

**SOA RESEARCH PROJECT INVENTORY**  
**September 2012**

TO: Bruce Iverson  
FROM: Korrel Rosenberg  
SUBJECT: Research Activity

**FINANCE PROJECTS**

**The Subprime Mortgage Crisis and Lessons for Insurers (FP161) – Report 2**  
– *The projects will evaluate and gauge the impact of the subprime mortgage crisis on insurers and what can be learned from it for future financial and risk management.* (Contact: John Nigh)

**Survey on Market Risk Best Practices for Life Insurance Companies (FP163)**  
– *The researchers will issue a survey that explores market risk best practices. The survey is to be completed by individuals within life insurance companies responsible for managing market risk.*

**This project is now complete and will be removed from future reports.**  
(Contact: Steven Siegel)

**Impact on Financial Security Systems of Baby Boomers Moving into an Asset Decumulation Mode (FP166) – This Call for Papers is seeking to expand the thinking on the impact of baby boomers moving into asset decumulation mode.**

**This project is now complete and will be removed from future reports.**  
(Contact: Steven Siegel)

**Insurance Regulatory Structures and Strategy-EU Compared with the U.S. (FP167) – This project will compare the insurance regulatory structures of the European Union with that of the US, and the potential effects of these structures on product development and risk management strategies.** (Contact: Steven Siegel)

**Interest Rate Swaps Exposed (FP168) – This project will look at real-life examples of swap deals, analyzing which could realistically be considered a mechanism to hedge various insurance liabilities.** (Contact: Steven Siegel)

**Future Equity Patterns and Baby Boomer Retirements (FP169)** – *This project is an expansion of an earlier Call for Papers and seeks to measure deviations in supply/demand patterns as baby boomers retire.* (Contact: Steven Siegel)

**Regulatory Risk and North American Insurance Organizations (FP170)** – *The NAAC Collaborative Research Group has initiated this project to examine the regulatory risk faced by insurance companies in North America.* (Contact: Steven Siegel)

## **RISK MANAGEMENT PROJECTS**

**Actuarial Climate Change Volatility Index (ACVI) (ERM115)** - *This is a joint project of the CIA, CAS, SOA and AAA to develop an index to help raise awareness of the potential risks associated with climate change and the risk management implications within North America and globally.* (Contact: Caterina Lindman)

**Variable Annuity Guarantee Product Risk Evaluation Approaches (ERM121)** – *The researchers will develop a quantification framework for better evaluation of the risks associated with VA Guarantees.* (Contact: Steven Siegel)

**Operational Risk Follow-Up – ERM Taxonomy (ERM125)** – *This project will develop a logical, consistent and comprehensive ERM architecture/taxonomy that will be applicable across all industries and risk types.* (Contact: Steven Siegel)

**Risk in the Financial System (ERM127)** – *This project will outline options for the design of a network model of the financial system.* (Contact: Steven Siegel)

**Systemic Risk (ERM130)** – *This project will identify what systemic risk is and is not and the warning signs of exposure to systemic risk.* (Contact: Steven Siegel)

**Natural Resources/Sustainability (ERM131)** – *This International Working Group of the Actuarial Sciences and Sustainability (IWGASS) has been established to explore a research project that would be related to the sustainability of natural resources.* (Contact: Ronora Stryker)

**2013 ERM Symposium CFP (ERM132)** – *This call for papers was issued in conjunction with the 2013 ERM Symposium to expand knowledge in this area.* (Contact: Steven Siegel)

**Emerging Risks Survey 2013 (ERM133)** – *This survey incorporates a set of Emerging Risks defined by the World Economic Forum and describes and compares results from previous years.* (Contact: Steven Siegel)

## **HEALTH PROJECTS**

**Model-Based Analysis of Factors That Drive Long-Term Disability Submitted Incidence Rates (HP166)** – *The objective of this project is to model Social Security incidence rates using Auto-Regressive Integrated Moving Average (ARIMA) modeling. (Contact: Steven Siegel)*

**LTC Morbidity Improvement Study (HP171)** – *This project analyzes the changes in LTC morbidity and the impact of those changes on lifetime disability. (Contact: Steven Siegel)*

