefor, designate the date and place of the public hearing, inform the policyholder of the procedures to be followed in commenting on the change, and describe the conduct of the meeting. Any such notice shall be in a form approved by the Commissioner.

(4) Within sixty days after such public hearing, the Commissioner must approve or deny the proposed change in investment policy.]

[(5) Should any policyholder object to the proposed material change and the change is allowed by the Commissioner, the objecting policyholder shall be given the option within sixty days of notification to the policyholder of the approval by the Commissioner of such change, of converting, without evidence of insurability, under one of the following options, to a fixed benefit life insurance policy issued by the insurer or an affiliate:

(A) If the policy is in force on a premium paying basis, either:

(i) conversion as of the original issue age to a substantially comparable permanent form of fixed benefit life insurance, based on the insurer's premium rates for fixed benefit life insurance at the original issue age, for an amount of insurance not exceeding the death benefit of the variable life insurance policy on the date of conversion.

(ii) conversion as of the attained age to a substantially comparable permanent form of fixed benefit life insurance for an amount of insurance not exceeding the excess of the death benefit of the variable life insurance policy on the date of conversion over:

(aa) its cash value on the date of conversion if the policyholder elects to surrender the variable life policy for its cash value, or

(bb) the death benefit payable under any paid-up insurance option if the policyholder elects such nonforfeiture option under variable life policy.

(B) If the policy is in force as paid-up variable life insurance, then conversion will be to a substantially comparable paid-up fixed benefit life insurance policy for an amount of insurance not exceeding the death benefit of the variable life insurance policy on the date of conversion.

If conversion is made pursuant to (A)(i) or (3) above, then (1) if the cash value of the variable life insurance policy exceeds the cash value of the fixed benefit life insurance policy, the difference shall be paid to the policyholder; (2) if the cash value of the fixed benefit life insurance policy exceeds the cash value of the variable life insurance policy, the difference shall be paid by the policyholder; and (3) any indebtedness under the variable life insurance policy shall become indebtedness under the fixed benefit policy, provided that any excess of such indebtedness over the cash value of the fixed benefit policy on the date of conversion shall be deducted from any amount otherwise payable to the policyholder.]

Section 7. Charges Against [Variable Life Insurance] Separate Account.

The insurer [may deduct only the following from the separate account:] must disclose in the policy all charges that may be made against the separate account, including, but not limited to, the following:

(1) taxes or reserves for taxes attributable to investment gains and income of the separate account:

(2) actual cost of reasonable brokerage fees and similar direct acquisition and sale costs incurred in the purchase or sale of separate account assets:

(3) actuarially determined costs of insurance (tabular costs) and the release of separate account liabilities:

(4) charges for administrative expenses and investment management expenses, including internal costs attributable to the investment management of assets of the separate account:[, not exceeding the following percentages, on an annual basis, of the average net value of the separate account as of the dates of valuation under Section 1e of this Article:

(a) .75% of that portion of separate account assets valued at or under $75,000,000; and

(b) .50% of that portion of separate account assets valued in excess of $75,000,000 but less than $150,000,000; and

(c) .40% of that portion of separate account assets valued in excess of $150,000,000 but less than $400,000,000; and

(d) .35% of that portion of separate account assets valued in excess of $400,000,000 but less than $800,000,000; and

(e) .30% of that portion of separate account assets valued in excess of $800,000,000.]

(5) a charge, at a rate specified in the policy, [not to exceed .50% per year of the average net asset value of the separate account as of the dates of valuation under Section 1e of this Article,] for mortality and expense guarantees.

(6) any amounts in excess of those required to be held in the separate accounts.

(7) charges for incidental insurance benefits.

[Any charges against the separate account made by either an affiliate of the insurer or an unaffiliated fund shall be considered part of the charges limited by paragraphs (4) and (5) of subsection (a) above. Any charge against the separate account, excluding taxes, shall not vary in accordance with the difference between the investment performance of the separate account and any index of securities prices or other measure of investment performance.]

Section 8. Standards of Conduct.

Every insurer seeking approval to enter into the variable life insurance business in this state shall adopt by formal action of its Board of Directors [and file with the Commissioner] a written statement specifying the Standards of Conduct of the insurer, its officers, directors, employees, and affiliates with respect to the purchase or sale of investments of [variable life insurance] separate accounts. [and variable life insurance operations.] Such Standards of Conduct shall be binding on the insurer and those to whom it refers. [and must contain at a minimum the items contained in subsection 9b of this Article.] A code or codes of ethics meeting the requirements of Section 17j under the Investment Company Act of 1940 and applicable rules and regulations thereunder shall satisfy the provisions of this Section.

Section 9. Conflicts of Interest.

[a] Rules under any provision of the Insurance Laws of this state or any regulation applicable to the officers and directors of insurance companies with respect to conflicts of interest shall also apply to members of any separate account's committee or other similar body. [No officer or director of such company nor any member of any managing committee or body of a separate account shall receive directly or indirectly any commission or any other compensation with respect to the purchase or sale of assets of such separate account. The Board of Directors of the insurer shall be responsible for all acts concerning the separate account.]

[b. Unless otherwise approved in writing by the Commissioner in advance of the transaction, with respect to variable life insurance separate accounts, an insurer or affiliate thereof shall not:

(1) sell to or purchase from any such separate account established by the insurer any securities or other property, other than variable life insurance policies;

(2) purchase or allow to be purchased for any such separate account any securities of which the insurer or an affiliate is the issuer;

(3) accept any compensation, other than a regular salary or wages from such insurer or affiliate, for the sale or purchase of securities to or from any such separate account other than as provided in Section 9c(3) of this Article;

(4) engage in any joint transaction, participation, or common undertaking whereby such insurer or an affiliate participates with such a separate account in any transaction in which an insurer or any of its affiliates obtain an advantage in the price or quality of the item purchased, in the service received, or in the cost of such service and the insurer or any of its other affiliates is disadvantaged in any of these respects by the same transaction;

(5) borrow money or securities from any such separate account other than under a policy loan provision.]

[c. No provision of this regulation shall be construed to prohibit:

(1) the investment of separate account assets in securities issued by one or more investment companies registered pursuant to the Investment Company Act of 1940 which is sponsored or managed by the insurer or an affiliate, and the payment of investment management or advisory fees on such assets;

(2) the combination of orders for the purchase or sale of securities for the insurer, an affiliate thereof, any separate accounts, or any one or more of them, which is for their mutual benefit or convenience so long as any securities so purchased or the proceeds of any sale thereof are allocated among the participants on some predetermined basis expressed in writing which is designed to assure the equitable treatment of all participants;

(3) an insurer or an affiliate to act as a broker or dealer in connection with the sale of securities to or by such separate account; however, any commission fee or remuneration charged therefor shall not exceed the minimum broker's commission established for any such transaction by any national securities exchange through which such transaction could be effected, or where such charges are subject to negotiation or where no minimum charge is applicable, then such charge shall be consistent with the charges prevailing in the ordinary course of business in the community where such transaction is effected;

(4) the rendering of investment management or investment advisory services by an insurer or affiliate, for a fee, subject to the provisions of this regulation.]

[d. The Commissioner may, upon the written request of an insurer or an affiliate, approve a particular transaction or series of proposed transactions which would otherwise be prohibited under subsection (b) if he determines such transaction is not unfair or inequitable to persons affected under the circumstances of such transactions.]

Section 10. Investment Advisory Services to a Separate Account.

[a.] An insurer shall not enter into a contract under which any person undertakes, for a fee, to regularly furnish investment advice to such insurer with respect to its separate accounts maintained for variable life insurance policies unless:

(1) the person providing such advice is registered as an investment adviser under the Investment Advisers Act of 1940; or

(2) the person providing such advice is an investment manager under the Employee Retirement Income Security Act of 1974 with respect to the assets of each employee benefit plan allocated to the separate account; or

(3) the insurer has filed with the Commissioner and continues to file annually the following information and statements concerning the proposed adviser:

(a) the name and form of organization, state of organization, and its principal place of business;

(b) the names and addresses of its partners, officers, directors, and persons performing similar functions or, if such an investment adviser be an individual, of such individual;

(c) a written Standard of Conduct complying in substance with the requirements of Section 8 of this Article which has been adopted by the investment adviser and is applicable to the investment adviser, its officers, directors, and affiliates;

(d) a statement provided by the proposed adviser as to whether the adviser or any person associated therewith:

(i) has been convicted within ten years of any felony or misdemeanor arising out of such person's conduct as an employee, salesman, officer or director or an insurance company, a banker, an insurance agent, a securities broker, or an investment adviser involving embezzlement, fraudulent conversion, or misappropriation of funds or securities, or involving the violation of Sections 1341, 1342, or 1343 of Title 18 of United States Code;

(ii) has been permanently or temporarily enjoined by order, judgment, or decree of any court of competent jurisdiction from acting as an investment adviser, underwriter, broker, or dealer, or as an affiliated person or as an employee of any investment company, bank, or insurance company, or from engaging in or continuing any conduct or practice in connection with any such activity;

(iii) has been found by federal or state regulatory authorities to have willfully violated or have acknowledged willful violation of any provision of federal or state securities laws or state insurance laws or of any rule or regulation under any such laws; or

(iv) has been censured, denied an investment adviser registration, had a registration as an investment adviser revoked or suspended, or been barred or suspended from being associated with an investment adviser by order of federal or state regulatory authorities; and

(4) such investment advisory contract shall be in writing and provide that it may be terminated by the insurer without penalty to the insurer or the separate account upon no more than sixty days' written notice to the investment adviser.

