

ABOUT THE AUTHORS



Patrick L. Brockett, not a member of the Society, is the Director of the Risk Management and Insurance Program and holds the Gus S. Wortham Memorial Chair in Risk Management and Insurance in the College and Graduate School of Business at the University of Texas at Austin. He is the former Director of the Center for Cybernetic Studies and former Director of the Actuarial Science Program in the Graduate School of Business. He is a Fellow of the Institute of Mathematical Statistics, the American Statistical Association, the Royal Statistical Society, and the American Association for the Advancement of Science; a Chartered Statistician by the Royal Statistical Society; and a Full Member of the Operations Research Society (now INFORMS). He is a member of the American Risk and Insurance Association, the Western Risk and Insurance Association, the International Actuarial Association (ASTIN section), and the Casualty Actuarial Society (Academic Corresponding Member). In addition to refereeing for numerous academic journals, he has published two books or monographs and more than 100 journal articles and is an Associate Editor of the journal *Insurance: Mathematics and Economics* and of the *North American Actuarial Journal*. Papers published in the *Transactions* include "Optimal Ruin Calculations Using Partial Stochastic Information" and "Statistical Adjustments of Mortality Tables to Reflect Known Information," both with Samuel H. Cox, Jr. (Volume XXXVI, 1984) and "Information Theoretic Approach to Actuarial Science: A Unification and Extension of Relevant Theory and Application" (Volume XLIII, 1991).



Robert L. Brown, F.S.A. 1976, F.C.I.A. 1977, and A.C.A.S. 1980, is Professor in the Department of Statistics and Actuarial Science and Director of the Institute of Insurance and Pension Research at the University of Waterloo, Ontario. He received an Hons.B.Math degree and an M.A. (gerontology) from the University of Waterloo. He has served as President of the Canadian Institute of Actuaries, was a member of the Board of Governors (1992-95), and Director of Publications

(1994–96) of the Society of Actuaries. He is the author of five books, including *Economic Security in an Aging Population* (Toronto, Ont.: Butterworths Canada, 1991) and *Introduction to the Mathematics of Demography*, 2nd edition (Winsted and Avon, Conn.: Actex Publications, 1993). He has published several papers in scientific and technical journals, including “Actuarial Aspects of the Changing Canadian Demographic Profile” (*TSA* Volume XXXIV, 1982), “Future of Group Insurance: Demographic Aspects” with Ben W. Lutek (*TSA* Volume XXXV, 1983), and “Toward Computerized Underwriting—A Biological Age Model” with K.S. Brown (*TSA* Volume XXV, 1983).



Samuel H. Cox, Jr., F.S.A. 1980, is Professor of Actuarial Science at Georgia State University. He earned B.A. and M.S. degrees at Texas Christian University and a Ph.D. at Louisiana State University, all in mathematics. Dr. Cox is a Chartered Property and Casualty Underwriter (1996). He is Editor of the Society of Actuaries-sponsored *North American Actuarial Journal*. Dr. Cox is a contributing author to several textbooks and has published scholarly papers in mathematics, actuarial science, insurance, and finance.



Niels H. Fischer, F.S.A. 1953, is a consultant with Bay State Actuaries in Needham, Mass. His practice is principally in accident and health special risks and international reinsurance. Following U.S. Navy service in World War II and graduation from Middlebury College, he was employed by Aetna from 1949 to 1976, where he was Vice President heading individual, special risk, and small-group health insurance operations, and introduced the industry's first cash-value disability policy. He was later Vice President, group staff, at Metropolitan Life, and a consulting actuary with Milliman & Robertson, where he formed the firm's Boston health practice. He has authored articles in publications including *Best's Review*, *Insurance Advocate*, and *Money Magazine*. He was a contributor to *Life Insurance* (Heubner & Black) and was co-author of the Society's textbook: *Health Insurance through Individual Policies*. Mr. Fischer served the Society as chairperson of an examination committee. He has made numerous presentations at meetings of the Society and at meetings of civic groups,

senior living groups, the Association of Life Insurance Medical Doctors of America, and the Health Insurance Association of America (HIAA); he also chaired an annual HIAA Forum. He was a member of the committees on Continuing Care Retirement Communities of the Academy of Actuaries and of the National Association of Insurance Commissioners.



John Gavin, not a member of the Society, graduated in mathematics from University College, Cork, in 1987 and received a diploma and a master's degree in actuarial science from The City University, London, in 1988 and 1992, respectively. He is currently studying for a Ph.D. in statistics at the University of Bath. His work experience includes four years service with the Sun Alliance Insurance Group. He has published papers in *Insurance: Mathematics and Economics* and *The Journal of the Institute of Actuaries*. His research interests focus on computational statistics, nonparametric statistics, and data visualization.



