TRANSACTIONS OF SOCIETY OF ACTUARIES 1983 VOL. 35

MINUTES OF THE REGIONAL MEETING of the SOCIETY OF ACTUARIES

HELD AT THE PHILADELPHIA MARRIOTT PHILADELPHIA, PENNSYLVANIA APRIL 7-8, 1983

The meeting was called to order by President Barbara J. Lautzenheiser on Thursday, April 7, 1983, at 9:00 a.m. The following is a summary of attendance at the meeting.

SUMMARY

Fellows	430
Associates	107
Others	_76
Total	613

President Lautzenheiser recognized the following individuals attending this meeting from countries other than the United States and Canada: Zbigniew J. Andrzejewski, Australia; John Graham, Australia; George Gwilt, Scotland; George C. Orros, England; Keith S. Pearson, England; and James Purvis, Australia.

President Lautzenheiser then recognized the following academic guests of the Society of Actuaries attending the meeting: Dr. Daniel McGill, the Wharton School, University of Pennsylvania; and Dr. Gerald Hartman, Temple University.

President Lautzenheiser next recognized the individuals responsible for this special topic meeting on "Competitive Strategies": Vice-President Robert D. Shapiro; Committee on Continuing Education General Chairman Frank S. Irish and members of that committee; Program Committee Chairman Stephen H. Frankel and members of that committee; and all individuals participating in the program.

President Lautzenheiser recognized all of the program participants—both Society members and those who were not members of the Society.

President Lautzenheiser acknowledged the recorders at the meeting for their assistance in creating the official Record of the meeting's discussions.

President Lautzenheiser recognized and welcomed the new Fellows and Associates who were attending their first meeting of the Society since attainment of their present ranks.

President Lautzenheiser recognized the authors of papers published by the Society of Actuaries as follows:

Vincent Amoroso, "IRS Limitations on Integration of Defined Benefit Pension Plans with United States Social Security"

Yuan Chang, John N. Feldtmose, Jeffrey J. Furnish, Michael J. Gulotta, Douglas M. Hodes, Karen Mitchell Krist, Frederic T. Lhamon, Lawrence N. Margel, Stewart G. Nagler, A. Frederick Rohlfs, Jr., Donald E. Sanning, and Robert J. Schnitzer, "Integration of Private Pension Plans with Social Security"

Robert R. Reitano, "Mortality Cost Valuation of Underwriting Requirements"

Robert L. Brown, "Actuarial Aspects of the Changing Canadian Demographic Profile"

Douglas A. Eckley, "Purchase Accounting: A Fresh Look" Walter B. Lowrie, "An Extension of the Whittaker-Henderson Method of Graduation"

H. Dennis Tolley, Kenneth Manton and Eric Stallard, "Compartment Model Methods in Estimating Cancer Costs"

Ronald V. Gresch and Kenneth K. Leong, "Recent Experience Under the Medicare Program"

Elias S. W. Shiu, "Integer Functions and Life Contingencies"

President Lautzenheiser advised that the Society had received word of the deaths of twenty-two members since the last annual meeting, including the death of Robert T. Jackson, F.S.A. 1948, who was a Past President of the Society of Actuaries 1976-1977. Those in attendance at this meeting observed a moment of silence in respect for the memory of these members. Obituaries are printed in this volume of the Transactions.

The Secretary presented an oral summary of nonroutine business transacted by the Executive Committee at its meetings on December 8, 1982, January 18, 1983, and March 7-8, 1983, and by the Board of Governors at its meeting on January 19, 1983.

Executive Director John E. O'Connor, Jr., made a few brief announce-

Frank S. Irish, General Chairman of the Committee on Continuing Education, introduced Charles E. Fiero, General Partner, Hay Associates, and John A. Miller, Chairman of the Board and President, Provident Mutual Life Insurance Company, who gave a keynote presentation on "Competitive Forces in the Insurance and Pension Industries."

After a brief recess, the meeting reconvened at 11:00 a.m. in five panel discussions and four workshops.

A "New Associates Workshop" was also held at 11:00 a.m. under the sponsorship of the Committee on Professional Development.