The Commissioner may, after notice and opportunity for hearing, by order require such investment advisory contract to be terminated if he deems continued operation thereunder to be hazardous to the public or the insurer's policyholders.

ARTICLE VII: INFORMATION FURNISHED TO APPLICANTS

An insurer delivering or issuing for delivery in this state any variable life insurance policies shall deliver to the applicant for the policy, and obtain a written acknowledgement of receipt from such applicant coincident with or prior to the execution of the application, the following information. The requirements of this Article shall be deemed to have been satisfied to the extent that a disclosure containing information required by this Article is delivered, either in the form of (1) a prospectus included in a registration statement relating to the policies which satisfies the requirements of the Securities Act of 1933 and which was declared effective by the Securities and Exchange Commission; or (2) all information and reports required by the Employee Retirement Income Security Act of 1974 if the policies are exempted from the registration requirements of the Securities Act of 1933 pursuant to Section 3(a)(2) thereof.

1. A summary explanation, in non-technical terms, of the principla features of the policy, including a description of the manner in which the variable benefits will reflect the investment experience of the separate account and the factors which affect such variation. Such explanation must include notices of the provision required by Article IV, Sections 3a(5) and 3f;

2. a statement of the investment policy of the separate account, including:

   a. a description of the investment objectives [and orientation] intended for the separate account and the principal types of investments intended to be made; and

   b. any restriction or limitations on the manner in which the operations of the separate account are intended to be conducted.

3. a statement of the net investment return of the separate account for each of the last ten years [for which] <u>or such lesser period as</u> the separate account [was] <u>has been</u> in existence;

[4. a statement describing, as an approximate percentage of an annual gross premium for each year and for the life of the policy all commission or equivalent payments to be paid to all agents or other persons as a result of the proposed sale for each year of the policy for which such payments are to be made. As used in this Section, "commissions" mean all monies and other valuable consideration, including but not limited to prizes, bonuses paid directly or indirectly to, for, or on behalf of the selling agent as compensation for services in the sale of variable life insurance;]

[5.] <u>4.</u> a statement of the [annual taxes, brokerage fees, and similar costs, and the] charges[, expressed as an annual percentage,] levied against the separate account during the previous year;

[6.] <u>5.</u> a summary of the method to be used in valuing assets held by the separate account;

[7.] <u>6.</u> a summary of the federal income tax [liabilities] <u>aspects</u> of the policy applicable to the insured, the policyholder [owner], and the beneficiary;

[8.] 7. [if the applicant is furnished] illustrations of benefits payable under [any] the variable life insurance contract[,]. Such illustrations shall be prepared by the insurer and shall not include projections of past investment experience into the future or attempted predictions of future investment experience, provided that nothing contained herein prohibits use of hypothetical assumed rates of return to illustrate possible levels of benefits if is it made clear that such assumed rates are hypothetical only.

[9. a prominent statement either in contrasting color or in bold-face type at least four points larger than the type size of the largest type used in the text of any provision on the page, providing in substance the following information:

The purpose of this variable life insurance policy is to provide insurance protection for the beneficiary named therein.

No claim is made that this variable life insurance policy is in any way similar or comparable to a systematic investment plan of a mutual fund.]

ARTICLE VIII: APPLICATIONS

The application for a variable life insurance policy shall contain:

1. a prominent statement that the death benefit may be variable or fixed under specified conditions;

2. a prominent statement that cash values may increase or decrease in accordance with the experience of the separate account (subject to any specified minimum guarantees);

3. questions designed to elicit information which enables the insurer to determine the suitability of variable life insurance for the applicant.

ARTICLE IX: REPORTS TO POLICYHOLDERS

Any insurer delivering or issuing for delivery in this state any variable life insurance policies shall mail to each variable life insurance policyholder at his or her last known address the following reports:

1. Within thirty days after each anniversary of the policy, a statement or statements of the cash surrender value, death benefit, any partial withdrawal or policy loan, any interest charge, any optional payments allowed pursuant to Section 4 of Article IV under the policy computed as of the policy anniversary date. Provided, however, that such statement may be furnished within thirty days after a specified date in each policy year so long as the information contained therein is computed as of a date not more than [forty-five] sixty days prior to the mailing of such notice. This statement shall state [in contrasting color or distinctive type] that, in accordance with the investment experience of the separate account, the cash values and the variable death benefit may increase or decrease, and shall prominently identify any value described therein which may be recomputed prior to the next statement required by this Section. If the policy guarantees that the variable death benefit on the next policy anniversary date will not be less than the variable death benefit specified in such statement, the statement shall be modified to so indicate. For flexible premium policies, the report must contain a reconciliation of the change since the previous report in net cash value and cash surrender value, if different, because of payments made (less deductions for expense charges), withdrawals, investment experience, insurance charges and any other charges made against the cash value. In addition, the report must show the projected net cash value and cash surrender value, if different, as of one year from the end of the period covered by the report assuming that: (i) planned periodic premiums, if any, are paid as scheduled; (ii) guaranteed costs of insurance are deducted; and (iii) the net investment return is equal to the guaranteed rate or, in the absence of a guaranteed rate, is not greater than zero. If the projected value is less than zero, a warning message must be included that states that the policy may be in danger of terminating without value in the next 12 months unless additional premium is paid.

2. Annually, a statement or statements including:

   a. a summary of the financial statement of the separate account based on the annual statement last filed with the Commissioner;

b. the net investment return of the separate account for the last year and, for each year after the first, a comparison of the investment rate of the separate account during the last year with the investment rate during prior years, up to a total of not less than five years when available;

c. a list of investments held by the separate account as of a date not earlier than the end of the last year for which an annual statement was filed with the Commissioner;

d. any charges[, taxes, and brokerage fees determined on an accrual basis payable by the separate account during the previous year, each expressed as a dollar amount and a percentage and the total expressed as a dollar amount and as a percentage of the assets of the separate account;] levied against the separate account during the previous year.

e. a statement of any change, since the last report, in the investment objective and orientation of the separate account, in any investment restriction or material quantitative or qualitative investment requirement applicable to the separate account or in the investment adviser of the separate account;

[f. the names and principal occupations of each principal executive officer and each director of the insurer; and]

[g. the names of all parents of the insurer and the basis of control of the insurer, and the name of any person who is known to own, to record of beneficially, 10% or more of the outstanding voting securities of the company.]

3. A report must be sent to the policyholder if the cash value on any policy processing day is equal to or less than the amount necessary to keep the policy in force until the next following policy processing day. The report must indicate the minimum payment required under the terms of the policy to keep it in force and the length of the grace period for payment of such amount.

ARTICLE X: FOREIGN COMPANIES

If the law or regulation in the place of domicile of a foreign company provides a degree of protection to the policyholders and the public which is substantially similar to that provided by these regulations, the Commissioner to the extent deemed appropriate by him in his discretion, may consider compliance with such law or regulation as compliance with these regulations.

ARTICLE XI: QUALIFICATIONS OF AGENTS FOR THE SALE OF VARIABLE LIFE INSURANCE

1. Qualification to Sell Variable Life Insurance

   a. No person may sell or offer for sale in this state any variable life insurance policy unless such person is an agent and has filed with the Commissioner, in a form satisfactory to the Commissioner, evidence that such person holds any license or authorization which may be required for the solicitation or sale of variable life insurance. [by any federal or state securities law.]

   b. Any examination administered by the Department for the purpose of determining the eligibility of any person for licensing as an agent shall, after the effective date of this regulation, include such questions concerning the history, purpose, regulation, and sale of variable life insurance as the Commissioner deems appropriate.

