



SOCIETY OF ACTUARIES

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Modeling of Economic Series Coordinated With Interest Rate Scenarios Project

by Steve Siegel

Last year, the SOA and the CAS partnered to jointly sponsor a request for proposals on research involving the modeling of economic series. Both organizations recognized the extreme importance to actuaries of appropriate modeling techniques for generating economic scenarios in a dynamic financial analysis model or a cash flow test. As a consequence, the organizations concluded an end result of this project should be a model for projecting economic indices in a correlated manner.

Of the proposals received, the one submitted by the research team of Kevin Ahlgrim of Bradley University, Stephen D'Arcy of the University of Illinois and Richard Gorvett of Zurich North America was selected.

The researchers initiated their work in January 2002. The broad plan for the project includes the following items:

- **Literature Review** – A comprehensive survey and review of the literature relevant to the topic. The review will include articles from actuarial, financial, and

other available sources such as econometric and/or statistical journals. A summary of the primary findings and procedures appearing in the review articles will be written. As of the publication of this newsletter, the researchers have largely completed this item.

- **Development and Presentation of an Economic Scenario Generator Model** – There are three aspects associated with this phase of the project. Work is currently underway on each of these:

a) Development of a model to represent economic and financial series—Specific series include the term structure of interest rates, inflation, stock market levels, real estate price levels, unemployment rates, and economic growth rates.

- b) Parameter Estimation – Relevant historical data will be used to parameterize the model.

- c) Provision for Extreme Conditions – Included in the model will be a

provision to represent extreme financial and economic conditions through either appropriate parameter values or other means.

- **Creation of software that allows users to model economic and financial series** – Application of the model described above will be available through use of a software program created as part of the project.
- **Report and Articles** – A final report describing all aspects of the project will be written as well as articles intended to appear in pertinent actuarial publications.

The research team expects to complete its work by June 2002.

With this and other research projects, the SOA is always interested in your feedback and suggestions as well as ideas for new projects. Please feel free to contact Steve Siegel, SOA Research Actuary at (847) 706-3578 or ssiegel@soa.org.

Smaller Insurance Company Section's Boston Sessions for October 27-30, 2002

Smaller Insurance Company Symposium - Part I

Monday 10/28

10:30 a.m. - 12:00 p.m.

- Expense analysis
- Reinsurance partnerships and strategic alliances
- 2001 CSO table

Smaller Insurance Company Symposium - Part II

Monday 10/28

2:00 p.m. - 3:30 p.m.

- Credit insurance
- Distribution and niche product development
- Simplified underwriting
- How to sell "big company" products

Smaller Insurance Company Section Hot Breakfast

Wednesday 10/30

7:30 a.m. - 9:30 a.m.