A luncheon was held at 12:30 p.m. honoring new Fellows attending their

first meeting of the Society since attainment of Fellowship. Before the luncheon, brief remarks were presented by President Lautzenheiser and President-Elect Bartlett. Following the luncheon, W. Thacher Longstreth, President-Emeritus, Greater Philadelphia Chamber of Commerce, addressed the audience.

The meeting, reconvened at 2:30 p.m. in four open forums, one panel discussion, and six workshops.

After a brief recess, the meeting reconvened at 4:45 p.m. in one session planned by the Futurism Section.

On Friday, April 8, the meeting convened at 9:00 a.m. in a general session with President Lautzenheiser presiding.

Frank S. Irish, General Chairman of the Committee on Continuing Education, introduced John S. Hammond, President, John S. Hammond and Associates, who gave a keynote presentation on "Strategic Planning."

After a brief recess, the meeting reconvened at 10:30 a.m. in five panel discussions, one open forum, and eight workshops.

Following lunch, the meeting reconvened at 1:30 p.m. in four panel discussions, one open forum, and five workshops.

General session, panel discussion, open forum, and workshop topics and the names of participants for this meeting are printed in the *Record*, Volume IX, Number 1.

MINUTES OF THE REGIONAL MEETING

of the

SOCIETY OF ACTUARIES

HELD AT THE CHICAGO MARRIOTT CHICAGO, ILLINOIS APRIL 28-29, 1983

The meeting was called to order by President Barbara J. Lautzenheiser on Thursday, April 28, 1983, at 9:00 a.m. The following is a summary of attendance at the meeting.

SUMMARY

Fellows	457
Associates	122
Others	_59
Total	638

President Lautzenheiser recognized the following individuals attending this meeting from countries other than the United States and Canada: Trevor J. Mathews, Australia; A. C. Musaib-Ali, West Indies; and Thomas A. Pyne, England.

President Lautzenheiser next recognized the individuals responsible for this meeting: Vice-President Robert D. Shapiro; Program Committee Chairman Stephen H. Frankel and members of that committee; and all individuals participating in the program.

President Lautzenheiser then recognized all of the program participants—both Society members and those who were not members of the Society.

President Lautzenheiser acknowledged the recorders at the meeting for their assistance in creating the official *Record* of the meeting's discussions.

President Lautzenheiser recognized and welcomed the new Fellows and Associates who were attending their first meeting of the Society since attainment of their present ranks.

President Lautzenheiser recognized the authors of papers published by the Society of Actuaries as follows:

Vincent Amoroso, "IRS Limitations on Integration of Defined Benefit Pension Plans with United States Social Security"

Yuan Chang, John N. Feldtmose, Jeffrey J. Furnish, Michael J. Gulotta, Douglas M. Hodes, Karen Mitchell Krist, Frederic T. Lhamon, Lawrence N. Margel, Stewart G. Nagler, A. Frederick Rohlfs, Jr., Donald E. Sanning, and Robert J. Schnitzer, "Integration of Private Pension Plans with Social Security"

Robert R. Reitano, "Mortality Cost Valuation of Underwriting Requirements"

Robert L. Brown, "Actuarial Aspects of the Changing Canadian Demographic Profile"

Douglas A. Eckley, "Purchase Accounting: A Fresh Look"

Walter B. Lowrie, "An Extension of the Whittaker-Henderson Method of Graduation"

H. Dennis Tolley, Kenneth Manton and Eric Stallard, "Compartment Model Methods in Estimating Cancer Costs"

Ronald V. Gresch and Kenneth K. Leong, "Recent Experience Under the Medicare Program"

Elias S. W. Shiu, "Integer Functions and Life Contingencies"

President Lautzenheiser announced that the Triennial Prize winner for the period of July 1, 1980 to June 30, 1982 was William F. Bluhm for his paper "Cumulative Antiselection Theory."

President Lautzenheiser advised that the Society had received word of the deaths of twenty-four members since the last annual meeting, including the death of Robert T. Jackson, F.S.A. 1948, who was a Past President of the Society of Actuaries 1976-1977. Those in attendance at this meeting observed a moment of silence in respect for the memory of these members. Obituaries are printed in this volume of the *Transactions*.

