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Forecast 2000 forum generates substantial media coverage

by Robert L. Brown

The recent Forecast 2000 forum on the environment held in Toronto dealt with such issues as increased taxes and higher insurance premiums to cover costs of natural disasters. The forum generated a lot of positive worldwide media coverage and brought more focus on the actuarial profession, despite the somewhat negative tone the survey projected.

In discussing the results, based on a survey of casualty actuaries, a positive pro-active stance was emphasized with the media.

In particular, it was our contention that through insurance premiums, the business sector will see real economic incentives and rewards for being responsible corporate citizens with respect to pollution control (e.g. reduced premiums for safe, inspected storage facilities). Furthermore, we stressed that actuaries have an essential role to play in assessing the economic value of the pollution liability risk, both in setting equitable premiums and also in assisting the courts in adjudicating penalties in cases of damage or injury.

Before the July 11 Forecast 2000 seminar, actuaries with a particular interest in the topic were polled on a series of relevant questions. In this case, the response was from 332 property/casualty actuaries (out of 1200 polled). Questions varied from the effects of a catastrophic natural disaster to concerns about environmental pollution. The results of the survey, which acted as the focal point

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Continuing education: The debate goes on and on

by Burton Jay

Should actuaries have a formal program for continuing education? This question has been asked, studied and debated at least since the early part of the decade. For many years, accountants, physicians and lawyers of many states have had continuing education requirements to retain their license to practice. Many other professions, including some groups of life insurance agents, require their members to participate in continuing education activities or in some way recognize those who do. Where are the actuaries?

The topic was on the agenda of the Society's Services to Members Policy Committee as early as 1983.

In 1984, a joint task force representing the actuarial bodies in North America was formed to consider the question. In a September 1985 report to the Council of Presidents (COP) the task force recommended that each founding organization of the Academy

adopt a similar continuing education recognition program. The Conference of Actuaries in Public Practice (CAPP) was already in the process of adopting a program similar to the one envisioned by the joint task force. That program would have recognized - with an asterisk or other designations in the organization's yearbook - those individuals who fulfill the required hours of continuing education and submit documentation to the organization's administrative offices. The American Society of Pension Actuaries has also had such a program for a number of years.

Another type of program involves specified continuing education requirements to retain one's professional designation. The Joint Board for Enrolled Actuaries recently implemented a program that members must fulfill to retain their Enrolled Actuary designations. The COP deferred action

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Transactions authors profiled

A total of 13 papers have been accepted for publication in Volume 41 of the *Transactions*. These profiles will be a periodic feature in *The Actuary*. The following biographical sketches briefly describe authors of eight of the papers. The remaining authors will be profiled in the December *Actuary*.

"The Effect of Variation in Prospective Mortality on Life Insurance Cash Values" by Albert E. Easton



ALBERT E. EASTON, FSA 1966, is Consulting Actuary, Milliman & Robertson. He received a bachelor's degree in mathematics from Brown University. He has been an actuarial student and an Assistant Actuary with the Equitable Life Assurance Society, Vice President and Actuary with Berkshire Life Insurance Company, and Director of Examinations for the Society of Actuaries. He has served on the Society's Education & Examination Committee as chairperson for Part 5 and for Part 7 and is currently chairperson of the Publications Index Committee. Easton, an Enrolled Actuary, is also a member of the American Academy of Actuaries.

"Mortality Trends of Males and Females over the Ages" by Barnet N. Berin, George J. Stolnitz, and Aaron Tenenbein



BARNET N. BERIN, FSA 1960, is Managing Director-Chief Actuary.

