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Financial Reporting Research Update

By David Armstrong and Ronora Stryker

Research is a primary mission of the Financial Reporting Section and a significant use of our section dues revenue. Here is an update, as of September 2019, on projects in process and those recently completed.

CURRENTLY IN PROCESS

“Mortality Improvement Trend Analysis.” This research examines the key drivers of mortality improvement and how they vary. Work has yet to begin on the project, as a researcher is being sought to perform the study.

“Predictive Modeling in Life Insurance Underwriting.” This study uses a case study approach to create a resource to help practitioners develop, evaluate, implement and monitor predictive models used in underwriting. This project is in the early stages.

“Simplified Methods for Principle-Based Reserve Calculations.” This project is in the late stages.

“Delphi Study of Economic Variables.” This study uses a Delphi Study framework to gather insights on the thought processes experts employ to estimate future values of economic variables. Work is in the mid-project stage.

“Macroeconomics-Based Economic Scenario Generation.” This project intends to find a practical way to improve economic scenario generators by studying the causes of economic development, economic volatility and capital market volatility. Work is in the late-project stage.

“Modeling and Forecasting Cause-of-Death Mortality.” This study will develop mortality projection models and produce cause-of-death mortality forecasts. Work is in the late-project stage.

RECENTLY COMPLETED

“The Application of Credibility Theory in the Canadian Life Insurance Industry.” This survey of credibility practices of Canadian life insurers compares and contrasts credibility methods used by the companies. The Financial Reporting Section contributed to the funding for this project.

<https://www.soa.org/resources/research-reports/2019/application-credibility-theory/>

“A Machine Learning Approach to Incorporating Industry Mortality Table Features in Mortality Analysis.” This research applies a machine learning approach that enables a practicing actuary to incorporate key industry mortality table features into insured mortality analysis.

<https://www.soa.org/resources/research-reports/2019/2019-machine-learning-approach/>

“The Use of Predictive Analytics in the Canadian Life Insurance Industry.” This project surveys Canadian life insurers on the use of predictive analytics in practice. The Financial Reporting Section contributed to the funding for this project.

<https://www.soa.org/resources/research-reports/2019/predictive-analytics-canadian-life-insurance/>

COMPLETED IN 2018

“Earnings Emergence Insurance Accounting Under Multiple Financial Reporting Bases.” This expands a 2015 research report on earnings emergence under multiple financial reporting bases. The original report looked at deferred annuities and term life insurance under U.S. SAP, U.S. GAAP, IFRS, CALM and market-consistent balance sheet approaches. This expanded report adds universal life and makes updates for principle-based U.S. statutory reserves, targeted changes to U.S. GAAP, and the new IFRS for insurance products. <https://www.soa.org/resources/research-reports/2018/earnings-emergence/>

“Survey of Waiver of Premium/Monthly Deduction Rider Assumptions and Experience.” This report summarizes the practices and assumptions that different companies use for waiver of premium and waiver of monthly deduction benefits. Survey topics included mortality, valuation and pricing, and they may be valuable to companies as they prepare for

a principle-based framework. <https://www.soa.org/research-reports/2018/survey-waiver-premium-monthly-deduction-rider/>

REQUEST FOR RESEARCH PROPOSALS

Do you have an idea for a research topic you would like to see the Financial Reporting Section consider for funding? If so, we want to hear from you! For more information, please contact Dave Armstrong or Ronora Stryker. ■



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May 4–5 | Saint Louis, MO

Valuation Actuary Symposium

Aug. 31–Sept. 1 | New Orleans, LA



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