The Secretary presented an oral summary of nonroutine business transacted by the Executive Committee at its meetings on December 8, 1982, January 18, 1983, and March 7-8, 1983, and by the Board of Governors at its meeting on January 19, 1983.

Executive Director John E. O'Connor, Jr., made a few brief announcements.

President Lautzenheiser then introduced President-Elect Bartlett, who served as the moderator of the keynote debate "Resolved: The Society of Actuaries Is Failing to Equip Its Members for the Role Their Employers and Clients Should Expect of Them." President-Elect Bartlett introduced the debaters, Daniel J. McCarthy (affirmative) and Richard Daskais (negative), and the commentator, Robert L. Posnak, CPA, Partner, Ernst & Whinney.

After a brief recess, the meeting reconvened at 11:15 a.m. in two panel discussions, two open forms, and eight workshops.

A "New Associates Workshop" was also held at 11:15 a.m. under the

A "New Associates Workshop" was also held at 11:15 a.m. under the sponsorship of the Committee on Professional Development.

A luncheon was held at 12:45 p.m. honoring new Fellows attending their first meeting of the Society since attainment of Fellowship. Before the luncheon, brief remarks were presented by President Lautzenheiser and President-

Elect Bartlett. Following the luncheon, Howard Young, Special Consultant to the President, United Auto Workers Union, addressed the audience.

The meeting reconvened at 2:30 p.m. in four panel discussions, two open forums, and seven workshops.

After a brief recess, the meeting reconvened at 4:45 p.m. in one session planned by the Futurism Section.

On Friday, April 29, 1983, the meeting convened at 8:30 a.m. in four panel discussions, two open forums, and eleven workshops.

After a brief recess, the meeting reconvened at 10:45 a.m. in three panel discussions, two open forums and six workshops.

General session, panel discussion, open forum, and workshop topics and the names of participants for the meeting are printed in the *Record*, Volume IX, Number 2.



MINUTES OF THE REGIONAL MEETING

of the

SOCIETY OF ACTUARIES

HELD AT THE HOTEL VANCOUVER VANCOUVER, BRITISH COLUMBIA, CANADA MAY 26-27, 1983

The meeting was called to order by President Barbara J. Lautzenheiser on Thursday, May 26, 1983, at 9:00 a.m. The following is a summary of attendance at the meeting.

SUMMARY

Fellows	421
Associates	292
Others	42
Total	755

President Lautzenheiser recognized the following individual attending this meeting from a country other than the United States and Canada: Stephen Meldrum, England.

President Lautzenheiser next recognized the individuals responsible for this meeting: Vice-President Robert D. Shapiro; Program Committee Chairman Stephen H. Frankel and members of that committee; and all individuals participating in the program.

President Lautzenheiser then recognized all of the program participants—both Society members and those who were not members of the Society.

President Lautzenheiser acknowledged the recorders at the meeting for their assistance in creating the official *Record* of the meeting's discussions.

President Lautzenheiser recognized Ian Karp, Peter F. Morse and the members of the Vancouver Actuarial Club for their assistance in organizing this meeting.

President Lautzenheiser recognized Reginald C. Barnsley, F.S.A. 1927.

President Lautzenheiser recognized and welcomed the new Fellows and Associates who were attending their first meeting of the Society since attainment of their present ranks.

President Lautzenheiser recognized the authors of papers published by the Society of Actuaries as follows:

Vincent Amoroso, "IRS Limitations on Integration of Defined Benefit Pension Plans with United States Social Security"

Yuan Chang, John N. Feldtmose, Jeffrey J. Furnish, Michael J. Gulotta, Douglas M. Hodes, Karen Mitchell Krist, Frederic T. Lhamon, Lawrence N. Margel, Stewart G. Nagler, A. Frederick Rohlfs, Jr., Donald E. Sanning,

and Robert J. Schnitzer, "Integration of Private Pension Plans with Social Security"

Robert R. Reitano, "Mortality Cost Valuation of Underwriting Requirements"

Robert L. Brown, "Actuarial Aspects of the Changing Canadian Demographic Profile"

