

# TRANSACTIONS OF SOCIETY OF ACTUARIES 1953 VOL. 5 NO. 11

## BOOK REVIEWS AND NOTICES

### ACTUARIAL AND INSURANCE PUBLICATIONS

Bowe, William J. *Life Insurance and Estate Tax Planning*. Vanderbilt University Press, Nashville, Tennessee, 1952. Pp. 109.

This is a revision of a 1950 treatise on the law, regulations and court decisions on estate taxation of life insurance. The author offers suggestions on how to treat the problems created by these rules. He also discusses various methods through which life insurance may be used to keep estate taxes to a minimum. The book ends with two chapters devoted to the use of business insurance in the field of survivor-purchase agreements.

Coe, N. E. and Ogborn, M. E. *The Practice of Life Assurance*. Cambridge University Press, London, 1952. Pp. 450.

This book is one of a series of books commissioned to be prepared by the Councils of the Institute of Actuaries and the Faculty of Actuaries. It is designed as a text book for the life contingency portion of the examinations of the above societies.

In order to be able to read the book easily the student should have a thorough knowledge of compound interest, annuities certain and life contingencies as well as the mathematics of the calculation of office premiums and the valuation of insurance and annuities.

The book is divided into three parts. Part I deals with the general principles common to ordinary and industrial life insurance, sketching the historical, legal and financial background. Part II deals with specific problems in ordinary life insurance and Part III with problems in industrial life insurance.

Larson, Robert E. and Gaumnitz, Erwin A. *Life Insurance Mathematics*. John Wiley and Sons, Inc., New York, 1951. Pp. 191.

This book is written as a Text Book on Actuarial Mathematics. It employs the new actuarial notations adopted by the International Congress of Actuaries and bases its examples on modern mortality tables and realistic rates of interest. It also deals with valuation and nonforfeiture benefits on the basis of the CSO 1941 Standard Valuation and Non-Forfeiture Laws.

The chapters contain treatises on the mortality table, interest and annuities certain, life annuities, life insurance, net level reserves, modified reserves, surrender values and gross premiums. The text includes numerous examples for the student and in many cases solutions to the examples are shown.

*Reprints* Volume I & Volume II. Institute of Actuaries. Cambridge University Press, New York.

These books are reprints of papers presented either to the Institute of Actuaries (Great Britain) or to the Ninth International Congress of Actuaries and are designed to be helpful to students for the examinations of the Institute of Actuaries. They should also be useful to students of other actuarial societies.

Rider, Paul R. and Fischer, Carl H. *Mathematics of Investment*. Rinehart and Company, Inc., New York, 1951. Pp. 370.

This is a textbook designed for the student in business administration so that he may obtain a working knowledge of the elements of mathematics of investment and to some extent insurance.

The authors have exercised considerable care in dividing the text into normal lesson units and problems are given for each unit. Since a great many problems are given, the book lends itself to repeated use without too much duplication of assignments.

Interest functions, and commutation tables based on the 1941 CSO Table of Mortality are shown at the end of the book together with a table of six-place logarithms.

Smail, Lloyd L. *Mathematics of Finance*. McGraw-Hill Book Company, New York, 1953. Pp. 292.

This book is intended as a text book for college classes in business administration. All mathematical finance topics are covered, such as simple and compound interest, annuities certain, application of annuities certain to amortization and sinking funds, depreciation and valuation of bonds. One chapter is devoted to life insurance and annuities. Each chapter contains a number of illustrations and examples and in addition there are numerous exercises for the student.

There is an appendix covering all important algebraic topics and formulas, such as logarithms, progressions and the binomial theorem, which are necessary to an understanding of the text. Also included at the end of the book is a series of interest and mortality tables designed to be helpful in the use of the book, together with a table of logarithms.

#### PENSION FUNDS AND SOCIAL INSURANCE

Illinois Public Employees Pension Laws Commission. *Report*. 1953. Pp. 174.

A three-page summary of recommendations helps to guide the reader. The section "Social Security Effect upon the State Retirement Systems" shows once more the elusive quality of the Federal Plan, and its radical differences from staff pension plans. There is a pronounced cost-mindedness in this report, a wise suggestion as to a larger contribution from the employee, a lower interest rate in the funding base, and a suggestion of the need for a sounder pension policy and a sounder pension philosophy. The financial consequences of routing part of the wage bill through pension funds begins to emerge in this and other reports.