Steven Haberman, F.I.A. 1975, A.S.A. 1976, is Professor of Actuarial Science at City University and Dean of the School of Mathematics. He is founding director of the Actuarial Research Centre at the University. He graduated from Cambridge University in mathematics in 1972 and received a Ph.D. in 1982 from City University. After graduation, he joined the Prudential Assurance Company before joining City in 1974 as a Lecturer. He has also worked part-time for the Government Actuary's Department and served as a consultant to a number of insurance companies. He is currently in his second term on the Council of the Institute of Actuaries and has served on several committees, including the CMI AIDS subcommittee. He is the co-author of *Pensions: The Problems of Today and Tomorrow* (Allen and Unwin: 1987), *Actuarial Mathematics* (Institute and Faculty of Actuaries: 1993), and *The History of Actuarial Science* (Pickering and Chatts: 1995). He has published more than 60 papers, which have appeared in the *Journal of the Institute of Actuaries*, *Insurance: Mathematics and Economics*, *Transactions of the International Congress of Actuaries*, *Journal of Actuarial Practice*, *Geneva Papers on Risk and Insurance*, *Journal of Royal Statistical Society*, *Social Science and Medicine*, and the *Actuarial Research Clearing House*. He has won two Research Prizes from the

Institute of Actuaries. His research interest focuses on graduation methods, pension fund models, motor insurance premium rating, and mortality and morbidity.



Boaz Golany, not a member of the Society, is the Associate Dean of the Industrial Engineering and Management Faculty at the Technion-Israel Institute of Technology. He has a B.Sc. (summa cum laude) in industrial engineering and management from the Technion (1982) and an interdisciplinary Ph.D. from the Business School of the University of Texas at Austin (1985). Dr. Golany has published over 40 papers in academic and professional journals and books. His publications are mostly

in the areas of industrial engineering, operations research, and management science.



Robert J. Johansen, F.S.A. 1954, retired MetLife vice president and actuary, is currently a consulting actuary. He received an M.A. in mathematics/statistics from Columbia in 1974. He has served on the SOA Board of Governors and numerous SOA committees. He has held various positions on the E&E Committee, including General Chairperson. In addition to chairing the industry committee that designed the Separate Accounts Annual Statement Blank in 1977, he chaired SOA committees

that produced the 1983 Table *a* (IAM) and the Blended 1980 CSO tables for life insurance policies affected by the Norris decision. He is currently Vice-Chair of the Life Practice Research Committee and chairs several of its Project Oversight Groups; he is also a member of the Life Practice Advancement Committee and chairs the SOA Task Force on Mortality Guarantees in Variable Products; and he is a member of the American Academy of Actuaries Work Group on Reserving for Minimum Guaranteed Death Benefits in Variable Annuities. His publications have appeared in the *Transactions*, *The Actuary*, *Best's Review* (P&C Edition), and the *Proceedings of the ASA Social Statistics Section*.



Bertram M. Kestenbaum, A.S.A. 1985, is an actuary in the Office of the Actuary of the Social Security Administration. He graduated summa cum laude from Brooklyn College with a bachelor's degree in mathematics and received a master's degree in biostatistics from the Johns Hopkins University School of Hygiene and Public Health. His papers have appeared in *Transactions* ("The Birthday Rule and the Difference in Spouses' Ages" (XLIV, 1992), the *Journal of the American Statistical Association*, *Demography*, and other journals. He serves on the Society's Course 161 (demography) Examination Committee.



Kevin Law, F.S.A. 1977, is Vice President and Group Actuary at Pan-American Life Insurance Company in New Orleans, La. His field of specialization is group life and health insurance, with current responsibilities for portfolios in the U.S. and in eight Latin American countries. Previously, he was employed by Aetna Life and Casualty and Phoenix Mutual (now Phoenix Home Life) in Hartford, Conn. Law received a B.A. in mathematics from the University of California at Santa Barbara. He is the 1995-96 Chairperson of the International Section Council. He was the Chairperson of the Organizing Committee for the International Section when it was formed in 1991-92; he served as the 1993-95 editor of the section's newsletter, the *International Section News* and as Associate Editor during 1992-93. He is a member of the Society's Committee on International Relations and the American Academy of Actuaries Committee on International Issues. He has participated in Society Spring and Annual meetings as a panelist and as a moderator and has made presentations at meetings of the Latin American insurance industry organization El Instituto de Estudios e Investigaciones del Seguro de Centro América, Panamá, y el Caribe (ISCAPC).