Walter B. Lowrie, "An Extension of the Whittaker-Henderson Method of Graduation"

H. Dennis Tolley, Kenneth Manton and Eric Stallard, "Compartment Model Methods in Estimating Cancer Costs"

Ronald V. Gresch and Kenneth K. Leong, "Recent Experience Under the Medicare Program"

Elias S. W. Shiu, "Integer Functions and Life Contingencies"

Vincent Amoroso, "Termination Insurance for Single-Employer Pension Plans: Cost and Benefits"

Francisco R. Bayo and Joseph F. Faber, "Mortality Experience Around Age 100"

Michael F. Davlin and Shane A. Chalke, "Universal Life Valuation and Nonforfeiture: A Generalized Model"

Thomas G. Kabele, "Universal Life and Indeterminate Premium Products and Policyholder Dividends"

Peter S. Kornya, "Distribution of Aggregate Claims in the Individual Risk Theory Model"

Carol A. Marler, "Application of Generally Accepted Accounting Principles to Annuities"

Arnold F. Shapiro, "Modified Cost Methods for Small Pension Plans"

Kenneth A. Steiner, "A Better Financing Approach for Social Security"

President Lautzenheiser advised that the Society had received word of the deaths of twenty-six members since the last annual meeting, including the death of Robert T. Jackson, F.S.A. 1948, who was a Past President of the Society of Actuaries 1976-1977. Those in attendance at this meeting observed a moment of silence in respect for the memory of these members. Obituaries are printed in this volume of the *Transactions*.

The Secretary presented an oral summary of nonroutine business transacted by the Executive Committee at its meeting on December 8, 1982, January 18, 1983, and March 7-8, 1983, and by the Board of Governors at its meetings on January 19, 1983, and May 25, 1983.

Executive Director John E. O'Connor, Jr., made a few brief announcements.

President Lautzenheiser then introduced President-Elect Bartlett, who served as the moderator of the keynote debate "Resolved: The Society of Actuaries

Is Failing to Equip Its Members for the Role Their Employers and Clients Should Expect of Them." President-Elect Bartlett introduced the debaters, Thomas P. Bowles, Jr. (positive) and Robin B. Leckie (negative), and the commentator, Robert Wyman, Chairman of the Board, Pemberton Securities, Ltd.

After a brief recess, the meeting reconvened at 11:15 a.m. in three panel discussions, two open forums, and eleven workshops.

A "New Associates Workshop" was also held at 11:15 a.m. under the sponsorship of the Committee on Professional Development.

A luncheon was held at 12:45 p.m. honoring new Fellows attending their first meeting of the Society since attainment of Fellowship. Before the luncheon, brief remarks were presented by President Lautzenheiser and President-Elect Bartlett. Following the luncheon, Dr. Michael A. Walker, Director, The Fraser Institute, addressed the audience.

The meeting reconvened at 2:30 p.m. in four panel discussions, two open forums and eight workshops.

After a brief recess, the meeting reconvened at 4:45 p.m. in one session planned by the Futurism Section.

On Friday, May 27, 1983, the meeting convened at 8:30 a.m. in four panel discussions, two open forums, and thirteen workshops.

After a brief recess, the meeting reconvened at 10:45 a.m. in three panel discussions, two open forums, and ten workshops.

General session, panel discussion, open forum, and workshop topics and the names of participants for the meeting are printed in the *Record*, Volume IX, Number 3.



MINUTES OF THE ANNUAL MEETING

of the

SOCIETY OF ACTUARIES

HELD AT THE DIPLOMAT HOTEL HOLLYWOOD, FLORIDA OCTOBER 10, 11, AND 12, 1983

The meeting was called to order by President Barbara J. Lautzenheiser on Monday, October 10, 1983, at 9:00 a.m. The following is a summary of attendance at the meeting:

SUMMARY

reliow	1,113
Associates	285
Others	91
Total	1,489

President Lautzenheiser introduced the United States Army Color Guard from the U.S. Miami Base for presentation of the colors.

