The Actuary

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EDP

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- Application categories (25) in which packages are available
- Number of life insurance users for services in education, consulting, facilities management, and time sharing.

Report No. 15, *EDP Software Catalogue*, provides the means of looking up those companies which provide packages in a particular area of application. This report is arranged into the 25 application categories. Under each category, applicable EDP packages are listed in alphabetical order by name of package with vendor. Information for each package includes price, system requirements, a brief description of the package, and a list of the names of those insurance companies (when available) currently using it. The last item is particularly valuable in that user reactions and comments can be polled without contacting the vendor directly. Other information offered, when available, included program language, facts on installation, maintenance documentation, trial periods, etc.

Categories of particular interest to actuaries are listed below. (Although the same packages can appear in more than one category, the number in parentheses indicates the number of packages covered in each.)

- Individual Insurance—Life (38)
- Individual Insurance—Health (24)
- Individual Pension (18)
- Group Insurance—Life (5)
- Group Insurance—Health (6)
- Group Pension (9)
- Variable Annuities (6)
- Actuarial and Statistical (30)
- Corporate Modelling (19)
- Natural Reserves and Adjusted Earnings (8)

Life Insurance Companies not members of the Association may obtain copies from the Association at the following prices: No. 14 $10.00, *No.* 15 $25.00. ☐

BOOK REVIEW

Barnet N. Berin, *The Fundamentals of Pension Mathematics*, Actuaries Club of New York, pp. 125, $12.50.

by Frank L. Griffin

The Fundamentals of Pension Mathematics was developed by Mr. Berin from notes made in conjunction with a series of lectures he gave under the sponsorship of the Actuaries Club of New York. The result is an interesting, highly practical, modern handbook for pension actuaries in the computer age, a fitting supplement to the classical pension mathematics on which actuaries were trained a generation or more ago. While the book does not deal directly with the science of computers Mr. Berin's approach relies for its practicability on the use of computers in making pension valuations thus reflecting the much greater scope available to the modern actuary.

As it should, Mr. Berin's "Fundamentals" lays considerable stress on the computation of actuarial gains and losses (by source), not only as a check on the individual actuarial assumptions but also as a means of reconciling changes from one valuation date to the next. The author points out that the gain and loss analysis gives the actuary greater confidence in the accuracy of the valuation, pinpointing any errors, and provides authoritative answers to questions posed by employers, unions, accountants, and others relative to the reasons for changes in pension costs. The subject of gain and loss is worked into the discussion of funding methods, where it logically belongs. As has been pointed out by a number of actuaries (notably Trowbridge), an actuarial funding method is not fully defined "until a mechanism is established for recognizing differences between actuarial assumptions and actual experience." Mr. Berin has provided the mechanism.

The author goes beyond the pension mathematics alone, delving into tax deductible contributions, presentation of valuation results, role of the actuary in multi-employer pension plans, deposit administration dividend formulas and an introduction to variable annuities. In short, he covers a great deal of ground which will be of practical value to those who enter the pension field.

As might be expected in a text designed for instructional purposes, especially one intended to provide an overall orientation for the student, the author has furnished a clear map to guide his charges through the forest while leaving them to study the individual trees on their own initiative. He has furnished the breadth; the depth is up to them. Exercises accompanying each chapter are well chosen to test understanding of the principles.

The opening chapters deal with standard methods of funding pension liabilities, methods of valuing assets, and the determination of gains and losses separately for assets and liabilities. Each funding method is handled in relation to the method of spreading (or recognizing immediately) the gains associated with such funding method. Later chapters provide a discussion of the valuation of ancillary benefits, tying together the valuation results, evaluating the significance of gains or losses, changing the actuarial assumptions and possibly funding methods, and other miscellaneous matters of interest to the practicing pension actuary.

Most actuaries in the pension field are aware that for several years a debate has been going on relative to the preparation, under the aegis of two of the principal actuarial bodies, of so-called "principles and practices" (or "guidelines") for the valuation of pension plans. In a limited sense, Mr. Berin has written such a work. It is not couched in the language of a "guideline" and has no official sanction. Those who have urged official sponsorship of such a project have cited a supposed need for "policing" within the profession itself, in order to avoid such a function being taken over by persons outside the profession. Those who have opposed it have, for the most part, taken the position that a professional is distinguished by the exercise of judgmental factors; in other words, an actuary qualified by education and experience should be considered the best judge of what is appropriate for the valuation of a plan under a given set of circumstances. Mr. Berin's approach to the Fundamentals of Pension Mathematics indirectly suggests there may be a middle ground between these views, possibly further extension of the Opinions issued by various actuarial bodies in clarification of their guides to professional conduct.