Ernest J. (Jack) Moorhead, F.S.A. 1938 and A.I.A., began his actuarial career at Great-West Life in 1929; from 1945 until 1948, he was with a predecessor of the Life Insurance Marketing and Research Association (LIMRA, at that time LISRB and then LIAMA); from 1948 to 1952, at United States Life in New York City; from 1952 to 1967, at New England Mutual Life; and from 1967 until his retirement in 1972, at Integon in Winston-Salem, N.C. Since 1972, he has participated in public interest activities, including advisory work for the U.S. Senate Subcommittee on Antitrust and Monopoly and two studies of the financial problems of the Social Security system. He served the Society of Actuaries as chairperson of the Committee on Papers, President (1969–70), and editor of *The Actuary*, and is currently chairperson of the Committee on Memorials. He served the American Academy of Actuaries as President (1973–74). He is the author of *Our Yesterdays: the History of the Actuarial Professional in North America, 1809–1979*, which was published by the Society as part of the profession's Centennial Celebration in 1989. He has published several papers, discussions, and book reviews in the *Transactions*, including "The Construction of Persistency Tables" (Volume XII, 1960), "Mortality Investigation with Expected Mortality Estimated at Issue by Use of Persistency Factors" (Volume XIII, 1961), "Valuation of Nonvested Renewal Commissions" (XV, 1963), "Report on the Forthcoming Sequel to the 1966–67 Future Outlook Study of the Institute of Life Insurance" (XXIV, 1972), "Unresolved OASDI Decoupling Issue," with C.L. Trowbridge (XXIX, 1977), "Sketches of Early North American Actuaries" (XXXVI, 1984), and "Mortality Experience of Fellows of the Actuarial Society of America and the American Institute of Actuaries" with John H. Cook (XLII, 1990). He resides in a CCRC.



Fred Phillips, not a member of the Society, is Professor of Management and Head of the Department of Management in Science and Technology at the Oregon Graduate Institute of Science and Technology. Dr. Phillips attended The University of Texas and Tokyo Institute of Technology, earning a Ph.D. at Texas (1978) in mathematics and management science. He has held teaching and research positions at the Universities of Aston and Birmingham in England, the General Motors Research

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Stephen Reddy, F.S.A. 1983, is a vice president at Morgan Stanley & Co. in New York, doing consulting on asset-liability management issues. He received a B.A. in mathematics from Bucknell University. Prior to joining Morgan Stanley in 1992, he worked at three large mutual life insurers, concentrating on the areas of life and annuity product development. He is currently on the SOA's Investment Section Council and is a member of the American Academy of Actuaries. Mr. Reddy's research activities have included the development of an interactive asset-liability computer model, co-authoring a LOMA research study "Asset Liability Management in the Life Insurance Industry" (1993), co-authoring a paper "Market Valuation of Liabilities" (1995), and co-editing the SOA's *Dynamic Financial Condition Analysis Handbook* (1995).



James B. Ross, F.S.A. 1954, is Associate Professor of Finance in the College of Business and Economics at Radford University in Radford, Va. His business experience includes service with Connecticut General Life, CIGNA, Insurance Company of North America, Continental Corp., and Metropolitan Life. He received an A.B. in mathematics from Harvard College, an M.B.A. from the University of Rhode Island, and a Ph.D. in finance from the University of Connecticut. His papers have appeared in the *Transactions*, *Journal of Actuarial Practice*, *Journal of Economics and Finance*, and the *Journal of Financial Services Research*.



David P.M. Scollnik, A.S.A. 1988, is an associate professor in the department of mathematics and statistics at the University of Calgary, where he teaches actuarial science and statistics. He has also lectured in actuarial science at the University of Toronto. He received a combined Honors B.Sc. in pure mathematics and actuarial science from the University of Western Ontario and both an M.Sc. and a Ph.D. in statistics from the University of Toronto. His doctoral research was partially supported by a SOA Ph.D. grant in 1991–92. Dr. Scollnik's professional actuarial experience includes service with Towers Perrin and Canada Life. He is a member of the American Risk and Insurance Association, the American Statistical Association, and the Statistical Society of Canada. He is also an academic correspondent with the Casualty Actuarial Society. His papers have appeared in *Insurance: Mathematics and Economics*, *ARCH*, *Biometrics*, *Communications in Statistics*, and the Proceedings of the Casualty Actuarial Society.



