



SOCIETY OF ACTUARIES

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Economic assumption survey insert in this issue

by Godfrey Perrott

The Society of Actuaries' Project Oversight Group for research on economic assumptions needs your help. We believe that our work in support of the *Dynamic Financial Condition Analysis Handbook* has a much wider application than financial condition reports. We are concerned that all relevant economic assumptions, and not just investment assumptions, need to be considered in making a projection of a company's operation. We want to identify these other assumptions and focus attention on them. That's why we are looking for your assistance. Your opinions will help us identify what additional research is needed.

Actuaries have to take account of economic assumptions in making projections of an insurance company's operations. Some of these assumptions are independent, whereas others may be partially or completely dependent. Actuarial and other literature has focused on one set of these assumptions: those that have to do directly with investment return. Most of this has to do with the term structure of interest rates and how to create arbitrage-free interest generators. Some work has been done on default costs and prepayment rates (both calls on bonds and prepay-

ments of residential mortgages).

For some lines of business, other economic assumptions may be as significant as, or even more significant than, the investment assumptions. For example, unemployment and the rate of salary inflation are generally believed to correlate positively with disability incidence and recovery. Incidence is higher when unemployment is higher, and recovery is lower when inflation is low, since the benefit continues to maintain an acceptable replacement ratio. Medical inflation is a key driver of group health coverages. The underwritten coverages often lose money if medical inflation is higher than expected because of unexpected claims; the ASO coverages often gain money if medical inflation is higher than expected, since their fees are normally a percentage of claims.

We have assembled a list of economic assumptions that might reasonably affect a company projection. We also have created a reference list of the typical actuarial assumptions and have identified those we think might be affected by the economic assumptions. We have used these two lists to prepare a survey, which is enclosed in this issue of *The Actuary*.

- One side of the survey describes many of the assumptions so each respondent starts from the same definitions.
- The other side contains a matrix that matches actuarial assumptions to economic assumptions. Please focus on the effect the economic assumption might have over the first 10 years of any projection and, for each actuarial assumption, identify up to five economic assumptions that you expect will have an impact on the actuarial assumption.

We have designed the survey to be completed for a single line of business. Please copy the form and submit a separate survey for each line of business that you would like to comment on.

Please fax the matrix side to the Society of Actuaries office no later than Monday, April 10, 1995, at 708/706-3599. We plan to publish a summary of the survey responses in a future issue of *The Actuary* and to use the survey results to identify appropriate research.

Thanks very much for your assistance.

Godfrey Perrott is a consulting actuary with Milliman & Robertson, Boston, Massachusetts.

University seeks candidates

**University of Calgary,
Alberta, Canada**

Position: Limited term position at the assistant professor level in statistics and/or actuarial science in the Department of Mathematics and Statistics to begin July 1, 1995.

Qualifications and Duties: An earned Ph.D. by August 31, 1995, and proven teaching abilities with strong research abilities.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Application: Submit curriculum vitae and arrange for three letters of reference to be sent before March 15, 1995, to Professor D.P. Johnson, Division of Statistics and Actuarial Science, Department of Mathematics and Statistics, The University of Calgary, 2500 University Drive N.W., Calgary, Alberta, Canada T2N 1N4; fax: 403/282-5150.