



SOCIETY OF ACTUARIES

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**BOOK REVIEW****Pension Mathematics**

Howard E. Winklevoss, *Pension Mathematics: with Numerical Illustrations*, pp. 243 (1st Ed.); published for the Pension Research Council by Richard D. Irwin, Inc., Homewood, Ill. 60430.

by Ronald A. Fletcher and Owen O'Neil

The stated objective of this book is to analyze pension costs in detail, including the manner in which such costs vary under different actuarial assumptions, funding methods, and benefit provisions.

The book deals only with defined benefit pensions. The cost illustrations are primarily based upon one model plan, namely a non-contributory final average plan. The author uses statistical charts, numerous tables and mathematical examples to show the possible variations in pension costs.

In the 17 chapters a wide area of pension plan matters is covered, ranging from an initial outline of the various types of benefits, both pension and ancillary, to an explanation and illustration of pension plan cost projections ("cash flow" projections). To take but one example of the treatment of the various subjects, the relative costs of pension benefits and of each of the ancillary benefits are given in detail and the costs of making subsequent changes in any of the plan's provisions are also carefully analyzed.

This book provides a considerable amount of insight into pension costs even though the approach is from a mathematical viewpoint. The author uses a notation unfamiliar to most actuaries and while the translation of the Winklevoss notation to another notation might be an interesting exercise, it serves to emphasize the absence of a standard notation.

The book should be instructive even to the established consulting actuary. Although he will, in most cases, already be familiar with most of the numerical conclusions and relationships, a study of the detailed tables and numerical illustrations can only serve to sharpen his tools. It is the feeling of the reviewers that in most cases this sharpening process will be quite valuable. On the other hand the book is likely to be of quite limited use to a non-actuary who, unless well trained in mathematics, would not normally be able to follow the formulas and mathematical relationships. He might find some interest in the tables

**Actuarial Club Meetings**

- Dec. 20, Chicago Actuarial Club
- Dec. 21, Seattle Actuarial Club
- Jan. 12, Baltimore Actuaries Club
- Jan. 17, Chicago Actuarial Club
- Jan. 18, Seattle Actuarial Club

and numerical conclusions, but he must beware of treating the results as applicable to all pension plans and situations.

The book might be useful as a part of the required reading for the actuarial student specializing in the pension side of the business, but the presence of errors in the formulas and the occasional use of a wrong symbol may cause the reader inexperienced in pensions some frustrations in understanding the presentation.

In the opinion of the reviewers, the book is probably most useful as a basic reference to those interested in pension cost relationships, examined from a theoretical and mathematical viewpoint. This purpose the book fulfills very well. The book was presumably not intended to provide a practical look into pension consulting practice and related government regulations, or even to provide an insight as to the funding method appropriate to a given set of circumstances.

*Note: An additional review by another reviewer will appear in the Transactions.* □

**Reorganization**

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other bodies have indicated a willingness to talk, and have formed or are forming committees.

The Society Committee is engaged in further research to understand better the issues and possibilities. It is also in the process of initiating dialogue, and has been involved in General Sessions and Concurrent Sessions at the Spring 1977 meetings, and in Workshops at the annual meeting of the Society.

The problems facing the profession at the present time are:

- (1) There are an increasing number of public issues involving matters which are of professional interest to actuaries.
- (2) There is duplication of effort be-

tween the various bodies, and often competition. A few dedicated people are being spread increasingly thin.

(3) There is a need to respond to and recognize the needs of specialties in a more effective way.

(4) The management of the profession needs to be streamlined so that energy expended can be used more effectively.

(5) As the profession becomes more and more a public profession, there is a need to have greater public awareness of the profession, and more effective public relations.

(6) There appears to be a possibility of further Federal licensing with government enrollment in new specialties creating new splinter groups of actuaries.

(7) The profession needs to have the capacity to expand its program in areas such as research and continuing education.

(8) A system is needed for regular setting of priorities, and focusing of effort on these priorities.

It should be emphasized that *reorganization is not a magical solution*; it will not solve most of the problems listed above. It is, however, one of a number of steps which can help the profession to solve its problems. Reorganization has the potential for being very helpful in streamlining organization structure, and enabling the profession to better use member's time.

The problems of the profession can be perhaps divided into two groups, internal and external. The external problems are those which are of greatest concern to many actuaries today. The most important step in solving such problems is commitment and a willingness to back that commitment with time and money. Reorganization could be helpful in that a new structure might be better able to focus on priorities and see that concentrated effort is devoted to such priorities. However, no structure will change the outside world, and to seek such change from a change within the profession is sure to lead to disappointment.

The Committee welcomes comments from actuaries. Send them to:

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