Keith P. Sharp, F.S.A. 1990, F.C.I.A. 1983, F.I.A. 1982, F.I.A.A. 1981, is an Associate Professor and Associate Director of the Institute of Insurance and Pension Research at the University of Waterloo. His business experience includes periods with Commercial Union Assurance in London, PTOW (now Towers Perrin) in Melbourne, and Towers Perrin in Toronto. He received a bachelor's degree in mathematics from Cambridge University, a master's degree in statistics from the Uni-

versity of California at Berkeley, and a doctorate in finance from the University of Waterloo. Dr. Sharp's papers have appeared in various journals, including *Review of Economics and Statistics*, *Insurance: Mathematics and Economics*, *Journal of Actuarial Practice*, and *Journal of Insurance Regulations*.



Klaus O. Shigley, F.S.A. 1976, is a vice president in John Hancock's Guaranteed and Stable Value Products division. He has responsibility for the pricing, underwriting, and financial reporting functions for guaranteed group pension products, primarily GICs and group annuities. From 1988 through 1993, he was responsible for the pricing and product development of retail life insurance products. Mr. Shigley currently serves as a member of the SOA's Investment Section Council and the Committee on Life Practice Research.

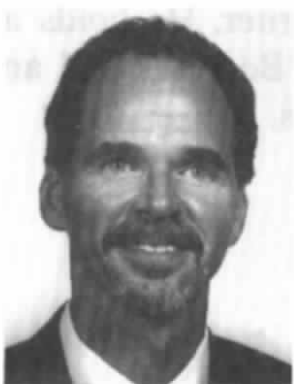
He is a former Chairperson of the Committee on Papers for the *Transactions* and is past president of the Boston Actuaries Club and is a former member of the Product Development Section Council. He is a frequent speaker at SOA Meetings ("Pricing and Profit Testing," San Francisco, 1994; "Impact of Low Interest Rates," Boston, 1993; "Capital Management," Quebec, 1993; "Pricing on a Unisex Basis," Vancouver, 1989; and "Matching Insurance Company Pension Assets and Liabilities," San Diego, 1986). He was a participating faculty member of the "GIC Product Management" seminar sponsored by the Society in 1986. He is also a frequent speaker at GIC conferences. His published papers include "Guaranteed Investment Contracts" in *The Handbook of Fixed Income Securities* (Fabozzi, 3rd ed.), and "Unit Expense Factors for Risk Based Capital Requirements" (*Product Development News* 1992). Mr. Shigley is an Enrolled Actuary and a Chartered Life Underwriter. He holds a B.A. in mathematics from the University of California at Berkeley and an M.A. in mathematics from the University of Massachusetts.



Yun Song is currently on the actuarial staff of the National Actuarial Services Group, Ernst & Young, LLP. She received a Ph.D. in management science and information systems from The University of Texas at Austin in May 1996. Her research has been conducted mainly in the area of actuarial science. Prior to joining Ernst & Young, she was an actuarial intern with Texas Department of Insurance and the United Teacher Associates Insurance Company in Austin, Texas. She published a paper in *Journal of Actuarial Practice*, "Obtaining a Life Table for Spinal Cord Injury Patients Using Medical Study."



Richard Verrall, not a member of the Society, is a Reader in the Department of Actuarial Science and Statistics at City University. He graduated in mathematics from St. John's College, Cambridge in 1981 and received an M.Sc. in statistics from University College, London in 1982. In 1989, he received his Ph.D. from City University for a dissertation on aspects of claims reserving. He has published papers on claims reserving, graduation, motor premium rating, and excess mortality rating in *Insurance: Mathematics and Economics*, *ASTIN Bulletin*, *Journal of the Institute of Actuaries*, and the *Scandinavian Actuarial Journal*. In 1993, he was awarded first prize in the Casualty Actuarial Society's prize competition on the variability of loss reserves. He is director of the M.Sc. program in actuarial science at City University and is an examiner in Statistics for the Institute of Actuaries.



Criss G. Woodruff, not a member of the Society, is Assistant Professor of Finance at Texas A&M University in Corpus Christi, Tx. He earned a B.A. degree from Centenary College of Louisiana and M.Ed., M.B.A., and D.B.A. degrees from Mississippi State University. Prior to joining the faculty at Texas A&M, Dr. Woodruff was Assistant Professor of Finance at Radford University in Radford, Va. He has also worked in retail management and state government. Dr. Woodruff's research has recently appeared in the *Journal of Economics and Finance* and the *Journal of Actuarial Practice*. He is a member of several professional organizations,

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