2. Report of Disciplinary Actions: Any person qualified in this state under this Article to sell or offer to sell variable life insurance shall immediately report to the Commissioner:

   a. any suspension or revocation of his agent's license in any other state or territory of the United States;

   b. the imposition of any disciplinary sanction, including suspension or expulsion from membership, suspension, or revocation of or denial of registration, imposed upon him by any national securities exchange, or national securities association, or any federal, state, or territorial agency with jurisdiction over securities or variable life insurance;

c. any judgment or injunction entered against him on the basis of conduct deemed to have involved fraud, deceit, misrepresentation, or violation of any insurance or securities law or regulation.

3. Refusal to Qualify Agent to Sell Variable Life Insurance: Suspension, Revocation, or Nonrenewal of Qualification: The Commissioner may reject any application or suspend or revoke or refuse to renew any agent's qualification under this Article to sell or offer to sell variable life insurance upon any ground that would bar such applicant or such agent from being licensed to sell other life insurance contracts in this state. The rules governing any proceeding relating to the suspension or revocation of an agent's license shall also govern any proceeding for suspension or revocation of an agent's qualification to sell or offer to sell variable life insurance.

ARTICLE XII: SEPARABILITY ARTICLE

If any provision of this regulation or the application thereof to any person or circumstance is for any reason held to be invalid, the remainder of the regulation and the application of such provision to other persons or circumstances shall not be affected thereby.

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ATTACHMENT THREE

Speech by Jerold Rosenblum at the NAIC Meeting
June 7, 1982

Good afternoon, my name is Jerold Rosenblum. I am vice president and senior staff counsel of Life Insurance Company of North America, a subsidiary of CIGNA Corporation. I am the chairman of the ACLI task force responsible for analysis of the current VLI Model and for recommending and drafting appropriate changes to that regulation to accommodate new forms of equity based life insurance.

My purpose is to explain briefly the genesis and background of the council's amended VLI Model Regulation which you have before you. In addition, I would like to explain why the council and several cooperating industry groups believed that it was necessary to undertake this project and why our proposal recommends certain changes from the current model.

The economy in recent years, characterized by rising, double-digit inflation, increasing expenses and taxes, and volatile, rising interest rates has placed an extraordinary strain on financial institutions of all types. Because of this, the traditional barriers between life insurance companies, depository institutions (such as banks and savings and loans), mutual funds (particularly money market funds), and investment banker/broker-dealers are breaking down. The economic realities have, in fact, outpaced today's regulatory structure and, as these financial institutions struggle in ever increasing competition, we see the federal banks, savings and loans, mutual funds, and investment bankers, scrambling to eliminate or alter the regulation of their constituencies in order to allow them to compete more effectively in this new economic environment.

The current economy has hastened the creation of a more financially sophisticated public, more responsive to higher yielding financial products and better financial services. Thus, institutions and individuals, battered by inflation, high interest and other adverse economic circumstances, both need and demand financial products and services that provide protection against the ever increasing prospect that their hard earned life savings and the estates they hope to pass on to their inheritors will be rendered worthless.

The life insurance industry has historically devoted a great deal of effort and imagination to meeting the public's demand for products that are responsive to these needs. In recent years, the efforts have intensified as never before. Variable annuities, current forms of variable life insurance and universal life insurance are all recently developed products that reflect the insurance industry's efforts.

Although we believe that these products are all on the right track for today, there are other insurance products ready to come off the drawing boards that are inhibited by the current Model Variable Life Insurance Regulation. We believe that this is unfortunate and unnecessary. Therefore, we have deliberated and collectively decided to propose changes that are believed to be responsible yet substantive, and ones which will allow these products to be offered within an effective regulatory atmosphere. One of the proposed products which gave immediate rise to our efforts is one which combines the features of current forms of variable life insurance with the flexibility inherent in universal life. In essense, our proposal will permit the issuance of a life insurance product which will permit the purchaser to make flexible premium payments, select an amount of insurance coverage which may be changed by him from time to time in accordance with need, and will have variable cash values and duration of coverage, all supported by an equity portfolio arrangement of a company sponsored separate account.

Before we embark upon a brief analysis of the proposed model, I thought it would be helpful to you if I briefly summarize the history of the current VLI Model.

The current Variable Life Model Regulation was developed under somewhat unusual circumstances at a time when the NAIC, the insurance industry and the SEC had just some through a decade of molding variable annuity regulations into a rough but workable regulatory scheme. At the same time, however, companies proposing to issue variable life insurance, with the participation of both the NAIC and the SEC, were trying to suggest a regulatory framework for this product that would avoid so many of the regulatory pitfalls that plagued the development of variable annuities. In the wake of the bitter battle between the insurance industry and the SEC regarding the securities law status of variable annuities, the combatants determined that a more sensible approach to dealing with securities law issues concerning insurance products would be a process of discussion and negotiation.

Therefore, in early 1972 representatives of the insurance industry petitioned the SEC for rules waiving regulation under the Investment Company Act of 1940 for Variable Life Insurance Separate Accounts.

After hearings, the SEC, in early 1973, proposed and then adopted Rule 3a-4 which exempted variable life insurance separate accounts from investment company regulation under the 1940 Act. Rule 3a-4 provided this exemption for only a very limited type of VLI Product. The rule set forth very specific and restrictive limitations on the type of product which would receive exemption from 1940 Act regulation. In granting this exemption, the SEC made clear that it expected adequate protections for the consumer to be imposed by state regulators which took into account the securities aspects of variable life insurance.

Thus, with Rule 3a-4 in hand, the NAIC and the industry embarked upon development of the current NAIC model. The model, of necessity, was fashioned to regulate and foster only the restrictive design criteria necessitated by the restrictive SEC exemptions.

Concerned with a slow pace of adoption by the states, and spurred by a lawsuit brought by the mutual fund industry, the SEC, in late 1973, proposed amendments to Rule 3a-4. These amendments would have specifically conditioned an exemption from the 1940 Act on an SEC state by state determination that a particular state's regulation of variable life insurance provided adequate consumer protection. In other words, the SEC proposed to review each system of state VLI Regulation.

Thus, the regulation which was adopted imposed not only all of the limits set forth in SEC Rule 3a-4, but others, all of which were included in the hopes of assuring that the SEC would consider the state law strict enough. Yet the SEC was again threatening to create state disparity by its state by state proposal.

It is worth keeping in mind that at this time many insurance companies were still possessed by a mortal fear of federal regulation, and particularly of regulation by the SEC in light of the variable annuity experience. Similarly, many members of the NAIC were concerned that 1940 Act regulation of VLI separate accounts would be the first step in a process of federal usurpation of state insurance regulation.

Then in early 1975 the SEC proposed to rescind the current 3a-4 exemption and instead adopt a new proposal to subject variable life separate accounts to the 1940 Act registration. This newly proposed and subsequently adopted Rule 6e-2 ultimately required 1940 Act regulation of VLI separate accounts but provided specific exemptions from certain troublesome provisions. The adoption took place in 1976.

Thus, the efforts of the NAIC and the industry to avoid 1940 Act regulation of constructing an extraordinarily restrictive system of state regulation of VLI was foiled by SEC Rule 6e-2. This left the insurance industry in its current state of affairs with both 1940 Act regulation and restrictive state regulation.

Economic circumstances, specifically the dramatic decline in equity markets and escalating interest rates, stymied for a time the industry's interest in variable life insurance. For some time, only one company entered the market with a VLI product, with a few others following later.

However, recent economic conditions have regenerated a new public interest in variable life insurance, as demonstrated by recent sale figures of the companies marketing the product. In addition, the public's current acceptance of universal life as well as other modern consumer oriented life products lead us to conlude that the current VLI regulation should be changed to accommodate further development of variable life products.

The recitation of this VLI history is particularly important in light of the fact that most of the changes advocated in the proposed model reflect either deletion or revision of provisions that were included in the current model for one of two reasons:

First, because they parallel or duplicate provisions of the 1940 Act and were included in the current model in order to support the contention that the 1940 Act regulation was unnecessary; – when 1940 Act regulation was imposed, such state regulation became duplicative.

And second, they limit the permissible policy design. Most model provisions were originally included in the hopes of assuring that the VLI product had sufficient "traditional insurance characteristics" so that federal regulation would not be necessary.

Obviously, there is substantial overlap between these two types of provisions.

Many of the changes suggested reflect a combination of each of these factors.

