



SOCIETY OF ACTUARIES

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by Anthony T. Spano

AIDS Reports. The Board approved the report of the Committee on HIV Research, on projected AIDS mortality rates for the U.S. general population, and the report of the Task Force on the Financial Implications of AIDS. The Board urged appropriate public relations and publications efforts for these reports.

Constitutional Amendment on College Credit. The Board finished setting procedures in connection with a proposed amendment to the Society's Constitution regarding credit based on a course taken at a college, university, or other educational institution. The amendment would prevent the Society's Board from allowing a student to obtain credit for material in the educational syllabus based on such a course rather than by Society

examination, unless the procedure has first been approved by a majority of the Fellows voting in a referendum.

Elimination of Secretary and Treasurer Positions. The Board approved a resolution proposing amendments to the Society's Constitution that would eliminate the Secretary and Treasurer positions following the Society's 1990 Annual Meeting. The Secretary and Treasurer functions would then be assigned to two of the Society's Vice Presidents.

Society Meeting Dates and Sites. The Board approved guidelines for selecting Society meeting dates and sites that were prepared by a task force of the Continuing Education Policy Committee. The Board also approved a proposal to hold an upcoming Society spring meeting in late June or early July at a resort location to allow members to schedule family vacations around the meeting.

Expansion of Publications Services. The Board ratified actions taken by the Society's Executive Committee on March 9 and 10, 1989, to expand the Society's publications services. The expansion would involve publishing special volumes of the *Record* as necessary, expanding the *Reports* volume of the *Transactions* to include reports of committees other than experience studies committees, and publishing a comprehensive annual index of material published by the Society.

Waiver of Dues for Child Rearing. The Board extended from three to five the maximum number of years for which membership dues would be waived on account of child rearing.

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computation of the aggregate claims distribution. The surplus process is analyzed in chapter 12. Some interesting applications of risk theory are outlined in chapter 13. How to compute net stop-loss premiums using the recursive formula of chapter 12 is shown, along with how stop-loss reinsurance is linked to a dividend formula in group insurance.

Chapter 3 introduces the basic random variables that will be used throughout the text. These include the survival function, the (continuous) time until death for a person aged x , the (discrete) curtate future lifetime, and the force of mortality. An illustrative mortality table, used in many exercises in the sequel, is presented and discussed.

Chapter 4 develops models for the most common insurances payable at the moment of death, including term, whole life and endowment. Classical variants are also presented. Chapter 5 focuses on similar developments for annuities. Some practitioners may regret the rather theoretical presentation of these and other chap-

ters. The continuous approach, based on integrals, is always presented before the discrete approach. Readers need to thoroughly study several chapters before getting acquainted with insurance practice.

Chapter 6 deals with net premiums and focuses on the financial loss random variable. This probabilistic approach allows the computation of not only net annual premiums, but also variances for the major contracts. The random variable "prospective future loss on a contract already in force" is investigated, in chapter 7, for both the continuous and the discrete case. The reserve is defined to be the expected value of this loss and is obtained for all usual types of policies.

Chapter 8 introduces multiple-life functions. In chapter 9 a single life is considered, but with multiple contingencies like withdrawal, retirement, death, and disability. The construction of multiple-decrement and associated single-decrement tables is applied to calculating actuarial present values of benefits and contributions for a participant in a pension plan in chapter 10.

Expenses are, at last, introduced in chapter 14. The individual model is

extended to incorporate acquisition and administrative expenses and accounting requirements. Nonforfeiture benefits and dividends are the subjects of chapter 15.

Chapters 16 through 19 develop special topics and are not included in examination material. They are nevertheless of extreme importance for practitioners. Chapter 16 computes actuarial present values, net and gross premiums, and net premium reserves for a wide variety of policies providing special annuity and insurance benefits. In chapter 17 elementary models for plans involving two lives are extended to a larger number of lives and to more complicated benefits. Chapter 18 provides a most welcome introduction to population theory. In chapter 19 aggregate models are applied to the evolution of retirement income benefits provided on a group basis. The major actuarial cost, or funding, methods for defined benefit plans are presented and analyzed.

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