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Book Review

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This question was the subject of a panel discussion at a recent meeting of the Society of Actuaries. Some actuaries have opted for greater disclosure in actuarial reports, not only as a substitute for "guidelines" but also as a road to better understanding of pensions on the part of the public, perhaps minimizing the need for restrictive regulation. This reviewer infers support by the author of this book for the principle of more adequate disclosure in valuation reports and possibly in pension funding matters generally. The author's position relative to the education of plan sponsors on matters of gain and loss suggests such a stance. Mr. Berin certainly is aware of objections to expanded reports which critics have raised. He cites the usual arguments—"not understood by, or of too little interest to, employers," "too time consuming and expensive," and so on. He dismisses these arguments in the case of the gain and loss analysis.

If it is practicable and constructive to communicate a gain and loss analysis, one might ask whether it is not also practicable to disclose other, conceptually simpler, items in order to contribute to better public understanding. Computerized valuations have introduced a brand new ball game in the informational field. Expanding reported details would be time consuming to a degree. Yet, if limited to items which the actuary knows to be available and *meaningful*, it could be less time consuming to program a computer to provide the information than to compile reams of virtually meaningless reports designed by well intentioned public servants—which seems to be the direction in which we are heading. As for making things understandable (even interesting!) to clients, the challenge this presents is hardly new. Mr. Berin points out most consultants *are* consultants because of that challenge.

A clarification might be in order on page 87 of the book, where the author advises against double-valuations "as a regular procedure" (i.e., valuations based on the plan's regular assumptions and funding method, as well as on alternate assumptions and method). We suspect he had in mind discouraging somewhat arbitrary changes in valuation bases on the part of employers who want "the best of all possible worlds" from year to year if shown too many alternatives.

We are confident he did not intend a proscription against providing plan sponsors with meaningful information relative to such matters as "benefit security of plan participants by class," "status of funding *vis-a-vis* 'close out' rates available from insurance companies," "tests of fund yields needed to overcome inflationary pay increases," and a variety of information which may be found useful in particular situations.

The author might someday wish to consider expanding The Fundamentals of Pension Mathematics to a more comprehensive, self-sufficient text, a "bible" of actuarial techniques and procedures for pension plan valuations.

Berin's book is timely, and one can feel greater confidence in the pension actuary of tomorrow if he has been brought up on such a training diet.

Setting aside minor flaws which could be corrected by simple editorial changes, Mr. Berin's book renders a substantial service to actuaries—hopefully to those of long standing as well as to the students who will be representing our profession in the future. □

Committees

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speakers, etc. The Committee welcomes suggestions and comments from all Society members.

3. To provide a source for suggested workshop leaders and panelists. The list polled for workshop leaders and panelists also includes individuals who are not on the Committee. In addition to the Fields of Activity Committee members, a number of other Society members are asked to suggest program participants.
4. To assist the Program Committee in planning the meeting, and in recruiting the panelists and workshop leaders.

How the Committee Functions

The Committee is polled by mail both for meeting evaluations and for suggestions about future meetings. (Suggestions are also welcomed on any topic and need not relate to meetings).

A designated Committee member collects all suggestions and collates them. The Chairman and Co-Chairman of the Committee, and usually three other Committee members, become part of th working group of the Program Committee for a given Society meeting, and work together with the Society Vice Presidents responsible for the meeting.

How a Society Meeting is Planned

The Fields of Activity Committee collects evaluations of past meetings, together with suggestions for the current meeting and submits these to the Working Group of the Program Committee for the particular meeting. The Working Group is composed of two Society Vice Presidents, the Executive Director of the Society, the Fields of Activity Committee representatives, and a local arrangements representative. On the basis of the ideas submitted, the Program Committee prepares the program. The program is balanced to include topics of interest to various segments of the membership. "Hot" current topics are included and topics which were very popular at recent meetings may be repeated.

The program outline is then mailed to the Fields of Activity Committee and to a number of other Society members for suggestions as to participants. A list c suggested persons is compiled and the Working Group meets to select panelists and workshop leaders from this list. The Fields of Activity Committee is responsible for getting in touch with the moderators and workshop chairmen who in turn get in touch with the panelists and the co-chairmen. The moderators and the chairmen develop the final program content and the finished program is sent to the Society's office for distribution.

The Committee welcomes comments on past meetings and suggestions for future programs. These should be sent to Mrs. Rappaport or to the Vice-Chairman, Richard S. Robertson. □

Natural Reserve

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basis, whilst at the same time retaining the traditional presentation on the bases within the statutory limits need not necessarily lead to the extreme situation described in this article. He has been concerned only to point out the danger which seem to him to exist should any significant weakening of valuation bases take place, and to contrast these with the slender and possibly transient advantages of such a course. □