



SOCIETY OF ACTUARIES

Article from:

# In The Public Interest

July 2010 – Issue 2

# SOCIETY OF ACTUARIES ANNUAL MEETING

## FEATURES SOCIAL INSURANCE MODELLING

### MINI-SEMINAR

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**E**mbedded in the Society of Actuaries' Annual Meeting this coming October will be a full-day of panel discussions on the projection of cash flows for social insurance programs. Four panels will be held on Wednesday, October 27 in New York City, the last day of the Annual Meeting. This mini-seminar has been organized by the SOA's Committee on Social Security and co-sponsored by the Social Insurance and Public Finance Section.

Social insurance program projections cover periods longer than most typical actuarial projections. In addition, they cover a wider spread of risks than the populations that most actuaries deal with. The overall demographics and economics of the entire country directly affect the experience of the program. Since the taxation and benefits of these programs affect everyone in one way or another, these projections need to be prepared in an objective and unbiased manner, with results and limitations clearly communicated so that decision makers, and indeed the population, can grasp their implications.

The four sessions will cover the three following topics:

General approaches to modelling. Chief actuaries from the U.S. Social Security Administration (SSA) and the Canada Pension Plan (CPP), Steve Goss and Jean-Claude Menard, respectively, and Richard Hinz from the World Bank, will discuss approaches that their respective organizations take. The World Bank's models have been used to provide advice to many countries around the world.

A significant degree of uncertainty is involved in any long-range forecast. Social insurance projections are no exception, and given the importance and wide dissemination of forecast results, it is important to provide users of these forecasts meaningful information regarding

these forecasts. The second panel will address the effective communication of the uncertainty in these projections. The primary approach used historically has been through the use of alternative scenarios, with stochastic modelling being increasingly used, especially in North America. Limitations and concerns with these approaches will also be highlighted.

The last two panels will deal with one important demographic element that is significant in these forecasts, the level, mix and impact of migration. Although not a significant factor in most areas of actuarial practice, the migration assumption is important in dynamic population modelling as used in social insurance projections. The first panel will discuss the drivers and implications of migration to social insurance. This will be followed up in the second, with representatives of the SSA, CPP and the U.S. Census Bureau, who will present currently-used population projection methodologies and thoughts regarding possible future practice.

These four sessions are expected to shed light on current practice, including methodologies, assumptions and communication of social insurance projections, and their significant effects on other factors that affect the cash flows of these important public programs. 