National Planning Association. *Pensions in the United States*. A study prepared for the Joint Committee on the Economic Report, 82nd Congress, 2nd Session. Joint Committee Print. U.S. Government Printing Office, Washington, 1952. Pp. 114.

Another hold-over report, ostensibly made for a Congressional Committee by an outside organization, this was actually made by the Assistant Director of the Bureau of Old-Age and Survivors Insurance—a special case of prejudiced presentation. It discusses "Where do we Stand Today?" "An Area of Agreement," "The Economics of Pensions," "Major Questions of Public Policy," "Summary and Recommendations." It should be very helpful to the Curtis Subcommittee on Social Security, a committee called for by the very activity pointed up by this report.

New York State Joint Legislative Committee on Problems of Aging. *Age is No Barrier*. Legislative Document (1952) No. 35. Pp. 171.

With 26 contributors, and an introduction by the Chairman, Senator Desmond, this is a remarkable report, carrying some 40 pages of Committee conclusions and recom-

mendations. The title significantly shows the debt to gerontology with its aspiration to maintain the fullest functioning of the citizen into advanced ages. The whole report shows marked interest in the older citizens, carries a customary discussion of mass provision for financial support in old age, but is silent on individual facilities. Monsignor O'Grady's studies on family and individual provision should be an excellent foil to this report's major blind spot. The strength of the report lies in its belief in removing the obstacles that hamper such personal development.

President Truman's Commission on the Health Needs of the Nation. Five Volumes. *Building America's Health*. The United States Government Printing Office, Washington, 1952-53.

These five volumes represent another engagement in what Edna Lonigan calls "The Battle of the Reports." They have been pouring out since the old administration ended. They treat the exceptional case as the typical, imply that carefully selected panels of men represent the citizens, and, while permitting certain opponents to speak, give little recognition to the voice raised in opposition.

Railroad Retirement Board. Office of Director of Research. *Fifth Actuarial Valuation*. Chicago, 1953. Pp. 139.

The report of the actuary of the Railroad Retirement Board and of the Actuarial Advisory Committee indicates the growing complexity of the system, the entanglements with Social Security (that convenient catch-all), the temporary quality of long-run cost appearances and a deficiency of .9%, or \$45 million a year. Most instructive, both on pension theory as brought out by particular Railroad problems and on the attempt to compare the Railroad Retirement of Federal handling of a huge staff-pension plan with the floors of protection of OASI. Bandyng about \$8 billion of special accrued liability between plans—as though transfer from a relatively solvent to a relatively insolvent carrier were wise—deserves very serious study. Another hold-over appointment seems ready to do more procrustean operations.

Social Security Administration, Division of Research and Statistics. *Social Security Financing*. Bureau Report No. 17. Ida C. Merriam. U.S. Government Printing Office, Washington, 1953. Pp. 214.

This is a report which has been under development, under various seminars, for a long time. It is in line with the old Wagner-Murray-Dingell bills—multipurpose Social Security—ILO backing. It glorifies major personal subsidy, delayed benefits, delay in recognizing costs. It largely ignores personal thrift opportunities, is particularly hard reading, much along the line of the earlier Mushkin deferred cost story. Another of the hold-over reports.

The Tax Foundation. *Facts and Figures on Government Finance*. 1952-1953. New York, 1952. Pp. 239.

A valuable reference guide when investigating the extent of Government domination through taxes and Government benefits, it carries a foreword by Executive Director Miller, a topical guide, and much evidence of trends—even in the cagily deferred cost handling of Social Security.

United States Civil Service Commission. *Retirement Report*. Fiscal Year ended June 30, 1952. Civil Service Retirement Act, Panama Canal Construction Annuity Act. U.S. Government Printing Office, Washington, 1953. Pp. 27.

In the foreword it is "estimated that the average retired employee, through his contributions, has paid for 15% of the cost of his annuity. The Federal Government bears the cost of the remaining 85%." In this report, Commissioner Wamspeck has added a good deal to the understanding of the very small share of the burden of retirement costs borne by the individual. A deficit of \$5 billion is noted (comparable to a \$200 billion deficit in OASI). Study of the recent series of these reports shows a good deal of pension history, and suggests considerable pension philosophy.