**The Relationship Between Health Costs and Non-Traditional Predictor Variables (HP175)** – *This project will estimate the impact of non-traditional predictor variables. (Contact: Steven Siegel)*

**End-of-Life Issues in Health Care (HP176)** – *This RFP is seeking proposals related to end-of-life issues in health care. (Contact: Steven Siegel)*

**Approaches for the Evaluation & Adoption of Medical Technologies (HP177)** – *This project will identify the advantages and disadvantages of different approaches used in the evaluation and adoption of medical technologies. (Contact: Steven Siegel)*

**Quantifying Uncertainty in Healthcare Claim-Based Risk Assessment (HP178)** – *This project will advance the knowledge of healthcare actuaries and help them advance towards the goal of being recognized as leading risk adjustment experts. (Contact: Steven Siegel)*

**Massachusetts Connector Project (HP181)** – *This project is examining the Massachusetts health market and lessons learned from it. (Contact: Steven Siegel)*

**Risk Adjustment Under the Affordable Care Act (HP182/SPA101)** – *This is the first effort under the HARI initiative and is focused on risk adjustment in the health care insurance exchanges.*

**This project is now complete and will be removed from future reports.**  
(Contact: Steven Siegel or Sara Teppema)

**Validating the PRIDIT Method for Determining Hospital Quality with Outcomes Data (HP183)** – *This research project will explore the use of the PRIDIT algorithm as a way to measure hospital quality. (Contact: Steven Siegel)*

**Health Carrier Risk Analysis (HP185)** – *This project will comprehensively document the identification, management, and mitigation of the risks with which health actuaries need to contend. (Contact: Steven Siegel)*

**Disability Credibility (HP187)** – *This project will explore applications of credibility for group disability insurance. (Contact: Steven Siegel)*

**Conceptual Actuarial Model for Wellness (HP188)** – *This project is developing the framework for an actuarial model for wellness through a literature search, survey and interviews with experts. (Contact: Steven Siegel)*

**Group LTD Offset Update (HP189)** – *This is a follow-up to the study completed in June 2010. (Contact: Steven Siegel)*

**Accountable Care Organizations: Actuarial & risk Issues (HP190/SPA102)** – *This is the second project under the HARI initiative and is focused on Accountable Care Organizations. (Contact: Steven Siegel)*

**Canadian Healthcare Fund Analysis and Model (HP191)** – *The purpose of this project is to investigate underlying factors critical to Canadian health care that would be useful to the upcoming renewal process of the Federal Health Transfer. This project is moving along nicely. (Contact: Ronora Stryker)*

**Funding of Public Insurance Plans in Canada and Globally (HP192)** – *This project identifies and investigates the funding methods and philosophies for public health plans in Canada, U.S. and globally, as well as the role of the actuary in determining the funding models/methods. (Contact: Ronora Stryker)*

**The Cost of the Future Newly Insured (HP193/SPA104)** – *This is the third project under the HARI initiative and is focused on the morbidity and health care costs of the newly insured. (Contact: Steven Siegel)*

**Guide to Modeling Healthcare Behavior (HP194)** – *This project will develop three models that consider healthcare behavior from a complexity science perspective. (Contact: Steven Siegel)*

## **LIFE INSURANCE PROJECTS**

**2009 Individual Life and Annuity Expense Study (LP174)** – *This is an annual inter-company expense study of individual life and annuity products. (Contact: Sam Gutterman)*

**2010 Individual Life and Annuity Expense Study (LP184)** – *This is an annual inter-company expense study of individual life and annuity products. (Contact: Sam Gutterman)*

**Living to 100 Mortality Overview (LP193)** – *This project is expected to provide an overview and analysis of the mortality models, theories and trends contained in the papers presented at the past four international Living to 100 symposia. (Contact: Tom Edwalds)*

**2014 Living To 100 and Beyond Call For Papers and Symposium (LP196)** — *The fifth international symposium will bring together actuaries, demographers, gerontologists and others interested in presenting papers on advanced age survival and its implications to social, financial, retirement and healthcare systems. (Contact: Tim Harris)*

