

## Uses for Predictive Modeling in Life Insurers

# Introduction

On behalf of the Society of Actuaries' Committee on Life Insurance Research, we are pleased to present these four papers submitted by members of the Society of Actuaries in response to: **Call for Papers– Predictive Modeling for Life Insurers.**

Traditionally predictive modeling techniques have been used within the insurance industry to help gain a better understanding of current and/or future insured risks leading to improved risk segmentation and underwriting, pricing and marketing processes and decisions. Predictive modeling involves "mining" datasets and performing statistical analysis that may uncover unexpected relationships about the underlying risks that may indicate the likelihood of future outcomes for an insurer. While predictive models have been developed and applied within the property and casualty and health insurance industries, their prevalence is not as great within the life insurance industry. The SOA is pleased to share this collection of papers written to examine how existing or new methods or models can be applied in the life insurance industry.

The call for papers was broad based with the only real limitation that the paper address the application of predictive modeling to life insurers. While we only received four papers, we were extremely pleased with the quality and diversity of the papers. All were thoughtful and well written and covered four different areas using four different predictive modeling techniques.

Monetary awards were presented to three author teams for their outstanding papers:

- Guillaume Briere-Giroux, Jean-Felix Huet, Robert Spaul, Andy Staudt, and David Weinsier; *Application of Predictive Models Techniques to Measure Dynamic Policyholder Behavior in Variable Annuity Contracts*
- John Hegstrom; *Predictive Model Learning of Stochastic Simulations*
- Mike Batty, Arun Tripathi, Alice Kroll, Cheng-sheng Peter Wu, David Moore, Chris Stehno, Lucas Lau, Jim Guszcsa, and Mitch Katcher; *Predictive Modeling for Life Insurance*

We hope you will enjoy reading the essays and that they will result in you considering the use of the techniques described in your company and your professional career.

Sincerely,

Sue Deakins, FSA, MAAA, *Chair*  
COMMITTEE ON LIFE INSURANCE RESEARCH