U.S. Department of Labor. Bureau of Employment Security. Unemployment Insurance Series. *Comparison of State Unemployment Insurance Laws as of December, 1951*. U.S. Government Printing Office, Washington, 1952. Pp. 114.

A survey of the State laws—coverage, financing, benefits, eligibility, disqualification, Temporary Disability coordinated with Unemployment Insurance. 34 Tables.

#### ACTUARIAL AND OTHER ARTICLES OF INTEREST IN RECENT PERIODICALS

In compiling this list, the Committee on Review has included only those papers which from their titles would appear to be of possible interest to members of the Society of Actuaries; and, in so doing, the Committee offers no opinion on the views which the various articles express.

References to only a limited number of papers on mathematical statistics and allied subjects are included. For a more complete list of such papers reference should be made to "Mathematical Reviews," sponsored by the American Mathematical Society and the Mathematical Association of America. Numerous articles on social insurance are listed each month in the "Social Security Bulletin" of the Social Security Board; and various articles are listed each month on social security, unemployment insurance, workmen's compensation, pensions, and health insurance in the "Monthly Labor Review." "Population Index," published quarterly by the School of Public Affairs, Princeton University, and the Population Association of America, lists numerous articles published throughout the world on mortality, fertility, marriage, divorce, and migration and on statistical methods of interest in such questions. "Statistical Methodology Index" in the *Journal of the American Statistical Association* should also be consulted.

#### JOURNAL OF THE INSTITUTE OF ACTUARIES

Vol. 78, Part 3 (1952)

The Use of Statistics as an Aid to Management Control—John Ryan.

Review of the Principles of Life-Office Valuations—F. M. Redington.

Some Further Experiments in the Use of the Incomplete Gamma Function for the Calculation of Actuarial Functions—R. E. Beard.

The Recent Mortality of Males in England and Wales in Later Middle Life—W. S. Hocking.

Continuous Mortality Investigation: Pensioners Under Life-Office Scheme.

#### TRANSACTIONS OF THE FACULTY OF ACTUARIES

Vol. 20, Part 3 No. 176 (1952)

Mortality of Life-Office Annuitants:

Memorandum by the Joint Mortality Committee of the Faculty and the Institute of Actuaries.

## JOURNAL OF THE INSTITUTE OF ACTUARIES STUDENTS' SOCIETY

Vol. 11, Part 3 (Nov. 1952)

- Some Consequences of the Continuity of Life-Offices—J. G. Day.  
 Small Private Pension Funds—P. E. Merriman.  
 Actuarial Science and the Theory of Statistics—Wilfred Perks.  
 Note on Double Taxation Relief—B. H. Barton.

## SKANDINAVISK AKTUARIETIDSKRIFT

Nos. 3-4 (1952)

- Basic Concepts in Life Assurance Mathematics—Erling Sverdrop.  
 (Application of the Collective Risk Theory to "Excess-Loss" Reinsurance)—J. Le  
 Fèvre.  
 Certain Non-linear Models of Population and Epidemic Theory—P. Whittle.

## PROCEEDINGS OF THE FRATERNAL ACTUARIAL ASSOCIATION

No. 24 (1951-1952)

- Negative Considerations to Broad Coverage Hospitalization Insurance—R. E. Bruce.  
 Practical Applications of Calculating Punches to Home Office Routines—Kermit Lang.  
 The Consulting Actuary and the Home Office—E. D. Brown, Jr.  
 The Standard Nonforfeiture Law Comes Under the Microscope—William C. Brennan.  
 Reserve Valuation—Franklin C. Stauffer.  
 New Formula for Calculating Life Annuities Payable More Frequently than Annually  
 —Robert H. Taylor.  
 Disability Extra Premiums for Automatic Conversion of Ten Year Term Plans—  
 Robert H. Taylor.

PROCEEDINGS OF THE FORTY-SEVENTH ANNUAL MEETING  
OF THE AMERICAN LIFE CONVENTION

1952

- Report of the Actuary—A. N. Guertin.  
 Thoughts on Mortality and Immortality—Dr. G. F. Tegtmeier.  
 What Top Management Expects of the Investment Department—H. W. Manning.  
 Mortgage Problems as Affected by Transportation—James C. Downs, Jr.  
 Installment Credit in Our Economy—Carl M. Flora.

