

**ACTUARIAL RESEARCH CLEARING HOUSE
1995 VOL. 1**

SoA's New Research Department

Warren R. Luckner
Managing Director of Research
Society of Actuaries

Restructuring SoA Research Department Activity

Motivation

- Restructuring of SoA
- Natural Evolution
- SoA Foundation

SOCIETY OF ACTUARIES

Research

RESEARCH VOLUNTEER REFERENCE MANUAL

A. Purpose

- Guidance
- Single-Source Reference

B. Contents

- SOA Research Structure
- Why?
- How?
- Tools?

RESEARCH VOLUNTEER REFERENCE MANUAL

TABLE OF CONTENTS

1. STRUCTURE OF SOA RESEARCH EFFORT
 - a. How the SOA is structured (**note date**)
 - b. "Research Volunteers, Staff and Activities Listing" (**note date**)
 - c. Who to contact for help - SOA Research Department staff assignments

2. WHY WE DO WHAT WE DO - Current SOA Operational Plan:
Research Strategic Directions

3. HOW WE DO WHAT WE DO - The research management process
 - a. SoA Policies 330, 350, 370, 520 and Series 800 (**excerpts from SoA Policies Manual**)
 - b. Society of Actuaries Research and Experience Activities Guides to Conduct
 - c. Society of Actuaries Research Management Guidelines
 - d. General Responsibilities: Research Area Committees (Committee on Knowledge Extension and Practice Area Research Committees) and Project Oversight Groups
 - e. "Research Management Fiscal Year Timeline"
 - f. "Research Project Life Cycle: Allocation of Tasks and Responsibilities"

4. APPENDIX A - Research management tools (copy and use as necessary)
 - a. "Research Suggestion" form
 - b. "Research Project Description, Timetable and Budget" form
 - c. "Quarterly Research Activity Status Update" form
 - d. "Status of Research Department Activity" form (Parts 1 and 2)
 - e. "Research Project Budget Request Summary" form
 - f. Sample format for Request for Proposal (RFP)
 - g. Sample format for Call for Papers
 - h. "Research Proposal Summary Evaluation"
 - i. Sample format for Letter of Agreement

5. APPENDIX B - Sample of research activity status report (note date)
6. APPENDIX C - Additional references for SoA staff
(included only in staff copies of manual)
 - a. Research Activity Profile
 - b. Guidelines for Research Activity Profile
 - c. Guidelines for Letters of Agreement
 - d. Guidelines for Research Activity files
 - e. Guidelines for "Status of Research Department Activity"
 - f. Sample format for letter accompanying payment (except final payment)
 - g. Sample format for letter accompanying final payment
 - h. Sample format for "Proposal Acknowledgement Letter"

STRUCTURE OF SoA RESEARCH EFFORT

- SoA Governance
- Volunteers
- Staff

SoA Research Department Staff Assignments

Research Area	Actuarial and Management support provided by	Administrative support provided by
Society of Actuaries Foundation	Harry Panjer, Kay Branz 708-706-3570 708-706-3557	Kathie Allison 708-706-3574
General Research Committees: * Research Coordination	Harry Panjer, 708-706-3570 Warren Luckner 708-706-3572	Judy Yore 708-706-3573
Knowledge Extension Research	Harry Panjer 708-706-3570	Kathie Allison 708-706-3574
Research on Social Concerns	Harry Panjer 708-706-3570	Kathie Allison 708-706-3574
Actuarial Principles	Warren Luckner 708-706-3572	Judy Yore 708-706-3573
General Research Task Forces: Ph.D. Grants Task Force	Warren Luckner 708-706-3572	Pam Leonard 708-706-3567
HIV/AIDS Non-Insurance	Judy Yore 708-706-3573	Judy Yore 708-706-3573
Research on U.S. Life Insurance Insolvency Guarantees	Harry Panjer 708-706-3570	Kathie Allison 708-706-3574
Life Insurance Research Groups *	Jack Luff 708-706-3571	Karen Haywood 708-706-3547
Retirement Systems Experience Committees	Jack Luff 708-706-3571	Karen Haywood 708-706-3547
Health Benefit Systems Experience Committees	Jack Luff 708-706-3571	Karen Haywood 708-706-3547
Other Retirement Systems and Health Benefit Systems Research Groups *	Tom Edwalds 708-706-3578	Ann Berg 708-706-3556
Financial and Investment Management Research Groups *	Warren Luckner 708-706-3572	Pam Leonard 708-706-3567

Any questions can be directed to Judy Yore (708-706-3573), Research Management Coordinator, or Sue Berg (708-706-3555), Research Department Administrative Assistant. They will direct them to other Research Department Staff members as appropriate.