## **REINSURANCE SECTION**

**Extreme Events Risk (LP185)** – *This report will investigate and identify strategies companies can employ to minimize, mitigate and/or manage the risks of extreme events. (Contact: Tom Edwalds)*

**Reinsurance Treaty Construction (LP198)** – *This project will examine important treaty terms, company practices and problems encountered in utilizing them, and solutions to overcome the obstacles. (Contact: Greg Brandner)*

## **PRODUCT DEVELOPMENT SECTION PROJECTS**

**Market Consistent Embedded Value (LP180)** – *This project reviews a MCEV method to measure the inherent risk that insurance companies continually take to quantify and qualify the risks that are being taken by writing the business they issue.*

**This project is now complete and will be removed from future reports.**  
(Contact: Mitch Katcher)

**Older Age Mortality and Other Older Age Assumptions (LP187)** – *This will be a survey of what companies are assuming for mortality at older ages, including new business written to an older insured, as well as the assumption for those who are surviving into older ages. (Contact: Ronora Stryker)*

## **FINANCIAL REPORTING SECTION**

**Comparative Failure Experience in the Insurance and Banking Industry (LP182)** – *This project will identify factors that have been effective for the insurance and banking industries in reducing failure rates. (Contact: Larry Rubin)*

**Discount Rate Monograph (LP183)**–*This project will produce educational material on the concepts and practical methods that can be used in the application of the discounting process for the purposes of insurance company financial reporting, capital assessment and internal management reporting. (Contact: Frank Grossman)*

**Credit Risk Modeling Techniques For Life Insurers (LP186)** -*This project is a survey of life insurers with respect to actuarial modeling of credit losses and will*

*also evaluate current practice in light of most recent available research on credit losses and asset defaults. (Contact: Mark Alberts)*

**Actuarial Modeling Controls (LP188)** - *This study is a survey of the control systems U.S. and Canadian life insurance and annuity companies have currently implemented for actuarial models. (Contact: Ronora Stryker)*

**Volatility of Fair Value Accounting (LP189)** - *This project is a study to identify methodologies currently in use by life insurers, as well as potential new strategies to manage balance sheet and income volatility risk associated with fair value and related accounting. (Contact: Katie McCarthy)*

**Behavioral Economics Applications to Life and Health Insurance Policyholder and Annuitant Behavior (LP194)** - *This project is a Call For Papers expected to expand the understanding of the theory of behavioral economics and its application to life and health insurance policyholder and annuitant behavior. (Contact: Ronora Stryker)*

**Risk Adjustment Monograph (LP195)** – *The monograph will address the application of risk and uncertainty to the measurement of the liability of insurance contracts in the context of general purpose accounting as adopted by the International Accounting Standards Board (IASB). (Contact: Mark Yu)*

**IASB Financial Reporting For Insurance Liabilities (LP197)** – *This project is at the request of the AAA and is an update of the project completed in January 2011 and will produce a report that examines the impact to life insurance financial reporting of the upcoming IASB exposure draft on accounting for insurance liabilities. (Contact: Tom Herget)*

## **RETIREMENT SYSTEMS PROJECTS**

**US vs. Canadian Comparison-Retirement Risks Survey (PRNR110)** – *This effort will compare results from the US and Canadian versions of the Retirement Risk Survey. (Contact: Anna Rappaport)*

**Addressing the Middle Market (PRNR111)** – *This effort will explore retirement issues relevant to the middle market. (Contact: Anna Rappaport)*

**The Impact of Running out of Money (PRNR112)** – *This initiative will investigate the implications of outliving assets in retirement. (Contact: Anna Rappaport)*

**Update to Segmenting the Middle Market: Retirement Risk and Solutions (PRNR114)** – *The Phase I and II reports will be updated using the data from the 2010 Federal Reserve Bank Survey of Consumer Finances. (Contact: Steven Siegel)*

**Family Structure in Retirement (PRNR115)** – *This project is a collaboration with the MetLife Mature Market Institute looking at how family structures affect retirement. (Contact: Anna Rappaport)*