## MEDICAL SECTION AMERICAN LIFE CONVENTION

1952

- Nutrition, Aging and Longevity—John B. Youmans, M.D.  
 The Tumor Potential of Silent Pulmonary Shadows—Richard H. Overholt, M.D.  
 The Effect of Surgery in Life Realization of Advanced Age Groups—Benjamin F. Byrd,  
 Jr., M.D.  
 A Commentary on Cor Pulmonale—J. Keith Gordon, M.D.  
 Attending Physicians' Statements—William Bolt, M.D., and Edson E. Getman.  
 The Role of the Medical Director in Accident and Health Insurance—C. O. Pauley.  
 A System for Evaluating Examiners—Jack A. End, M.D.

## THE JOURNAL OF THE AMERICAN SOCIETY OF CHARTERED LIFE UNDERWRITERS

Vol. 6, No. 4 (September 1952)

- The Place of Personal Salesmanship of Services in Our Economy—Harold H. Maynard.  
 The Gerontological Revolution—Ewan Clague.  
 Revolution in Old-Age Security Planning—Henry T. Owen.  
 Who Should Buy, Pay For, and Own Life Insurance—Vernon Mason.  
 The Development of Group Life Insurance—N. E. Horelich.  
 War Clauses—Theo P. Otjen.  
 How We Can Avoid a Tax on the Income from a Life Insurance Policy—Richard S. Brawerman.

Vol. 7, No. 1 (December 1952)

- It Is Not What You Leave, But What Remains—Samuel L. Zeiger.  
 The Small Pension Plan—Its Problems and Potentialities—Edward S. Churchill.  
 Alter Ego, Life Insurance, and Taxes—George J. Laikin.  
 Direct Placement and Sale of Securities—Sherwin C. Badger.  
 Social Problems—Walter C. McKain, Jr.  
 The Variable Annuity—George E. Johnson.  
 The Long Run Upward Trend in Prices—Carl A. Danten.  
 Government Benefits and Estate Planning for Servicemen and Veterans—Charles K. Reid, II.

Vol. 7, No. 2 (March 1953)

- The Impact of Science on Life Insurance—D. W. Woodward and J. J. Hubbard.  
 Can Life Insurance Increase Its Share of the Consumer's Dollar?—Edward Stone.  
 Estate Planning from the Life Insurance Point of View—L. C. Jones.  
 Multiple Accumulative Term Trusts—John O. Todd.  
 Joint Tenancy—Simple or Subtle—E. P. Walsh.  
 Schools, Education, and Life Insurance—Edward B. Bull.  
 The Ideas and Influence of John Maynard Keynes—C. W. Efrogmson.  
 Dependents' Coverage—Nathaniel B. Taft.

## THE INSURANCE LAW JOURNAL

No. 354 (July 1952)

- Exemption of Endowment Insurance from the Insured's Creditors—William E. Mooney.

## AMERICAN JOURNAL OF PUBLIC HEALTH

Vol. 42, No. 12 (December 1952)

- Occupational Diseases Associated with the Importation of Raw Materials—D. C. Braun and J. F. Ostertren.

Vol. 43, No. 1 (January 1953)

- Minnesota Maternal Mortality Surveys—A. J. Rosenfeld. Discussion—C. Newberger.

Vol. 43, No. 2 (February 1953)

- An Application of Biometry to Hospital Statistics: Hospital Stay Tables—Morton Robins and Rose Sachs.

## HARVARD BUSINESS REVIEW

Vol. 31, No. 1 (January–February 1953)

A New Pension Plan—R. M. Sedgwick.

Executives' Financial Preparation for Retirement—Harold R. Hall.

## THE AMERICAN ECONOMIC REVIEW

Vol. 43, No. 1 (March 1953)

Population Growth and the Demand for Capital—C. L. Barber.

## POPULATION STUDIES

Vol. 6, No. 2 (November 1952)

Theory of Population and Modern Economic Analysis I—Alan T. Peacock.