William M. Mercer Meidinger Hansen, Inc. He graduated magna cum laude from the City College of New York, where he received highest second-year honors and was elected to Phi Beta Kappa. He has a Master of Arts degree from Columbia University. A member of seven national and international actuarial organizations, Berin has lectured and written extensively on pensions and employee benefits. He has been an instructor for the New York Actuaries Club, where he pioneered a course in pension mathematics. Berin has authored two books, *The Fundamentals of Pension Mathematics* and *Pensions: A Guide to the Technical Side*, and has published articles in business, trade and professional publications in the employee benefits field. For the Society, he has served as Chairperson of the Committee on Retirement Plans and of the Pension Section Council; on the Board of Governors; and as Associate Editor of *The Actuary*. He is currently a Vice President.



GEORGE J. STOLNITZ, not a member of the Society, is Professor of Economics and Director of the Population Institute for Research and Training at Indiana University. He was president of the Population Association of America in 1983. He has served as a consultant to the United Nations and U.S. Department of State.



AARON TENENBEIN, ASA 1965, is Professor of Statistics and Actuarial Science and Chairman of the Statistics

and Operations Research Department at the Stern School of Business of New York University. He received a Ph.D. in statistics from Harvard University. He has published papers in such journals as the *Transactions*, *Actuarial Research Clearing House*, *The Actuary*, *The Journal of the American Statistical Association*, and *Biometrics and Technometrics*. Dr. Tenenbein's research has involved the applications of statistics to graduation of life tables, the determination of surplus reserves for a life insurance company, and determination of loss development factors for casualty insurance. He has consulted for such corporations as Equitable Life, Municipal Bond Insurance Association, Chemical Bank, IBM, and Morgan Stanley.

"The New Voluntary Annuity Program in the Soviet Union" by Robert J. Myers



ROBERT J. MYERS, FSA 1940, served in various actuarial positions with the U.S. Social Security Administration from 1934 until 1970, including chief actuary (1947-70). Since then he has been a member of the National Commission on Social Security (1978-81), executive director of the National Commission on Social Security Reform (1982-1983), chairperson of the Railroad Unemployment Compensation Committee (1983-1985), and Deputy Commissioner of Social Security (1981-82). He is currently chairperson of the Commission on Railroad Retirement Reform. He also has been an actuarial consultant to various Congressional Committees and the Federal Judiciary, and a member of missions of technical assistance in connection with Social Security or pension programs in many foreign countries. He was President of the Society of Actuaries in 1971-72 and President of the American Academy of Actuaries, also in 1971-

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1972. He is a Fellow of the Casualty Actuarial Society, the Conference of Actuaries in Public Practice, the American Statistical Association, the American Association for the Advancement of Science, and the Royal Statistical Society. His numerous awards include the Triennial Prize from the Actuarial Society of America and the Distinguished Service Award from the U.S. Department of Health, Education, and Welfare. Myers is the author of several books, including *Social Insurance and Allied Government Programs* (Richard D. Irwin, Inc., 1965); *Medicare* (Irwin, 1970), *Social Security* (Irwin, 1st ed., 1975; 2nd ed., 1981, 3rd ed., 1985), and *Indexation of Pension and Other Benefits* (Irwin, 1978). He has published 738 papers in technical and scientific journals, of which many have appeared in the *Transactions*, the *Transactions of the Actuarial Society of America*, and the *Record of the American Institute of Actuaries*; numerous discussions, book reviews, letters to the editor, and testimonies before Congressional committees and advisory groups.

"A Modified Development Method for Deriving Health Claim Reserves"

by Mark E. Litow



MARK E. LITOW, FSA 1981, is Consulting Actuary, Milliman & Robertson, Inc. His primary consulting activities are in the areas of individual health insurance, group health insurance, and risk analysis. Specific areas of expertise include valuation of reserves and liabilities, projection of health costs, new product development, and appraisals of accident and health business as part of life insurance company appraisals. Litow, who received a bachelor's degree from the University of Wisconsin-Oshkosh, has a master's degree from Ball State University. For the Society, Litow has served as co-chairperson of the workshop on Analysis of Medicare Supplement

Market, a panelist on Accident and Health Reserve Issues, chairperson of the workshop on Accident and Health Reserve Issues, and a panelist on "Health Insurance Valuation Actuary." He has also been a member of the task force reviewing the individual health insurance syllabus on SOA examinations and a member of the Advisory Committee to Wisconsin Risk Sharing Health Insurance Plan. He is the co-author of chapter 10, "Policy Forms," in the textbook *Individual Health Insurance*.