In reviewing the model with a view to recommending changes, the council has tried to keep in mind all relevant factors concerning state insurance regulation. The proposed amendments are designed to accommodate emerging innovative product designs, such as flexible premium variable life insurance, without compromising the adequacy and comprehensiveness of the current basic framework of state regulation of variable life insurance. Also, we have endeavored to keep in mind other considerations. For the most part, the changes will continue to entrust the pure securities aspects of the proposed VLI product to the SEC. At the same time, it will retain for the states all aspects of insurance regulations over VLI products and their issues. In addition, it will also keep for state regulation some provisions of the current model which, although securities oriented, still have relevance for consumer protection within a state regulatory scheme. For example, Section 3 of Article III of the current regulation imposes upon insurers standards of suitability which are substantially identical to the suitability requirements imposed by the federal securities laws. While these standards do parallel those imposed by the securities law, we believe that it is appropriate to include such standards in the model. We are well aware, for example, of the conflict the NAIC continues to experience with the National Association of Securities Administrators concerning regulation of new insurance products. This is just one example of a provision which we have recommended be retained, even though it is arguably adequately covered by federal regulation.

Another example of change involves Articles III and VI of our proposal concerning investment policy. The current provisions reflect assumptions made in the early '70's that state regulation of separate account investment policies would become a replacement for the current SEC and policyholder approval requirements, as well as the portfolio diversification requirements contained in the 1940 Act. As a result of the SEC's '76 action which re-imposed SEC requirements, VLI separate accounts are subject to both SEC and state investment policy limitations. Our proposal attempts to strike a balance between the regulatory jurisdictions which recognize the primacy of SEC regulation over the investment policies of 1940 Act registered separate accounts.

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ATTACHMENT FOUR

MEMORANDUM TO THE
VARIABLE LIFE INSURANCE REGULATION (A) TASK FORCE

Philadelphia, Pennsylvania
June 7, 1982

INTRODUCTION

On behalf of its 527 member companies, the American Council of Life Insurance (council) is pleased to submit an exposure draft of a Proposed Amended Variable Life Insurance Model Regulation for consideration by the Variable Life Insurance Regulation Task Force. This memorandum explains the impetus for the proposed amendments and summarizes the rationale underlying the significant departures from the model.[1]

Life insurance companies, like all financial intermediaries, have felt the tremendous impact on their business of double-digit inflation, rising expenses and taxes, and volatile interest rates. The continuing ability of insurers to compete in today's marketplace depends in large part on their ability to develop effective new products, particularly products that are responsive to a consuming public that is placing more and more emphasis on near-term financial rewards and the flexibility to adjust as financial needs change.

The life insurance industry has devoted a great deal of effort and imagination to meeting the public's demand for products responsive to changing consumer needs and the prevailing economy. Variable life insurance is such a product. However, the full potential of this product is impeded by a restrictive and outmoded system of state regulation that severely inhibits the development of innovative variable life insurance product designs.

The amendments the council is proposing are intended to address these concerns by broadening the scope of the existing model so as to accommodate innovative products. More specifically, these changes would permit life insurance companies to offer a product now in the evolutionary stage referred to as flexible premium variable life insurance. This product is a hybrid of two rather recent innovations -- universal life insurance and existing variable life insurance -- and possesses characteristics of both. In broad overview, the product is conceived of as a flexible premium, separate account product, with the death benefit and cash value varying with investment experience. As a separate account product, flexible premium variable life differs from first generation, general account based universal life. Moreover, the flexible premium feature of this new product distinguishes it from current forms of variable life insurance which contemplate a scheduled stream of premium payments.

As presently envisioned, many features of flexible premium variable life insurance would parallel those of universal life insurance policies now being marketed. For example, policyholders could be afforded flexibility as to the amount and timing of premium payments, the selection of death benefit schedules, the amount of death benefits after issue, and the underlying investment options. Additionally, this type of policy might be designed to continue in effect so long as its cash value is sufficient to cover charges for the cost of insurance.

The proposed amendments are designed to permit the model to accommodate emerging innovative product designs, such as flexible premium variable life, without compromising the adequacy and comprehensiveness of the basic framework of state regulation of variable life insurance. In attempting to achieve these twin goals, those drafting the proposed amendments have searchingly examined the existing model to determine the necessary provisions for effective and thorough state regulation of variable life insurance. Those portions of the model that constitute unnecessary impediments to the development of innovative flexible premium products have been deleted.

In addition, the proposed revisions take cognizance of the regulatory atmosphere prevailing at the time the model was adopted. Specifically, it was recognized that the model was adopted in large part in response to concerns about possible dual (i.e., federal and state) regulation of variable life insurance. Prior to 1973, the Securities and Exhcnage Commission (SEC) considered requests by the NAIC and the insurance industry that variable life insurance be exempted completely from federal securities law regulation. In 1973, the SEC adopted Rule 3c-4 under the Investment Company Act of 1940 (the 1940 Act). This rule exempted certain separate accounts funding variable life insurance policies from the requirement

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1. A commentary will be furnished separately to the task force discussing in detail each of the changes proposed to the model.

that they be registered as investment companies under the 1940 Act. At the same time, the SEC determined that variable life insurance policies themselves were securities subject to the registration and prospectus delivery requirements of the Securities Act of 1933 and the antifraud and broker/dealer requirements of the Securities Exchange Act of 1934.

Rule 3c-4 exempted only those separate accounts funding policies which met certain restrictive design criteria intended to satisfy various 1940 Act regulatory concerns. These criteria were adopted with the understanding that the NAIC would move expeditiously to develop, refine and adopt appropriate regulations with respect to variable life insurance so that 1940 Act regulation would be unnecessary. Accordingly, in drafting the present model, the NAIC generally limited its scope so as to accommodate only those policies which were described in Rule 3c-4.

As a review of the notes and commentary to the existing model indicates, the NAIC was aware that there were several policy designs under consideration which did not meet the design criteria set forth by the SEC in Rule 3c-4 and subsequently embraced in the model. While recognizing that these designs were also insurance, the NAIC nevertheless determined to limit severely policy designs "for the present" to those described in Rule 3c-4.

In 1975, spurred by lawsuits initiated by the investment company industry contending that state insurance regulation was an inappropriate substitute for the 1940 Act and concerned with the lack of activity by the states in adopting the NAIC Model, the SEC rescinded Rule 3c-4, and reasserted 1940 Act jurisdiction over all forms of variable life insurance. In place of Rule 3c-4, the SEC adopted Rule 6e-2 which provides a number of necessary exemptions from the provisions of the 1940 Act tailored specifically for variable life insurance.

The NAIC model and the state statutes based thereon were never significantly amended, even after the rescission of Rule 3c-4 and the adopted of Rule 6e-2. Thus, variable life insurance is currently subject to both state insurance law and federal securities law. Unfortunately, the model contains many provisions which overlap unnecessarily with the federal securities laws.

With this historical perspective in mind, the proposed model recommends the removal of those provisions of the existing model that overlap or duplicate provisions of the 1940 Act. These overlaps were not intended by the original draftsmen of the model and serve only to confuse and complicate the regulatory scheme applicable to variable life insurance.

For this reason, and in light of the unnecessarily restrictive nature of the model noted above, the council believes that it is appropriate to revise the model as proposed. Moreover, we believe that these revisions can be effected without compromising the efficacy of state regulation of variable life insurance. This premise underlies the proposed amendments, which are summarized below.

ARTICLE II: DEFINITIONS

The proposed amendments to Article II of the model regulation add several new definitions that are central to the overall goal of restructuring the model regulation to encompass flexible premium variable life products while preserving the existing regulatory framework for conventional variable life products. Perhaps the most fundamental of the proposed new definitions is the demarcation between "flexible premium" policies (Article II, Section 7, p. 2) and "scheduled premium" policies (Article II, Section 15, p. 4). The basic approach has been to define a "scheduled premium policy" to include "traditional" variable life insurance policy designs. Accordingly, a "scheduled premium policy" is defined as "any variable life insurance policy under which the amount and timing of premium payments are specified under the terms of the policy." Having established the boundaries of conventional variable life policies, the proposed model has defined "flexible premium" policies expansively to encompass all other variable life policy designs. Accordingly, a "flexible premium policy" has been defined as "any variable life insurance policy other than a scheduled premium policy as specified in Section 15 of this Article II." The breadth of this definition is intended to include flexible premium variable life products.

