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# Financial Reporting Research Update

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**R**esearch is a primary mission of the Financial Reporting Section and a significant use of our section dues revenue. Here is an update, as of December 2018, on projects in process and those recently completed.

## CURRENTLY IN PROCESS ...

“Simplified Methods for Principle-based Reserve Calculations”—this project is in the late stages, and the project is being prepared for publication.

“The Application of Credibility Theory in the Canadian Life Insurance Industry”—this survey of credibility practices of Canadian life insurers will compare and contrast credibility methods used by the companies. The Financial Reporting Section contributed to the funding for this project. Work is in the late project stage.

“The Use of Predictive Analytics in the Canadian Life Insurance Industry”—this project will survey Canadian life insurers on the use of predictive analytics in practice. The Financial Reporting Section contributed to the funding for this project. Work is in the late project stage.

“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 early 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 early 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 early project stage.

“A Machine Learning Approach to Incorporating Industry Mortality Table Features in Mortality Analysis”—this research

applies a machine learning approach that would enable a practicing actuary to incorporate key industry mortality table features into insured mortality analysis. Work is in the early project stage.

## 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 US SAP, US 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 US GAAP, and the new IFRS for insurance products.

“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 may be valuable to companies as they prepare for a principle-based framework. The results were published in March. <https://www.soa.org/research-reports/2018/survey-waiver-premium-monthly-deduction-rider/>

## COMPLETED IN 2017 ...

“PBA Change Attribution Analysis”—this project studied the drivers of change in principle-based reserves. An SOA webcast was also done at the time of publication, and the report was summarized in the December 2017 issue of this newsletter. <https://www.soa.org/research-reports/2017/2017-understand-vm-20-results/>

“Modern Deterministic Scenarios”—this was a review of possible deterministic scenario sets that could be useful to company management, regulators and rating agencies under PBA. The report was summarized in the December 2017 issue of this newsletter. <https://www.soa.org/research-reports/2017/2017-modern-deterministic-scenarios/>

“Actuarial Model Governance: A Survey of Actuarial Modeling Governance and the Industry Evolution Report”—this was an update to the original 2012 report co-sponsored by the Financial Reporting and Modeling Sections. <https://www.soa.org/Research-Reports/2017/2017-01-actuarial-model-governance/>



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### 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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