Note: Support for some Practice Area Task Forces that are not exclusively research-related is provided by others on the SoA staff (e.g. Practice Area Education Actuaries)

* includes related POGs and researchers

July 29, 1994

Why We Do

What We Do -

**Operational Plan:
Research Strategic Directions**

1994/95 OPERATING PLAN: RESEARCH STRATEGIC DIRECTIONS

- 2.1 Define and maintain a significant commitment to research appropriate to current and future needs of members.**
- 2.2 Clearly define the purpose of research efforts.**
- 2.3 Articulate and adopt actuarial principles.**
- 2.4 Undertake research efforts to include: (a) the application of emerging techniques and methods to actuarial practice; (b) new areas for applications of actuarial science and (c) public and business policy issues.**

1994/95 OPERATING PLAN: RESEARCH STRATEGIC DIRECTIONS

- 2.5 Facilitate the ongoing design and implementation of experience studies relevant to the current business environment.
- 2.6 Facilitate the ongoing design and implementation of rigorous research on the application of actuarial techniques in assessing the financial strengths of financial security systems.
- 2.7 Facilitate the application of research from other disciplines to actuarial practice.
- 2.8 Promote fundamental research at universities on actuarial topics.

How We Do

What We Do

- **General Responsibilities: RAC, POG**
- **Fiscal Year Timeline**
- **Research Project Life Cycle**

GENERAL RESPONSIBILITIES:

RESEARCH AREA COMMITTEES AND PROJECT OVERSIGHT GROUPS

Note: The general responsibilities for each research committee and task force are implied by the charge to the committee or task force, as listed in the SoA yearbook. The following gives more specific information for research area committees (Committee on Knowledge Extension and Practice Area Research Committees) and project oversight groups. The "Research Project Life Cycle: Allocation of Tasks and Responsibilities" and "Research Management Fiscal Year Timeline" also provide detail regarding responsibilities of certain research groups.

Research Area Committee (RAC)

Project Oversight Group (POG)

Responsibilities:

- | | |
|--|--|
| <ul style="list-style-type: none">● Collect research ideas● Develop brief description, timetable and budget for research ideas to be pursued● Identify/suggest funding sources● Appoint POG● Set priorities within research area● Prepare budget request● Resolve issues of sources, ownership and confidentiality of data● Approve proposal for funding● Develop letter of agreement (chair)● Approve end products | <ul style="list-style-type: none">● Develop request for Proposal (RFP)● Evaluate proposals● Recommend proposal to be funded● Monitor research (guidance and peer review)● Recommend immediate and permanent end products |
|--|--|

Responsible to:

- | | |
|--|---|
| <ul style="list-style-type: none">● Appropriate SoA Vice-President (practice area or general research) | <ul style="list-style-type: none">● Appropriate research area committee |
|--|---|

July 27, 1994

SOCIETY OF ACTUARIES

Research

RESEARCH PROJECT LIFE CYCLE

Task/Responsibilities (Tools)

- 1. Suggest Ideas (“Research Suggestion” Form)**
- 2. Assign Ideas to Research Area Committee**
- 3. Prepare Description, Budget, Timetable (“Res. Proj. Description, Timetable and Budget” Form)**

SOCIETY OF ACTUARIES

Research

RESEARCH PROJECT LIFE CYCLE

Task/Responsibilities (Tools)

4. Prioritize

- Within Research Area**
- Across Research Areas**

5. Budgeting

6. Assign Approved Ideas to Oversight Group

SOCIETY OF ACTUARIES

Research

RESEARCH PROJECT LIFE CYCLE

Task/Responsibilities (Tools)

**7. Develop Solicitation Document
(Sample Format for RFP or
Sample Format for Call for
Papers)**

- **Initiate**
- **Review**
- **Distribute**

8. Selection of Researchers

- **Review Proposals**
- **Select Proposal to Fund**

SOCIETY OF ACTUARIES

Research

RESEARCH PROJECT LIFE CYCLE

Task/Responsibilities (Tools)

9. Management of Research - Guidance & Peer Review
(“Quarterly Research Activity Status Update” and
“Status of Research Department Activity” Forms)

10. Form and Distribution of End Product

- **Immediate**
- **Permanent**

Current State of SoA Research Activity

- A. Overview of scope of
research activity**
- B. Status**
- C. Sales of end products**

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY	<u>TOTAL</u>
People/Roles	365/445
<hr/>	
Activities	76
<hr/>	
SOA Research Funds Committed (Thru 93/94) and Budgeted for Currently Active Projects	\$814,000
<hr/>	
Section Funds Committed* Thru 93/94 for Currently Active Projects	\$218,300

*** In General, Amounts Contingent on Cost Sharing**

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY

General Research

People/Roles

25/30

Activities

7

**SOA Research Funds
Committed (Thru 93/94) and Budgeted
for Currently Active Projects**

\$159,500

**Section Funds Committed* Thru 93/94
for Currently Active Projects**

\$0

*** In General, Amounts Contingent on Cost Sharing**

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY	<u>FIM</u>
People/Roles	25/30
<hr/>	
Activities	11
<hr/>	
SOA Research Funds Committed (Thru 93/94) and Budgeted for Currently Active Projects	\$97,000
<hr/>	
Section Funds Committed* Thru 93/94 for Currently Active Projects	\$5,000