To allow for the flexibility inherent in flexible premium products, it has also been necessary to propose an amended definition of "variable life insurance policy." The current model regulation (Article II, Section 16) defines a variable life insurance policy as "any individual policy which provides for <u>life insurance which varies</u> according to the investment experience of any separate account or accounts established and maintained by the insurer as to such policy . . ." (emphasis added). This definition could be construed as mandating that the <u>amount</u> of the death benefit under a variable life insurance policy must vary to reflect investment experience. Such an interpretation would not be compatible with flexible premium variable life insurance product design. Since insurance coverage under a flexible premium variable policy continues as long as the policy's cash value is sufficient to support charges for the cost of insurance, it may be the <u>duration</u> of the policy, rather than the <u>amount</u> of the death benefit, which varies with the investment experience of the separate account. Accordingly, the proposed model recommends that the definition of "variable life insurance policy" be expanded to include "any individual policy which provides for life insurance <u>the amount or duration of</u> which varies" in accordance with investment experience. (<u>See</u> p. 4 of attached draft.)

The proposed amendments to Article II also introduce the concept of the "policy processing day," defining this term as "the day on which charges authorized in the policy are deducted from the policy's cash value." (Article II, Section 14, p. 3.) As explained more fully in the discussion of the proposed amendments to Articles IV and IX, the "policy processing day" plays a central role in triggering the grace period for flexible premium policies and in measuring the length of the grace period once it is activated (Article IV, Section 3(b)(2), p. 17; Article IX, Section 3, p. 44).

ARTICLE III: QUALIFICATION OF INSURER TO ISSUE VARIABLE LIFE INSURANCE

This article sets forth requirements applicable to all insurers as a condition of their obtaining and maintaining authority to issue variable life insurance products in the state. The current provisions reflect both traditional life insurance regulatory concerns and the concern with avoiding federal securities regulation in connection with variable life insurance.

The changes suggested in the proposed model would leave in place the traditional insurance regulatory structure. Some provisions reflecting the concern with federal securities regulation have been retained because they tie in well with insurance regulatory concerns, while other such provisions have been deleted.

Section 1. Licensing and Approval to Do Business in This State.

Paragraph (a) of this section currently requires that the insurer be licensed and organized to conduct a life insurance business in the state. Paragraph (b), in conjunction with Article VI of the existing model, is concerned with regulation of the investment policy of the separate accounts funding the policy. Paragraph (c) requires the commissioner to consider the plan of operation of the company, the character, reputation, and experience of the management, and the present and foreseeable future financial condition of the issuer before authorizing an insurer to sell or deliver variable life insurance in the state.

The proposed draft recommends that paragraphs (a) and (c) be retained. Consistent with the changes suggested for Article VI, it is recommended that subparagraph (b) of the current section be deleted. This subparagraph reflects the hope of the industry and the state insurance regulators at the time it was adopted that this provision and the provisions in Article VI would be considered an adequate substitute for the federal securities law provisions regarding investment policy.

As is discussed at greater length in connection with the proposed revisions of Article VI, the fact that variable life insurance is subject to the federal securities laws substantially changes the assumptions on which the existing Model's provisions regarding investment policy were based. Not only is extensive disclosure of separate account investment policy required by the federal securities laws, but restrictive regulations and limitations are imposed with regard to investment policies of separate accounts and procedures for changing such policies.

Section 2. Filing for Approval to Do Business in This State.

The existing model requires that an insurer must, before delivering or issuing for delivery any variable life insurance policy in the state, file with the department various documents and items of information not unlike those required to be filed in connection with the sale of a conventional whole life insurance policy. In addition to the information which must be filed, other information may be filed if requested by the commissioner.

The primary change suggested would permit the commissioner, at his discretion, to require that the insurer file with the department the various items currently required to be filed. Thus, if the commissioner did not feel that certain information was necessary, its filing would not be mandated.

Subparagraph (b) of this section currently requires a description of the methods of operation of the issuer. The proposed model recommends adding to this description a general description of the methods of distribution of the variable life insurance business of the insurer. This suggestion reflects the recognition that the methods of selling flexible premium variable life insurance products may differ from the methods of selling more traditional life insurance products. Because of these anticipated changes, it is not unlikely that the commissioners will take a particular interest in these sales activities.

Subparagraph (g) in the proposed model is an addition which requires companies to demonstrate the mortality and expense risk assumed.

Section 3. Standards of Suitability.

This section, which was included in the current model in the hopes of avoiding federal securities regulation of variable life insurance, has been retained and simplified.

The substantive standard set forth in this provision is:

> "that no recommendations shall be made to an applicant to purchase a variable life insurance policy and that no variable life insurance policy shall be issued in the absence of reasonable grounds to believe that the purchase of such policy is not unsuitable for such applicant on the basis of information furnished after reasonable inquiry of such applicant concerning the applicant's insurance and investment objectives, financial situation and needs, and any other information known to the insurer or to the agent making the recommendation."

This standard is derived from suitability requirements under the federal securities laws and the holding in Anderson v. Knox, 297 F.2d 702 (9th Cir., 1961) cert. den. 370 U.S. 915 (1961). We believe that it is appropriate that such a standard be set forth as a requirement in the model.

However, we recommend that certain modifications be made to the current standard. For example, the current standard requires that the insurer "adopt by formal action of its board of directors and file with the commissioner a written statement specifying the standards of suitability to be used by the insurer . . ." We believe that such a requirement of formal action by the board of directors is unprecedented in NAIC model insurance statutes and that such a requirement adds little to the suitability concept. Similarly, we believed that the provisions specifying to whom the standards of suitability would be applicable are unnecessary in that the standard would apply with regard to any recommendation and sale, and their applicability would vary according to the facts of the particular situation.

We strongly recommend that the provisions in the existing model specifying that lapse rates be utilized as indicators of the suitability of sales by an insurer should be deleted. Wtih regard to conventional insurance policy's lapse rates, even those reflecting experience over a very long period of time, are suspect as an indicator of whether or not sales of insurance were suitable when made. Lapse rates are even less relevant to the suitability of sales of variable life insurance. Lapse rates are affected by a variety of factors, the most significant of which ordinarily are changes in the policyholder's perception of the attractiveness of the policy due to changes in the general economy and in the economic circumstances of the policyholder. In the case of variable life insurance, an additional important factor is the performance of the separate account relative to other financial alternatives. Because of the significance of these and other factors, we suggest that the use of lapse rates as a measure of suitability is particularly inappropriate and inaccurate.

Section 4. Use of Sales Materials.

This section requires that the insurer may not use false, misleading, deceptive, and inaccurate sales materials, advertising materials or descriptive literature. The proposed model suggests no material change in this requirement.

The proposed draft does recommend deletion of subparagraph (a) to this Section. The comments to the existing model indicate that the NAIC was concerned with reconciling SEC and NAIC policies with regard to advertising and sales materials. Therefore, it required that all variable life insurance advertising and agent training materials be submitted to the commissioner. The comments to the existing model make it clear that this was considered an interim measure only. Nothing in this section was intended to modify the commissioner's authority to regulate the dissemination of sales materials in the state. We suggest that subparagraph (a) is unnecessary in light of the fact that the commissioner can obtain all sales materials on request.

Section 5. Requirements Applicable to Contractual Services.

Subparagraph (a) of this provision requires that contracts between the insurer and suppliers of specified services must be in writing, and that the supplier of such services will furnish the commissioner with any information or reports in connection with such services that the commissioner requests in order to ascertain whether the variable life insurance operations of the insurer are being conducted in a manner consistent with the law and regulations. Subparagraphs (b) and (c) require that such contracts be fair and equitable, not endanger policyholders, and not relieve the insurer from any responsibilities or obligations imposed by law or regulation.

The proposed model suggests that subparagraph (a) be amended to require that only material contracts must meet the requirements of that provision and that subparagraphs (b) and (c) be deleted inasmuch as their provisions are more germand to state contract law provisions than to an insurance regulation.

Section 6. Reports to the Commissioner.

This section requires that an insurer issuing variable life insurance submit to the commissioner an annual statement of the business of its variable life insurance separate account in a form prescribed by the NAIC, any information furnished applicants, reports to policyholders, and any other information requested by the commissioner. The section also gives the commissioner the authority to disapprove of any material if it is found to be false, misleading, deceptive, or inaccurate in any material respect. Also, if any false, misleading, or deceptive, or inaccurate material has been disseminated, the commissioner may require the distribution of amended material.

We recommend no material changes to this provision.

Section 7. Authority of Commissioner to Disapprove.

This provision gives the commissioner authority to disapprove material filed with the department if it fails to comply with the standards established by this regulation.