**Embedded Options (RP172)** – *Project one of two: The purpose of this project is to create reference material which will address and explore embedded options in retirement plans. (Contact: Steven Siegel)*

**Analysis of the Behavioral Consequences of DB & DC Systems (RP173)** – *A project analyzing the behavioral consequences related to plan sponsor and participant decision making within the contexts of both defined benefit and defined contribution plans. (Contact: Steven Siegel)*

**Valuation of Embedded Options in Pension Plans (RP174)** – *Project two of two: The purpose of this second project is to create reference material which will address and explore embedded options in retirement plans from a more technical perspective. (Contact: Steven Siegel)*

**Actuarial Smoothing CFP (Volatility Management in Pension & OPEB Plans) (RP177)** – *This call for papers is seeking papers concerning volatility management and actuarial smoothing techniques across a broad range of issues.*

**This project is now complete and will be removed from future reports.**  
(Contact: Steven Siegel)

**Equity-Based Risk Premium (RP178)** – *This RFP will help actuaries develop forward thinking long-term estimates of future equity risk premiums. (Contact: Steven Siegel)*

**Impact of Insufficient Retirement Savings on Workforce Management (RP179)** - *This project is examining the consequences to employers when employee retirement savings are insufficient. (Contact: Steven Siegel)*

**Back Testing of Investment Portfolios (RP180)** – *This project is exploring the impact of liability driven investing for a hypothetical pension plan. (Contact: Steven Siegel)*

**Measures of Benefit Adequacy (RP181)** – *This project is exploring the impact of measures of benefit adequacy to various stakeholders. (Contact: Steven Siegel)*

**Communicating the Financial Health of Public Pension Plans (RP185)** – *This project was initiated by the SIPF Section and seeks to use an actuarial control*

*cycle to communicate key information on public pension plans. (Contact: Steven Siegel)*

**NAPFA University Partnership 2 (RP186)** – *The second effort of this ongoing partnership with NAPFA University will explore disability income related issues. (Contact: Steven Siegel)*

**2011 Retirement Risk Survey (RX120)** - *This survey is the sixth in a bi-annual series that assesses retired and near retired persons' attitudes towards post-retirement risk.*

**This project is now complete and will be removed from future reports.**  
(Contact: Anna Rappaport)

## **FINANCE EXPERIENCE STUDIES**

**2002-10 Private Placement Study (FX106)** – *This experience study is the next phase of the ongoing analysis of characteristics of loss experience under private placement bond investments. (Contact: Jim Stoltzfus)*

## **GENERAL EXPERIENCE STUDIES**

**Experience Studies Oversight Working Group (GS106)** – *This group was formed to help implement the recommendations of the Experience Studies Advisory Group and provide oversight of Experience Studies at a high level. (Contact: Tom Corcoran)*

## **HEALTH EXPERIENCE STUDIES**

**Long-Term Care Valuation Task Force (HC108)** - *This joint Society-Academy Working Group is planning the development of standard tables for the valuation of the many facets of this product. (Contact: Bob Yee)*

**Cancer Experience Study & Table Committee (HX119)** - *The objective of this study is to perform an experience study that will lead to an update of the 1985 NAIC Cancer Claim Cost Tables. (Contact: Brad Spenney)*

**Analysis re Update to 1985 CIDA (HX121)** - *The objective of this work is to develop a potential replacement for the 1985 CIDA Table from recently collected individual disability income policy experience, if practical. (Contact: Bob Beal)*

**2009-11 Group Life Insurance Study (HX127)** - *This Committee is pursuing a follow up to the 1999-2001 Group Life Insurance Experience Study, including the establishment of a regular pattern for this study. (Contact: Bob Hardin)*

**2007-10 Group Long-Term Disability Study (HX129)** - *This study will examine*



*the termination experience under group LTD claims in 2007-10. (Contact: Roger Martin)*

**2008-10 Long-Term Care Study (HX131)** - *The objective of this study is to compile long-term care data from carriers into an inter-company study. (Contact: Jon Prince)*

**Credit Disability Study (HX133)** - *This committee is developing an experience study for credit insurance. (Contact: Chris Hause)*