*** In General, Amounts Contingent on Cost Sharing**

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY

Health Benefit

People/Roles

150/185

Activities

20

**SOA Research Funds
Committed (Thru 93/94) and Budgeted
for Currently Active Projects**

\$343,000

**Section Funds Committed* Thru 93/94
for Currently Active Projects**

\$163,300

*** In General, Amounts Contingent on Cost Sharing**

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY

Life Insurance

People/Roles

100/120

Activities

25

SOA Research Funds

\$143,000

**Committed (Thru 93/94) and Budgeted (94/95)
for Currently Active Projects**

**Section Funds Committed* Thru 93/94
for Currently Active Projects**

\$50,300

*** In General, Amounts Contingent on Cost Sharing**

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY

Retirement Systems

People/Roles

35/50

Activities

8

SOA Research Funds

\$71,500

Committed (Thru 93/94) and Budgeted
for Currently Active Projects

Section Funds Committed* Thru 93/94
for Currently Active Projects

\$0

* In General, Amounts Contingent on Cost Sharing

SOCIETY OF ACTUARIES

Research

SCOPE OF RESEARCH ACTIVITY	<u>Special</u>
People/Roles	30/30
<hr/>	
Activities	5
<hr/>	
SOA Research Funds Committed (Thru 93/94) and Budgeted for Currently Active Projects	\$0
<hr/>	
Section Funds Committed* Thru 93/94 for Currently Active Projects	\$0

*** In General, Amounts Contingent on Cost Sharing**

SOCIETY OF ACTUARIES

Research

SPECIAL RESEARCH DEPARTMENT ACTIVITIES

- **Principles Regarding Provisions for Life Risks**
- **Ph.D. Grants Program**
- **Committee for Research on Social Concerns**
- **Task Force for Research on US Life Insurance
Insolvency Guarantees**
- **HIV/AIDS Non-Insurance Task Force**

SOCIETY OF ACTUARIES

Research

COMPLETED PH.D. GRANT THESES

- **A Consideration of Certain Statistical Problems Involving Econometric Models with a Linear Structure from a Bayesian Perspective**
- **Recurrence Equations and Insurance Risks Computing**
- **Identifying Life Insurer Financial Distress: Parametric and Nonparametric Classification Models and Empirical Evidence**
- **A Hierarchical Bayesian Model of the Rate of Non-Acceptable In-Patient Hospital Utilization**

SOCIETY OF ACTUARIES

Research

OTHER SUPPORTED ACTIVITIES

- **Actuarial Education and Research Fund**
- **Actuarial Research Clearing House**
- **Actuarial Research Conference**
- **SOA Education and Research Section**

RESEARCH PRODUCTS DISTRIBUTION AND INCOME REPORT

PRODUCT	ACTIVITY*		FISCAL YEAR(S) INCOME +				
	5/25/94-9/28/94	TOTAL	1987-1991	1992	1993	1994	TOTAL
CIDA diskette	5	537	\$55,193.50	\$4,711.07	\$3,186.00	\$4,098.25	\$67,188.82
CCRC Model: Documentation and Diskette Source Code (\$100 each) Income	0 0	64 1		\$4,200.00	\$450.00	\$150.00	\$4,800.00
Small Groups Report: Report Diskette (Exhibits II-V)	0 1	173 32		\$1,400.00	\$100.00		\$1,500.00
Interest Sensitive Cash Flow and Analysis Single Premium Deferred Annuity Study: Preliminary Report Final Report	0 0	397 334		\$7,257.50	\$1,274.50	\$125.00	\$8,657.00
Credit Risk Private Placement Bonds Report: Preliminary Report	0	160			\$13,787.80	\$790.00	\$14,577.80
1986-89 Credit Risk Event Loss Experience Final Report "A" Final Report "B" Final Report "C" Final Report "D" Income	4 4 0 0	40 54 2 7				\$36,741.25	\$36,741.25
Credit Risk Project - Miscellaneous Income				\$1,000.00			\$1,000.00
Fuzzy Set Methods in Actuarial Science	27	946			\$15,608.10	\$2,805.40	\$18,413.50
Options and the Management of Financial Risk	27	1054			\$19,873.15	\$3,455.25	\$23,328.40
Miscellaneous Research Income						\$75.00	\$75.00
TOTAL	68	3801	\$55,193.50	\$18,568.57	\$54,279.55	\$48,240.15	\$176,281.77

* provided by Books Department; Options and the Management of Financial Management is currently out of stock - numbers do not include 20 books on back order
+ as of 7/31/94 per Accounting Department; Fiscal Year x = 8/1/x-1 - 7/31/x

Issues

- **Funding/Budgeting**
- **Role of CORC**
- **Experience Studies**
- **Appointment of Committees/Task Forces**