ARTICLE IV: INSURANCE POLICY REQUIREMENTS

Policy Benefit and Design Requirements

The proposed model recommends revisions in Article IV of the model regulation to provide companies with sufficient flexibility to offer flexible premium variable life insurance as well as other variations on more traditional forms of variable life insurance. Many of the proposed amendments to this article consist of deletions from the mandatory Policy Benefit and Design Requirements of Section 2 (pp. 10-14). Specifically, the Proposed Amended Variable Life Insurance Model Regulation would delete or modify the following mandatory policy benefit and design requirements now contained in Section 2: (1) the requirement of lifetime insurance coverage (Section 2(a)); (2) the requirement that "[g] ross premiums for death benefits shall be a level amount for the duration of the premium payment period" (Section 2(b)); (3) the "minimum multiples" (Section 2(d)); (4) limitations on the manner in which the policy design reflects investment performance (Section 2(e)); (5) the requirement of substantially increased nonforfeiture benefits whenever premiums exceed a certain "conditional maximum" (Section 2(j)); and (6) a limitation on the types of charges that the insurer may deduct in determining the net investment return to be applied to the benefit base (Section 2(k)).

Deletion of the foregoing portions of Section 2 is proposed because of their inconsistency with the rudiments of the product design envisaged for flexible premium variable life insurance. Moreover, wholly apart from the substantial flexibility that would result from the deletions, it should be emphasized that these strictures need not be perpetuated for the sake of the thoroughness and efficacy of state insurance regulation of flexible premium variable life insurance. Several of these requirements -- the whole-of-life limitation, the minimum multiples, the limitation on the manner in which investment performance is reflected, and the mandatory increase in nonforfeiture benefits -- were adopted in response to the restrictive design criteria set forth by the SEC in Rule 3c-4 and in an effort on the part of the NAIC to avert dual federal and state regulation of variable life insurance. The commentary to the model regulation clearly reflects that the NAIC subcommittee assumed that the limitations which Article IV, Section 2 imposes on variable life policy design would be temporary only. The rescission of Rule 3c-4 by the SEC has removed the underpinnings for these restrictive design criteria. Their retention in the model regulation would be anachronistic and would stifle product development unnecessarily without any concomitant benefit to the public or to state regulation of variable life insurance.

Another portion of the existing model which was adopted in response to Rule 3c-4 is that setting forth the requirement that a minimum death benefit be provided "in an amount at least equal to the initial face amount of the policy so long as premiums are duly paid . . ." (Article IV, Section 2(c).) Section 10 of Article II of the model, in turn, defines "minimum death benefit" as "the amount of the guaranteed death benefit . . . payable under a variable life insurance policy regardless of the investment performance of the separate account." (Emphasis added.)

The proposed amendment to the minimum death benefit guarantee (Article IV, Section 2(c)) would differentiate between the minimum death benefit which must be offered under scheduled premium and flexible premium policies. Under the proposed amendment, the existing minimum death benefit guarantee -- i.e., the requirement that the minimum death benefit never be less than the "initial face amount of the policy" – would be limited to scheduled premium policies. The minimum death benefit guarantee for flexible premium policies would be addressed in the context of a new provision governing grace periods for flexible premium policies (Article IV, Section 3(b)(2), p. 17.)

Specifically, proposed new Section 3(b)(2) has two interrelated components. First, Section 3(b)(2) requires that flexible premium policies contain a provision for a grace period to begin on the "policy processing day" (see discussion of Article II, Section 14 supra) when the policy's cash value is insufficient to pay all authorized charges necessary to keep the policy in force until the next policy processing day. The grace period would end not less than 61 days after the date that the policyholder is mailed the report contemplated by Section 3 of Article IX (p. 44). The latter provision requires the insurer to mail a report to the policyholder of record if the policy's cash value on any policy processing day is equal to, or less than, the amount necessary to keep the policy in force until the next following policy processing day. The report must inform the policyholder of the minimum payment required to keep the policy in force and the length of the grace period for making this payment.

In addition to delineating the length of the grace period for flexible premium policies, Section 3(b)(2) provides that during the grace period the insurer must pay a death benefit equal to the death benefit that was in effect immediately prior to the grace period, less any overdue charges. Thus, Section 3(b)(2) in effect prescribes the minimum death benefit payable under a flexible premium policy. Apart from this minimum death benefit, an insurer would not be required to include a minimum death benefit guarantee in a flexible premium variable life insurance policy. Of course, nothing in the proposed model would preclude an insurer from offering a greater minimum death benefit guarantee under a flexible premium variable life insurance policy.

Other Proposed Amendments to Article IV

In addition to the foregoing salient amendments, the drafting groups have proposed several revisions to Article IV which are designed to clarify how provisions of the existing model would apply to flexible premium policies, to limit to scheduled premium policies those provisions that cannot be applied meaningfully to flexible premium products, and to provide the industry with enhanced flexibility in product development. For example, Sections 3(1) (pp. 18-19) and 5(a) (p. 23) have been revised to clarify how the incontestability clause and suicide exclusion in a flexible premium variable life insurance policy would operate with respect to increases in coverage applied for by the policyowner subsequent to the policy issue date. The requirement that a reinstatement privilege be provided (Section 3(c), p. 17) has been limited to scheduled premium policies on the theory that there is nothing to reinstate under a flexible premium policy once the policy's cash value has been depleted by deductions for the cost of insurance and other charges. Finally, insurers are afforded increased flexibility both in product development and investment practices by amendments such as the proposed deletion of the current restriction that the separate account be used to fund only variable life insurance benefits (Section 3(e)(1), p. 18).

ARTICLE V: RESERVE LIABILITIES FOR VARIABLE LIFE INSURANCE

Subparagraph 1

Subparagraph 1 of the existing model requires that reserve liabilities for variable life insurance be established under the Standard Valuation Law in accordance with actuarial procedures that recognize the variable nature of the benefits provided and any mortality guarantees. Both the existing model and the proposed model recognize the the Standard Valuation Law is prospective in nature and requires a knowledge of future benefits. Since under variable life insurance future benefits are unknown, this subparagraph recognizes that the Standard Valuation Law cannot be applied without appropriate modifications.

The proposed model recommends no change in this subparagraph.

Subparagraph 2

Subparagraph 2 in the existing model deals with reserves for minimum death benefit guarantees. The purpose of the reserve for the minimum death benefit guarantee (MDBG) is to accumulate funds to provide for the contingency of death occuring when the guaranteed minimum death benefit exceeds the death benefit that would have been payable in the absence of such a guarantee. The existing model contains a two-part MDBG reserve system consisting of the greater of (1) a one-year term reserve to assure coverage of next year's claims, or (2) a reserve designed to protect against an extended period of poor investment experience of the separate account.

The proposed model suggests that this current MDBG reserve requirement be limited to scheduled premium policies.

Subparagraph 3

Subparagraph 3 is a new subparagraph designed to deal with reserves for any minimum death benefit guarantee under a flexible premium policy. The minimum reserve proposed is a term reserve equivalent to that defined in subparagraph 2(a) for scheduled premium policies. Because the timing of future premium payments is uncertain, an "attained age level" reserve cannot be calculated for a flexible premium policy and, therefore, this reserve system is not included for flexible premium policies.

Subparagraph 4

This subparagraph in the current model requires that reserve liabilities for all fixed incidental insurance benefits must be maintained in the general account in amounts determined in accordance with the actuarial procedures appropriate to such benefits.

The proposed model simply adds to the current requirements the requirement that reserve liabilities for all variable incidental insurance benefits may be maintained in a separate account.

It should be noted that, according to the original comments to the existing model reserve standards for minimum death benefit guarantees were to be reviewed periodically to insure their satisfactory operation.

ARTICLE VI: SEPARATE ACCOUNTS

Section 1. The Establishment and Administration of Separate Accounts.

The introductory language to Section 1 has been modified to make clear that the domiciliary state has exclusive jurisdiction over the establishment of separate accounts and to clarify that a commissioner may not require foreign insurers to establish separate accounts in his or her state. This change is consistent with the intent of the existing model as expressed in the comments. Corresponding changes are recommended to Section 1(a) in order to be consistent with this concept.

Subsection (b) provides that no one can be employed in a position permitting access to separate account assets if within the last ten years they have been convicted of certain crimes or found to have violated certain insurance or securities laws. Subsection (c) requires that all persons with access to separate account assets be bonded. No change is suggested in these provisions.

Subsection (d) requires that an insurer desiring to establish more than one separate account for variable life insurance must file with the commissioner a justification for such action and must obtain the commissioner's approval for the establishment of each additional separate account. The subsection also prohibits the creation of additional separate accounts for the purpose of avoiding lower maximum charges against the separate account. We recommend deletion of this subsection because flexible premium variable life products will normally be registered with the SEC under the 1940 Act, which regulates permissible charges against a registered separate account. By deleting this section, unnecessary dual regulation at the state and federal levels would be eliminated.