Differential Fertility in Ontario. An Application of Factorial Design to a Demographic Problem—N. Keyfitz.

Vol. 6, No. 3 (March 1953)

A Note on Occupation Statistics in British Censuses—J. Bellamy.

## SOCIAL SECURITY BULLETIN

Vol. 15, No. 8 (August 1952)

Resources of Aged Insurance Beneficiaries: 1951 National Survey—Edna C. Wentworth.

Expenditures for Medical Services in Public Assistance, 1946—Ruth White.

Vol. 15, No. 9 (September 1952)

Social Security Act Amendments of 1952—W. J. Cohen.

Vol. 15, No. 10 (October 1952)

Minimum Standards of Social Security; New International Convention—Robert J. Myers.

Temporary Disability Insurance Laws in the United States—Alfred M. Skolnik.

Vol. 15, No. 11 (November 1952)

Hospitalization Insurance and Hospitalization Utilization Among Aged Persons: March 1952 Survey—I. S. Falk and Agnes W. Brewster.

Vol. 15, No. 12 (December 1952)

Voluntary Insurance Against Sickness: 1948–1951 Estimates.

Vol. 16, No. 1 (January 1953)

Aid to the Blind: Earned Income of Recipients, September 1950—Sadie Suffian.

Vol. 16, No. 2 (February 1953)

Social Welfare in the United States—Ida C. Merriam.

Long-Range Trends in Old-Age Assistance—Robert J. Myers.

Temporary Disability Insurance: The California Program—Margaret M. Dohn.

## MONTHLY LABOR REVIEW

Vol. 75, No. 1 (July 1952)

Relaxation of Mortgage Credit Controls, 1952.

Conclusions on Inflation by the American Assembly.

Vol. 75, No. 2 (August 1952)

Injury Rates in Manufacturing, 1st quarter, 1952.

Vol. 75, No. 5 (November 1952)

Work Injuries in the United States, 1951.

Vol. 75, No. 6 (December 1952)

Injury Rates in Manufacturing, 2nd quarter, 1952.

Vol. 76, No. 1 (January 1953)

Changes in Distribution of Income, 1913-1948.

Vol. 76, No. 3 (March 1953)

Pension Planning Under Collective Bargaining—E. K. Rowe and T. H. Paine.

The Pension Problem in the United States.

The Health Needs of the United States.

#### JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION

Vol. 47, No. 260 (December 1952)

Evolving Mechanisms for the Production of International Health Statistics—Halbert L. Dunn.

Vol. 48, No. 261 (March 1953)

Data for Measuring the Effectiveness of Public Income-Maintenance Programs—J. Fisher.

An Appraisal of the 1950 Census Income Data—H. P. Miller.

#### APPLIED STATISTICS

Vol. 1, No. 2 (June 1952)

Estimating the Future Population—P. R. Cox.

Vol. 1, No. 3 (November 1952)

The Scope of Medical Statistics—N. T. J. Bailey.

Vol. 2, No. 1 (March 1953)

Stochastic Processes or the Statistics of Change—M. A. Bartlett.

#### BIOMETRICS

Vol. 8, No. 3 (September 1952)

Sequential Medical Plans—I. Bross.

Vol. 8, No. 4 (December 1952)

The Truncated Poisson—F. N. David and N. L. Johnson.

#### HUMAN BIOLOGY

Vol. 24, No. 1 (February 1952)

Studies in the Human Sex Ratio—Marianne E. Bernstein.

Vol. 24, No. 2 (May 1952)

Estimation of the T-Year Survival Rate from Follow-up Studies Over a Limited Period of Time—Arthur S. Littell.

Vol. 24, No. 3 (September 1952)

Historical Review of Epidemic Theory—Robert E. Seafiling.

Vol. 24, No. 4 (December 1952)

Prospects of Further Decline in Mortality Rates—Harold F. Dorn.

MATHEMATICAL TABLES AND OTHER AIDS TO COMPUTATION

Vol. 6, No. 40 (October 1952)

The Office of Naval Research Relay Computer—J. Jay Wolf.

On the Rounding Off of Difference Tables for Linear Interpolation—A. M. Ostrowski.

Vol. 6, No. 41 (January 1953)

The Use of Large Intervals in Finite Difference Equations—L. Fox.