"Source of Earnings Analysis under FAS 97 Universal Life Accounting"

by Joseph H. Tan



JOSEPH H. TAN, FSA 1984, is a senior consultant in the New York office of the actuarial, benefits, and compensation consulting division of Coopers & Lybrand. Before joining Coopers & Lybrand, he was the financial planning and control director of the individual insurance products division of CIGNA. Before that, he was associated with Penn Mutual Life Insurance Company. He graduated magna cum laude with a bachelor of science degree in statistics from the University of the Philippines, where he received his master of science degree in mathematics (actuarial science). He has a doctorate in business administration from Temple University, where he received the Conwell Russell Fellowship. He is a Fellow of the Life Management Institute and a member of the American Academy of Actuaries. Dr. Tan spoke at the 1988 and 1989 Society spring meetings on sources of profit analysis. As a member of the Financial Reporting Section, he has published papers on GAAP accounting and return on equity in the *Financial Reporting Section* newsletter. His paper "Source of Earnings Analysis for Flexible Premium and Interest-Sensitive Life and Annuity Products," co-authored with Robert W. Stein, appeared in Volume 40 of the *Transactions*.

"A Guide to Quantifying C-3 Risk"

by John A. Mereu



JOHN A. MEREU, FSA 1955 and FCIA 1965, was employed by London Life Insurance Company until his retirement in 1989. He has been a lecturer in actuarial science at the University of Western Ontario since 1957. He graduated from the University of Western Ontario. His published papers include "Some Observations on Actuarial Approximations" (*TSA* 1961), "Annuity Values Directly from the Makeham Constants" (*TSA* 1962), "The Mathematical Forces Operating on Reserves" (*TSA* 1963), "An Algorithm for Computing Expected Stop-Loss Claims under a Group Life Contract" (*TSA* 1972), "Analysis of the Deficit Risk in Group Insurance" co-authored with Harry Panjer (*TSA* 1980), "A Projection System for Ordinary Life Business" (*TICA* 1976), and "Provision for Adverse Deviations under PPM" (*CIA* 1988).

"AIDS: Some Aspects of Modeling the Insurance Risk"

by Harry H. Panjer



HARRY H. PANJER, FSA 1976 and FCIA 1977, is Professor of Actuarial Science at the University of Waterloo, Ontario, and Director of the Institute of Insurance and Pension Research at the university. He received a B.A. in 1969, an M.A. in 1971, and a Ph.D. in 1975, all from the University of Western Ontario. He now serves on the Society's Board of Governors and has served on numerous committees of the Society and the Canadian Insti-

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tute of Actuaries. Dr. Panjer chaired the CIA's Task Force on AIDS subcommittee on modeling, which together with the valuation subcommittee proposed guidelines for valuation of the AIDS risk in life insurance. He is the author of more than 30 papers that have appeared in *Transactions*, *Journal of Risk and Insurance*, *Insurance: Mathematics and Economics*, *Transactions of International Congress of Actuaries*, *ASTIN Bulletin*, and *Journal of Econometrics*.