In the existing model, subsection (f) provides that a separate account, exempt from regulation under Section 3(c)(11) of the 1940 Act because of the tax qualified status of the policies funded thereby, shall not be used to fund other variable life insurance policies. Subsection (f) was included in the existing model in order to prohibit companies from jeopardizing the exempt status under the 1940 Act of Section 3(c)(11) separate accounts by placing in those accounts assets from non-exempt policies. The comments to the existing model make clear that the NAIC intended to prevent dual SEC-NASD jurisdiction over these accounts by this prohibition. The proposed model recommends deletion of this provision to afford the insurer the flexibility to decide whether there are economies or benefits to be gained from pooling 3(c)(11) assets with non-exempt assets in one separate account.

Similarly, subsection (g) states that except for separate accounts exempt pursuant to Section 3(c)(11) of the 1940 Act, variable life insurance separate accounts shall not be used for variable annuities or the investment of funds corresponding to dividend accumulations or other policyholder liabilities not involving life contingencies. This provision was included in the existing model to assure that insurers not jeopardize the partially exempt 1940 Act status of variable life insurance separate accounts by pooling them with assets funding variable annuities when variable annuity separate accounts were subject to full 1940 Act regulation. We recommend deletion of this provision on the ground that the model should not preclude the insurer from deciding whether it is more advantageous to pool the separate account assets into one 1940 Act regulated account, or, on the other hand, to maintain two separate accounts, one a 1940 Act regulated variable annuity separate account and the other a variable life insurance separate account that is partially exempt from the 1940 Act.

Section 2. Amounts in the Separate Accounts.

This section requires the insurer to maintain assets in each separate account equal to the greater of the valuation reserve for the variable portion of the policy or the benefit base for such policy. Subsections (b) and (c) provide instructions for calculating the benefit base for purposes of this section. The proposed model recommends that subsections (b), (c) and (d) be deleted.

The valuation reserves underlying the variable portion of the policy measure the amount of current liabilities arising from the obligation to pay future variable benefits. Thus, for solvency reasons this section requires corresponding assets to be maintained in the separate account because the required reserve will fluctuate in direct response to changes in variable benefits (See Article V, Section 1).

Assets at least equal to the benefit base must be maintained in the separate account in order to assure that sufficient investment return exists to provide the benefits required by Article IV, Sections 2c and 2d. The reference to the "valuation reserves for the variable portion of the policy" is not intended to encompass reserves for fixed nonforfeiture benefits, reserves whether for dividend accumulations or for dividends applied to purchase paid-up insurance, or reserves for incidental insurance benefits.

Article IV, Sections 2c, 2d, and 2f require that the policy design reflect investment experience in an actuarially sound manner, the full net investment return be credited to the benefit base, and the method of computation of nonforfeiture benefits be consistent with the Standard Nonforfeiture Law. Article V, Section 1 requires reserves to be established under the Standard Valuation Law. These provisions ensure that the benefit base will be soundly defined and that adequate reserves will be maintained for the benefits generated. Accordingly, Article VI, Sections 2b, 2c, and 2d of the existing regulation, which define the minimum benefit base, are unnecessary and have been deleted.

Section 3. Investments of the Separate Account.

Subsection (a) in the existing model places strict limitations upon sales and exchanges of assets between and among the insurer, its affiliates, and the separate account. This provision is intended to prevent unfair or discriminatory transfer between accounts. The proposed model recommends the retention of this provision.

Subsection (b) of the existing model requires that assets allocated to variable life insurance separate accounts be held in cash or investments having a "reasonably ascertainable market value," and sets forth restricted categories of investments fulfilling this standard. The commentary to the existing model indicates that this extremely limited definition of permissible investments was adopted "for the time being," implying that it would be reconsidered in the future. The suggested revisions to subsection (b) set forth a standard which will provide adequate safety and liquidity for separate accounts while also providing the greater investment flexibility needed in today's economy. The proposal would delete the requirement that the entire portfolio of the separate account be composed of the specified types of assets designated by the regulation as having a "reasonably ascertainable market value," and would substitute a requirement that the account maintain in its portfolio readily marketable assets and assets producing investment income such that the total of such assets and income are sufficient to meet anticipated withdrawals under policies funded by such account. In other words, to determine liquidity of the account, the net income from investment plus the aggregate amount of publicly traded securities, cash items and other readily marketable assets will be compared with anticipated withdrawals to meet obligations under the policies. In this way, the proposed standard for liquidity would focus upon the entire separate account rather than individual assets in the separate account.

Subsection (c) of the existing model precludes certain separate account investments because they were considered to be either incapable of uniform valuation or unreasonably speculative. The proposed model would delete this subsection in order to permit separate accounts to hold a wider range of investments. Deletion of this subsection is consistent with the concept of the proposed revision of subsection (b) which permits determination of liquidity by reference to the aggregate account rather than requiring that every investment in the account meet conservative liquidity standards. With this deletion, separate accounts would be permitted to acquire certain currently attractive forms of investment while maintaining safety and liquidity.

Section 4. Limitations on Ownership.

This section provides that a separate account shall not acquire greater than 10% of the total issued and outstanding voting securities of any single issuer. In addition, this section prohibits a separate account from allocating greater than 10% of its portfolio to the securities of any issuer other than United States guaranteed securities. These quantitative limitations are designed to promote diversification of portfolio assets and to limit investment risk. The proposed model suggests no material changes to these provisions.

Section 5. Valuation of Separate Account Assets.

This provision in the current model requires that investment of the separate account shall be valued at market value on the date of valuation. The proposed model would also permit investments to be valued at their amortized cost if it approximates market value. This change is recommended to permit valuation consistent with the current SEC position on the amortized cost method of valuation.

Subsections (a)(1), (2) and (3) define the term "market value" for purposes of this section. The proposed model recommends deletion of these subsections because state insurance law and state separate account law regulate asset valuation. In addition, because most flexible premium variable products will require SEC registration, the separate account portfolio assets will normally be regulated by the SEC. For the same reasons, Section 5(b), which delineates valuation of investments which cease to be traded, is recommended for deletion.

Section 6. Separate Account Investment Policy.

Section 6(a) of the existing model provides that separate account investment policy shall not be changed without the approval of the Commissioner, and sets forth administrative procedures for such approval.

The proposed model proposes to modify subsection (a)(2) to provide that approval of a change in investment policy shall be granted unless the commissioner determines that the change is detrimental to the interests of policyholders participating in the specific separate account and to eliminate the requirement for a mandatory public hearing to consider any proposed material changes in investment policy. The public hearing requirement is recommended for deletion as unnecessary in light of existing authority to hold hearings under state insurance and administrative procedure laws. Further, under most circumstances the federal securities laws will grant contractholders the right to vote upon changes in investment policy and the SEC has authority to review such changes. The modifications were intended to eliminate duplicative state administrative and regulatory procedures while leaving with the commissioner the authority to disapprove material changes in investment policy whenever they are determined to be detrimental to the interests of the affected policyholders.

Consistent with the modifications recommended for subsection (a)(2), the proposed model recommends deletion of subsections (a)(3) and (4) pertaining to hearing procedures.

Subsection (a)(5) to the existing model, which permits shareholders objecting to material changes in investment policy to convert to a general account life insurance policy, is recommended for deletion. At the time the existing model was drafted, it was hoped that variable life insurance could avoid SEC regulation, and the conversion right of objecting shareholders was viewed as a substitute for the voting procedures mandated under the securities laws. The hoped for exemption from the 1940 Act was not realized. Under the federal securities laws, shareholders have the right to vote upon proposed changes in investment policy. This right, together with the SEC oversight review of changes in investment policy, provides adequate policyholder protection from undesirable changes in investment policy.

Section 7. Charges Against Separate Account.

This section in the existing model limits charges against the separate account to specifically enumerated categories. The proposed model recommends modification of the section to provide that the insurer must disclose in the policy all charges that may be made against the separate account including, but not limited, to the charges currently enumerated in Section 7. Flexible premium variable life products registered under the 1940 Act will be limited by that act as to the charges which may be levied against separate accounts. As a result, the specific limitations in the existing model are unnecessarily restrictive. Policyholders will be adequately protected by the commissioner's oversight review and the SEC statutes and regulations. In addition, we believe that separate account charges should not be restricted to specific categories thereby limiting future product design. The proposed modifications would expand the enumerated charges to permit administrative expenses and charges for incidental insurance benefits to be charged against the separate account of the flexible premium products.

The proposed model suggests deletion of the limits in subsection 7(a)(4) on investment management expenses as a percentage of average net asset value. The 1940 Act regulates the amount that can be charged for investment management expense.