President Lautzenheiser recognized the following individuals attending this meeting from countries other than the United States and Canada: Professor Bernard Benjamin, England; Ross I. Bennet, England; Michael B. Brown, England: Astor Duggan, Jamaica; Warwick J. Easton, Australia; Robert C. Hellig, South Africa; F. E. Lofthouse, Jamaica; Catherine Denise Lyn, Jamaica; Helge-Ivar Magnussen, Norway; Tetsuya Matsunami, Japan; Daisy M. McFarlane-Coke, Jamaica; Earl Robinson, Jamaica; and Eyvind Width, Norway.

President Lautzenheiser recognized the following Past Presidents attending the meeting: E. Paul Barnhart, Thomas P. Bowles, Jr., John M. Bragg, William A. Halvorson, Robert H. Hoskins, Edwin B. Lancaster, Robin B. Leckie, Edward A. Lew, Morton D. Miller, Ernest J. Moorhead, Robert J. Myers, and Julius Vogel.

President Lautzenheiser next recognized the individuals responsible for this meeting: Vice-President Robert D. Shapiro; Program Committee Chairman Stephen H. Frankel and members of that committee; and all individuals participating in the program.

President Lautzenheiser then recognized all of the program participants—both Society members and those who were not members of the Society.

President Lautzenheiser acknowledged the recorders at the meeting for their assistance in creating the official *Record* of the meeting's discussions.

President Lautzenheiser recognized and welcomed the new Fellows and

Associates who were attending their first meeting of the Society since attainment of their present ranks.

President Lautzenheiser recognized the retiring members of the Board of Governors for their service as follows:

Board of Governors: John C. Angle

Geoffrey Crofts Myles M. Gray Joe B. Pharr Thomas C. Sutton John C. Wooddy

Vice-Presidents: Harold G. Ingraham, Jr.

Richard S. Robertson

Secretary: Kenneth T. Clark
Treasurer: Robert J. Johansen
Penultimate Past President: Robin B. Leckie

Executive Director John E. O'Connor, Jr., made a few brief announcements.

Robin B. Leckie, Chairman of the Committee on Elections, reported the results of the elections of Officers and Board members as follows:

President-Elect: Preston C. Bassett Vice-Presidents: James A. Attwood

Anna Maria Rappaport

Secretary: Donald S. Grubbs, Jr.
Treasurer: Michael B. McGuinness

Director of Publications: Edward J. Porto
Board of Governors: Charles M. Beardsley

Edwin F. Boynton Robert M. Hammond James A. Tilley Irwin T. Vanderhoof Robert C. Winters

Following announcement of the election results, President-Elect Bassett spoke briefly.

President Lautzenheiser recognized the authors of papers published by the Society of Actuaries in 1983 as follows:

Alastair G. Longley-Cook, "REROSHE: The Concept of a Risk-Free Equivalent Return on Shareholders' Equity"

Barry T. Allen, "Two Enhancements to Investment-Year Allocations of Income"

Bradley M. Smith, "The Choice of the Proper Profit Objective"

E. Paul Barnhart, "The 1982 Disability Tables"

Robert L. Brown and Dr. K. S. Brown, "Toward Computerized Underwriting—A Biological Age Model"

Claude Y. Paquin, "The Actuary as Expert Witness"

Robert L. Brown and Ben W. Lutek, "The Future of Group Insurance: Demographic Aspects"

The 1982 Society of Actuaries' Pension Committee, "Effect of Deferred Retirement on Pension Plan Liabilities and Cost"

Robert J. Myers and Bruce D. Schobel, "A Money's-Worth Analysis of Social Security Retirement Benefits"

Lawrence N. Bader, "Actuarial Implications of Dedicated Pension Funds" James A. Attwood and Carl R. Ohman, "Segmentation of Insurance Company General Accounts"

Peter L. Hutchings and Richard E. Ullman, "Prepaid Hospital Care Age/ Sex and Hospital Continuation Study"

Donald D. Cody, "The Generalized Ordinary Dividend Formula under TEFRA"

Peter A. Gerritson and Walter B. Lowrie, "Policy Reserves in Group Insurance"

Michael J. Mahoney presented the L. Ronald Hill Memorial Prize to Barnet N. Berin and Anthony B. Richter for their paper "Constant Replacement Ratios in Retirement: A Theoretical Approach," published in the Transactions, Volume XXXIV. Mr. Berin accepted the award on behalf of Mr. Richter and himself.

