



SOCIETY OF ACTUARIES

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Reinsurance Research—What's New

By Edward Hui

Recently, the Reinsurance Section's research team completed a number of excellent reports, so I thought it would be a good time to briefly note what they are and how they could be of interest to you. I will review reports completed in the recent past, near future (those in the pipeline), and look ahead to new possible projects.

I am also happy to note each of the recently completed projects has garnered a broad degree of interest outside of the Reinsurance Section as well. While the projects were overseen by the Reinsurance Section, it was also nice that funding and participation were provided through other sections such as product development, financial reporting, and the Committee on Life Insurance Research.

RECENT PAST

Global Mortality Improvement Experience and Projection Techniques (6/2011): The report provides a literature review, but also a summary of past improvement levels whether by country, age, gender, and general population versus insured population. It then goes on to describe possible ranges for future improvement, and modeling techniques. I found it interesting that most recent improvement levels have been materially higher than the average, and wonder whether the trend will continue. It will also be interesting to observe the basis risk dynamic where insured improvement could differ from general population improvement, as the insured demographic continues to become healthier and wealthier. <http://www.soa.org/research/research-projects/life-insurance/research-global-mortality-improve.aspx>

New Medical Markers in Life Insurance Underwriting (12/2011): The report explores what new medical markers are being explored by the three main labs, and provides considerations as to whether they could be implemented to medical underwriting. A calculation spreadsheet also determines the cost-benefit factors in implementing the new markers. Overall it looks like some of the markers (not widely used in the industry) could provide additional benefit starting as low as \$100k policy sizes. <http://www.soa.org/research/research-projects/life-insurance/research-medical-markers.aspx>

Access to Reinsurance by Smaller Insurers: Perils, Pitfalls and Solutions (10/2011): The report examines challenges encountered by smaller insurers in obtaining life reinsurance, the challenges and opportunities life reinsurers face in servicing these companies, and considers some possible solutions that might help to resolve the challenges encountered. <http://www.soa.org/research/research-projects/life-insurance/research-2011-11-access-rein.aspx>

Mortality Comparison and Risk Exposures in the Older Age U.S. Financial Services Market (12/2011): The report compares the pricing assumption mortality of 15 companies surveyed by insurance, annuity, and pension product lines. It then identifies possible reasons for the different mortality expectations by product such as the underwriting, target market, and degree of selection. Finally the report explores whether there could be possible exposure to arbitrage, at the individual policy or portfolio level. <http://www.soa.org/research/research-projects/life-insurance/research-mortality-comparisons.aspx>

NEAR FUTURE (IN THE PIPELINE)

Mortality at the High Face Amounts: The report will provide the analysis of mortality of amounts \$1m and over, by band, in relation to amounts under \$1 million. Both univariate and multivariate analysis will be done using the variables age, gender, duration, smoker status, product, and cause of death, etc. The study will analyze more than 7000 claims for amounts of \$1 million and more, certainly a much greater number than the older large amount reports done in the 1990s where typically a maximum of hundreds of claims were analyzed. Hopefully we can determine more information such as whether the 'J' curve (eventually higher mortality at the highest bands) exists and why.

Key Issues in Reinsurance Treaty: While still in the early stages of development, the report will likely identify what reinsurers and direct companies feel are the most difficult treaty issues and provide possible solutions to all parties. The report may be conducted as a survey or Delphi study, and will likely address key terms such as errors and omissions and binding limits.



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Extreme Event Risk: While still in the early stages of development, the report will likely examine different methods of assessing capital charges for extreme event risks as well as strategies to manage these risks.

LOOKING AHEAD

Over the early part of the second quarter of 2012 the Reinsurance Section's research team will be brainstorming and finalizing what the new set of projects ideas will be for the coming year. I encourage you to get involved. You can suggest an idea, volunteer for a project, or volunteer to be part of our research team. While serving as the research head over the past three years, I have definitely learned a lot and really enjoyed my time. If you volunteer, I am sure you will feel the same. We have a very friendly and insightful research team, including an excellent SOA staff, and this is true even though most members have not volunteered in this way before.

If you have an idea or interest contact myself (edward.hui@caldwell-ls.com) or Ronora Stryker of the SOA (rstryker@soa.org). Often, all it takes is for you to say, "wouldn't it be nice if we knew more about ..."? We look forward to hearing from you!

Special thanks to the research volunteers who participated in the project oversight group or the actual research, the researchers, and the SOA staff. Their names are listed in the research reports.

Current RSC research team volunteers: Mike Bertsche, Greg Brandner, Audrey Chervansky, Maple Cheung, Ing Chian Ching, Tom Edwalds, Clark Himmelberger, Edward Hui, Achille Lanang, Stephen Manly, Gary Pauline, Michael Shumrak, Kevin Trapp, Jean-Marc Fix. Past RSC research team volunteers (since 10/2008): Bill Briggs, JJ Carroll, Gaetano Geretto, Bob Lau, Kelly Levy, Jim Sweeney, Karen Tan. SOA staff: Mike Boot, Christy Cook, Jack Luff, James Miles, Jan Schuh, Ronora Stryker. ■

A promotional poster for the 2012 Retirement Industry Conference. The background is a dark, moody landscape with a body of water reflecting a light source, possibly the sun or moon, creating a shimmering path. The text is overlaid in white and light gray. At the top, it says "2012 Retirement Industry CONFERENCE" in a bold, sans-serif font. Below that, the subtitle "Rising to Today's Challenges" is written in a script font. The dates and location are listed: "April 25-27, 2012 The Hilton in the Walt Disney World Resort Orlando, FL". A paragraph of text describes the conference's focus on retirement industry professionals and thought leaders, covering topics like annuity and retirement income products, defined contribution or defined benefit retirement plans, accumulation or retirement income, strategic planning, product development and risk management, marketing, distribution, operations or communications. At the bottom right, it says "Register today at SOA.org." data-bbox="230 545 943 907"/>

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CONFERENCE
Rising to Today's Challenges

April 25-27, 2012
The Hilton in the Walt Disney World Resort
Orlando, FL

Join the hundreds of retirement industry professionals who will attend the 2012 Retirement Industry Conference to gain insights on the latest industry developments and equip themselves with solutions to address the complex challenges they face every day. The conference sessions are designed for retirement industry professionals and thought leaders who focus on one or more of these crucial areas: Individual annuity and retirement income products; defined contribution or defined benefit retirement plans; accumulation or retirement income; strategic planning; product development and risk management; marketing, distribution, operations or communications.

Register today at SOA.org.