The proposed model suggests that subsection 7(a)(5) be modified to remove the limits on charges for mortality and expense guarantees.

Subsection 7(b) is also deleted in the proposed model. The prohibition against performance fees for investment advisers is regulated by the 1940 Act and the Investment Advisers Act making these regulations superfluous.

Section 8. Standards of Conduct.

Section 9. Conflicts of Interest.

Sections 8 and 9 of the existing model, addressing standards of conduct and conflicts of interest, are interrelated, in as much as the prohibited transactions set forth in Section 9(b) are presently subsumed in Section 8. Consequently, these sections were considered jointly, and the proposed revisions reflect an effort to eliminate redundancies and clarify the scope of the two provisions.

Subsections 9(b)-(d) of the current model do not appear in the proposed model because they duplicate the provisions of Section 17(a)-(e) of the 1940 Act and the rules thereunder relating to transactions with affiliated persons and underwriters. Section 9 of the proposed model would simply incorporate by reference all state conflict of interest laws and specify their applicability to those responsible for the management of the separate account.

Section 8 has been modified to clarify that it governs standards of conduct relating to insider trading of separate account investments. For this reason, and because the separate account will be subject to the aforementioned provisions in connection with transactions with affiliates, the reference to Section 9(b) has been deleted.

Since 1980, Rule 17j-l under the 1940 Act has prescribed in general terms certain fraudulent or manipulative trading activities by insiders of registered investment companies and their investment advisers and principal underwriters. In addition, the rule requires every registered investment company to adopt a written code of ethics governing insider trading in such a company's portfolio investments. Section 8 has been modified to provide that its requirements shall be deemed satisfied by the adoption of a code of ethics as required by Rule 17j-l.

ARTICLE VII: INFORMATION FURNISHED TO APPLICANTS

This article specifies that certain information must be provided to applicants for variable life insurance policies including a summary explanation of the policy, a statement of the investment policy of the separate account, a statement of the recent net investment return of the separate account, a description of commissions, a statement of taxes, brokerage fees and other charges, a summary of the federal tax aspects, and other information. The article states that its provisions will be satisfied to the extent that disclosure containing the information required by the article is delivered in the form of a prospectus satisfying the requirements of the 1933 Act or information and reports required by ERISA.

The proposed model suggests deletion of subparagraph 4 of this article which requires a statement describing, as an approximate percentage of an annual gross premium for each year and for the life of the policy, all commissions or equivalent payments for each year of the policy for which such payments are to be made. Such calculation would be difficult for a flexible premium product. Moreover, there is no reason to impose this type of commission disclosure on variable life insurance when it is not required with regard to any other form of life insurance.

The proposed draft also suggests the deletion of subparagraph 9 of this article which currently requires a prominent statement in contrasting color or in bold-faced type at least four points larger than the type size of the largest type used in the text of any provision on the page, providing:

> "The purpose of this variable life insurance policy is to provide insurance protection for the beneficiary named therein.
>
> No claim is made that this variable life insurance policy is in any way similar or comparable to a systematic investment plan of a mutual fund."

These required disclosures were included in the regulation as part of the effort to assure that the variable life insurance product would be considered to be insurance not involving an investment company subject to SEC regulation. Because the insurance and securities aspects of future products will be considered on the merits of each product, it was determined to suggest deletion of these paragraphs. We believe that the first required statement is self-evident and that the second statement may not be accurate in the context of certain policy designs.

The proposed draft also suggests simplifying current subparagraph 5 of this article to require a statement of the charges levied against the separate account during the previous year. It was felt that the language of the existing model – which requires a statement of certain specified costs and charges – might give rise to a negative inference that the disclosure of other charges is not required.

In addition, it is suggested that the requirement that the applicant be provided with "a summary of the federal income tax liabilities" of the policy be amended to require "a summary of the federal income tax aspects" of the policy. A discussion of income tax "liabilities" will be subsumed in a more comprehensive discussion of the policy's tax "aspects."

ARTICLE VIII: APPLICATIONS

Article VIII requires that the application for a variable life insurance policy contain a prominent statement that the death benefit may be variable or fixed under specified conditions, that cash values may increase or decrease with the separate account and must include questions designed to elicit information which enable the insurer to determine the suitability of the product for the applicant.

No changes are suggested for this article.

ARTICLE IX: REPORTS TO POLICYHOLDERS

The flexibility in amount and timing of premium payment which is the hallmark of the universal life concept, and the fluctuation of cash value and death benefit in accordance with investment experience which characterizes variable life insurance, converge in the flexible premium variable product. This highlights the policyholder's need to be provided with current, reliable information concerning the status of his insurance coverage.

The principal proposed amendments to Article IX attempt to satisfy this need. The expansion of the information that must be included in an annual report in the case of flexible premium policies (Section 1, p. 42), and the notice of impending expiration of coverage which is envisioned by new Section 3 of Article IX (p. 44), are both designed to alert the policyholder to the possible insufficiency of the policy's cash value and the corresponding need to make additional premium payments to keep the flexible premium policy in force.

Thus, the proposed amendment to Section 1 of Article IX is designed to provide the policyholder of a flexible premium variable life insurance policy with a long-range warning that his policy may terminate without value if additional premium is not paid. In addition to setting forth information concerning changes in the policy's net cash value and cash surrender value during the preceding policy year, the proposed expanded annual report would also contain a projection, based upon specified assumptions, of net cash value and cash surrender value as of the next policy anniversary. If the projected value is less than zero, the annual report would include a warning message stating that the flexible premium variable policy "may be in danger of terminating without value in the next twelve months unless additional premium is paid."

Although the long-range warning notice contemplated by Section 1 provides the policyholder with important information concerning the possible insufficiency of the cash value to keep the policy in force, the proposed model recognizes the need for an additional, immediate notice if the cash value is in fact insufficient to keep the policy in effect without payment of additional premium. Accordingly, as mentioned above in discussing the proposed amendments to Articles II and IV, proposed new Section 3 of Article IX (p. 44) requires an insurer to send a report to the policyholder in the event that the "cash value on any policy processing day is equal to or less than the amount necessary to keep the policy in force until the next following policy processing day." The mailing of this report triggers the 61 day grace period for flexible premium policies. (Article IV, Section 3(b)(2), p. 17.) Section 3 requires that the report indicate "the minimum payment required under the terms of the policy to keep it in force until the next following policy processing day." Thus, the policyholder is provided with prompt notice of the possible impending expiration of his coverage and of the correlative need to take immediate action to assure that the policy continues in effect.

The proposed model also proposes several other amendments to Article IX. In Section 1, the current requirement that the information contained in reports to policyholders be computed as of forty-five days prior to mailing would be changed to sixty days to be consistent with the corresponding time period under current SEC regulations. The portion of Section 1 which requires the use of "contrasting color or distinctive type" to highlight the variable nature of the cash value and death benefit would be deleted on the rationale that the principal function of a policyholder report, unlike a policy application, is to report information, and that Article VIII already requires that an applicant for a variable life insurance policy be provided with "a prominent statement" of this same information. In addition, requiring contrasting color printing imposes an unnecessary additional expense.

The proposed model also proposes amendments to the required contents of the annual statement contemplated by Section 2 of Article IX (p. 43). First, the proposed amendment to Section 2(b) is intended to permit an insurer, as a matter of state law, to furnish comparisons of the investment rate of the separate account for more than a five-year period. In addition, the requirement embodied in subsections (f) and (g) that the statement include information concerning the insurer's principal executive officer, directors, parent companies and ten percent beneficial owners would be deleted. This information will normally be provided to the policyholder pursuant to the federal securities laws. Also, it is not directly relevant to the more material information contained in the report concerning the policyholder's status with regard to his policy. Finally, a conforming amendment is suggested in Section 2(d) to be consistent with the proposed deletion of the limitations on the types of charges that may be levied against the separate account. (See Article VI, Section 7, pp. 34-35 and Article VII, Section 4 (previously Section 5), p. 41.)

ARTICLE X: FOREIGN COMPANIES

No changes are suggested with regard to this article.

ARTICLE XI: QUALIFICATIONS OF AGENTS FOR THE SALE OF VARIABLE LIFE INSURANCE

Under the existing model this article provides for the qualification of agents to sell variable life insurance, requires that such qualified persons report any suspension or revocation of their agents license, the imposition of disciplinary action, and any judgment or injunction entered against them in any jurisdiction. It also provides the commissioner with authority to refuse to qualify an agent and authority to suspend, revoke or not renew a qualification.

No material changes are suggested to this article.

ARTICLE XII: SEPARABILITY ARTICLE

No changes are recommended to this article.