**Group Long-Term Disability Incidence Study (HX134)** - *This study will examine recent incidence on Group LTD (scope and years TBD). (Contact: Roger Martin)*

**Update to 1987 Commissioner's Group Long-Term Disability Table (HX135)** – *Based on the 1997-2006 data, an update to the termination portion of this table is being made. (Contact: Roger Martin)*

## **LIFE EXPERIENCE STUDIES**

**Mortality & Morbidity Liaison Committee (LC102)** - *This joint committee of actuaries, medical directors and underwriters investigates experience of various facets of the insurance and disability underwriting process, especially those reflecting extra mortality. Issues regarding the validity of recent ISCS data have been resolved. (Contact: Anna Hart)*

**Committee on Mortality & Underwriting Surveys (LC109)** - *This Committee is to oversee and conduct surveys on topics related to underwriting practices and mortality experience on life insurance and annuities. (Contact: David Wylde)*

**Mortality Improvement (LX180)** – *This survey will examine the use of mortality improvement in the life insurance product development process.*

**This study is now complete and will be removed from future reports.**  
(Contact: Gord Gibbins)

**Preferred Structures (LX183)** – *This survey will examine the various structures of preferred products. (Contact: Mike Choate)*

**International Experience Survey (LC111)** - *The broad objective of this work is to develop experience studies for various countries of interest to members of the Society. (Contact: Bill Horbatt)*

**Experience Studies Oversight (PD Section Council) (LC112)** – *This oversight group has been tasked with ensuring that all life experience study committees and task forces are working in a complementary fashion and not overlapping one*

*another.* (see GS106) (Contact: Cathy Bierschbach)

**2000-04 Structured Settlement Study (LX157)** – *The broad objective of this study is to study the mortality experience under structured settlement annuity contracts. See LX184 below.* (Contact: Bill Albright)

**Preferred Mortality POG (LX166)** - *This preferred life mortality experience study will support industry leaders and the NAIC by developing valuation tables for preferred life insurance products.* (Contact: Mary Bahna-Nolan)

**2005-08 Individual Payout Annuity Study (LX176)** - *This study will examine the experience under various forms of individual payout annuities and develop a database that can be used to create a new mortality table for such products.* (Contact: Bill Albright)

**Payout Annuity Valuation Table (LX177)** – *This work will examine the recent Payout Annuity Study results with the intention of developing a table to replace the Annuity 2000 Table as a valuation standard.* (Contact: Mary Bahna-Nolan)

**Guaranteed/Simplified Issue Study (LX179)** – *This work is in support of the principles-based reserving requirements of higher mortality products.* (Contact: Mary Bahna-Nolan)

**Individual Life 2007-09 (LX184)** – *This study is the ongoing reporting of mortality experience under standard, fully underwritten life insurance policies for policy years 2007–09.* (Contact: Rick Bergstrom)

**2005-08 Structured Settlements Study (LX185)** – *The broad objective of this study is to study the mortality experience under structured settlement annuity contracts.* (Contact: Bill Albright)

**Variable Annuity Guaranteed Living Benefits Study – Phase 2 (LX189)** – *The objective of this study is to complete a study VAGLB policyholder behavior.* (Contact: Tim Cardinal)

## **RETIREMENT EXPERIENCE STUDIES**

**Retirement Plans Experience Committee (RC103)** - *The mission of this committee is to effect mortality and other studies of public and private pension plan data.* (Contact: Bill Roberts)

**Group Annuity 2007-10 (RX113)** - *This study is the next in the series studying the mortality experience under group annuity contracts, primarily those in payment status.* (Contact: Kristin Gustafson)

**Pension Plan Mortality Study (RX115)** - *This study will examine private*

*pension plan data with an ultimate goal of replacing the RP-2000 Table for pension plan calculations. (Contact: Bill Roberts)*

### **IAA MORTALITY WORKING GROUP**

*Their purpose is to serve as a working group within the IAA devoted to the study of mortality. (Contacts: Dieter Gaubatz and Al Klein)*

### **Experience Studies Assessment**

So far, we have collected \$994,357.18 from insurance companies and \$152,775.00 from consulting firms.