"Modeling the AIDS Epidemic by Analysis of Sexual and Intravenous Drug Behavior" by Peter W. Plumley



PETER W. PLUMLEY, FSA 1958, is a consulting actuary whose interests include expansion of mortality and morbidity research and modeling of the AIDS epidemic. He was executive director of the Society in 1975-79 and served on the Board of Governors in 1981-84. He has served on various Society committees, including New Recording Means and Computing Devices, Education and Examination, Advisory on Education and Examinations, Alternate Route, To Study Educational Facilities for Actuaries, Public Relations, Research Policy, Life Insurance Company Valuation Principles, Task Force on Expansion of Mortality and Morbidity Research, and Task Force to Review and Revitalize Society of Actuaries Research. Published papers include "The Education of the Actuary in the Future" with Anna Maria Rappaport (*TSA* 1975), "Certain Inequities in the Life Insurance Company Income Tax Act of 1959" (*TSA* 1976), "The Impact of Social and Economic Changes on Financial Security Systems" with Anna Maria Rappaport (*TSA* 1978), and "Federal Income Taxation of Life Insurance Companies in the 1980s" (*TSA* 1981).

Dear Editor:

Teaching vs. examining

In the discussions of the Actuary of the Future at the Centennial Meeting, I was disturbed by the comparative emphasis on teaching versus examining. I have always felt that the primary function of the examination system was to distinguish between those who were qualified to represent themselves — under the Society's aegis — as actuaries and those who were not so qualified.

Teaching the knowledge requirements of actuaries is something the Society should encourage but not necessarily try to do by itself, particularly if bodies who are better equipped to teach can do the job. Taking the extreme case, if other bodies such as universities could do the job to the complete satisfaction of the Society, it would be better for the Society to concentrate its efforts in areas where it has unique expertise. My apprehension arises from the fear that relatively greater emphasis on the teaching aspect would be likely to detract from the examination-for-admission aspect. There are certain conflicts of interest between teachers and examiners, and I fear for the continuance of what Robin Leckie refers to as the intellectual core of the actuary if the resolution of such conflicts results in the examining side being downgraded.

Also, I was shocked to hear that nonactuarial CEOs were questioned as to what characteristics they would like actuaries to have and that the resulting answers were given some credibility. The obvious answer that the typical nonactuarial CEO could be expected to give would be "Actuaries should be more like me!"

Again the question of relative emphasis arises. From the sound of some of the discussions, the Society's overriding objective would appear to be the recruitment and production of people who will be satisfactory as managers and communications experts and who only incidentally have the mathematical skills that are the backbone of the profession.

If the Society wishes to expand its value, and the value of its products, to fields somewhat beyond the ones in which actuaries are currently concentrated, I would suggest that the general theory of valuation should be explored in greater depth. The valuation of insurance liabilities is really

only a special case of a general theory which ought to be universally applicable. (Estey touched on this.)

The discounted cash flows well known to MBAs are different only as to orientation and sophistication from the calculation of a life insurance policy reserve. CPAs could do a much better job if they realized that the assets and liabilities in their balance sheets are distinguished not by the criterion of which ones are nearer the window and which ones are nearer the door; with a general theory they could introduce the concepts of the time value of money and the probability of events happening in the future and the credibility of those probabilities, etc.

Having demonstrated ability to master a general theory and to apply it to special cases (such as insurance), actuaries would be more likely to be accorded the respect that they would like to have in the eyes of the general public.

Robert Grant Espie

'The Actuarial Profession' booklet

I recently received my copy of the "Picture Yourself Making a Terrific Choice/The Actuarial Profession" booklet and was proceeding to use it to entice my young daughter into this profession. Then I noticed on the page 18 FYI section that the 200 credits required for Associateship in the Society are worth \$13,000 to \$22,000 while the following 250 credits required for Fellowship are worth \$12,000 to \$9,000. On first glance, this may leave the impression on a young mind that the Fellowship exams are not as valuable to an employer as the earlier Associateship exams. I have thought of one or two explanations for this trend, but perhaps could hardly use them effectively to promote the "number one job." I wonder if the facts presented here are serving the otherwise widely held impressions/appearances well.

Syamal Ghosh

Psychonacci

Thanks to Don Sondergeld for the entertaining article on Fibon and other acci numbers. Rather by coincidence, I assume, I read his letter right after an experience that led me to appreciate Psychonacci numbers.

I wandered into my family room one evening and glimpsed a TV show

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