The Secretary presented an oral summary of nonroutine business transacted by the Executive Committee at its meetings on July 20, 1983 and September 23, 1983, and by the Board of Governors at its meeting on October 8-9, 1983.

James J. Murphy, General Chairman of the Education and Examination Committee, presented the new textbook material on life contingencies, "Actuarial Mathematics."

President Lautzenheiser introduced Leon C. Martel, Ph.D., a political scientist and futurist, specializing in economic, political, social and resource issues, who gave the keynote presentation on managing future changes and how they could affect the actuary.

After a brief recess, the meeting reconvened at 11:00 a.m. in three panel discussions, two open forums, and six workshops.

A "New Associates Workshop" was also held at 11:00 a.m. under the sponsorship of the Committee on Professional Development.

A luncheon was held at 12:45 p.m. honoring new Fellows attending their first meeting of the Society since attainment of Fellowship. Before the luncheon, brief remarks were presented by President Lautzenheiser and President-

Elect Bartlett. Following the luncheon, Robert J. Myers, Professor of Actuarial Science Emeritus, Temple University, addressed the audience.

The meeting reconvened at 2:30 p.m. in three panel discussions, two open forums, and ten workshops.

After a brief recess, the meeting reconvened at 4:45 p.m. in a Pension Section organizational meeting.

On Tuesday, October 11, the meeting convened at 8:30 a.m. in two panel discussions, two open forums, one open workshop, and ten workshops.

After a brief recess, the meeting reconvened at 11:00 a.m. in two panel discussions, three open forums, and ten workshops.

A luncheon of the Product Development Section was held at 12:30 p.m. Following the luncheon, the Honorable Roger C. Day, Commissioner of Insurance, State of Utah and President, National Association of Insurance Commissioners, addressed the audience.

Following the luncheon, the meeting reconvened at 2:30 p.m. in two panel discussions, three open forums, and ten workshops.

After a brief recess, the meeting reconvened at 4:45 p.m. in a business meeting of the Individual Life Insurance and Annuity Product Development Section.

On Wednesday, October 12, the meeting convened at 9:00 a.m. in a general session with President Lautzenheiser presiding.

President Lautzenheiser advised that the Society had received word of the deaths of thirty-four members since the last annual meeting, including the death of Robert T. Jackson, F.S.A. 1948, who was a Past President of the Society of Actuaries 1976-1977. Those in attendance at this meeting observed a moment of silence in respect for the memory of these members. Obituaries are printed in this volume of the *Transactions*.

Executive Director John E. O'Connor, Jr. presented his annual report to the membership.

Treasurer Robert J. Johansen summarized the financial report, which is printed in this volume of the *Transactions*.

President Lautzenheiser presented the Triennial Prize for the period of July 1, 1980 to June 30, 1982 to William F. Bluhm for his paper "Cumulative Antiselection Theory," which will appear in Volume XXXIV of the Transactions.

President Lautzenheiser reported that the minutes of the 1982 Society meetings would not be approved at this meeting. Volume XXXIV of the *Transactions* will be sent to the Society members at the end of October. The minutes will be approved at the first 1984 Society spring meeting.

President Lautzenheiser reported that the Committee on Papers has not selected the winner of the Annual Prize at this time. The winner will be

announced in a future issue of The Actuary and honored at a 1984 spring meeting.

President Lautzenheiser then gave her presidential address, which is printed in this volume of the *Transactions*.

The gavel was passed to President-Elect Bartlett. President Bartlett called upon Robin B. Leckie, who presented a silver tray to Ms. Lautzenheiser on behalf of the Society in appreciation of her services as President.

President Bartlett then spoke briefly and adjourned the business session.

After a brief recess, the meeting reconvened at 11:00 a.m. in three panel discussions, three open forums, and twelve workshops.

General session, panel discussion, open forum and workshop topics and the names of participants for the meeting are printed in the *Record*, Volume IX, Number 4.