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THE ACTUAL (AND ACTUARIAL) APPLICATIONS OF PREDICTIVE ANALYTICS

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Big data is an often talked about topic, both among the public and our profession. As actuaries, we can serve an important role by using modeling and data analysis techniques on large data sets to discover predictive patterns and relationships. With the emergence of big data use, we also face new challenges.

As businesses look for new ways to mine data, it is important to understand how to gain real meaning through the data analysis and application. *CIO Magazine* referenced how automakers and insurance companies are teaming up to provide mobility solutions that are more than just transportation services. That means there is also a need for actuaries to help provide new insights in addressing these and other future challenges facing our profession and the companies we serve.

The 2015 SOA Annual Meeting & Exhibit featured several sessions on big data, which serves as an example of the pervasive use of predictive analytics across the profession, from life and health to property and casualty. There were sessions on health insurance big data, using predictive analytics in setting actuarial assumptions, machine learning, marketing and distribution, and also on how to build an effective predictive analytics team.

The SOA recently created a report providing educational background on the process of building predictive models, from data preparation to the selection and interpretation of models. This project focuses on insights with post-level predictive modeling within life insurance. The SOA's Committee on Finance Research also issued a new predictive analytics report examining the process of creating models and interpreting results. This report illustrates a case study on applying predictive modeling to long-term disability pricing. Topics include data selection, model development and model validation, among others related to predictive analytics. Also, the SOA is currently conducting a study that will serve as a primer on predictive analytics in health care.

Look for more from us, as the SOA continues its research and highlights the ways predictive analytics and data visualization are being championed by our profession. ■

RELATED LINKS

CIO Magazine article
http://bit.ly/1MlEUGu

Post-level lapse study
http://bit.ly/1NHWAeR

Models case study
http://bit.ly/1U6oOEY

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GOOD RESEARCH READS

SOA ANNOUNCES MULTIEMPLOYER PLAN STRESS METRICS REPORT

The Society of Actuaries (SOA) released a new report measuring the stress posed by unfunded liabilities and changing demographics across the system. The high stress levels observed in this analysis raise the question of how the system might cope in the future.
http://bit.ly/1fEl0YL

PENSION RISK MANAGEMENT REPORT ON THEORY AND PRACTICE AVAILABLE

The SOA released a new report on bridging the gap between theory and practice in pension risk management. The report examines corporate pension risk and corporate finance.
http://bit.ly/1EgP4Fx

2014 CREDIT DISABILITY STUDY REPORT RELEASED

The Credit Insurance Experience Committee has completed a new report, which serves as an update to the 2004 study. As a part of the Principle-Based Reserve (PBR) effort by the NAIC, the section of the Valuation Manual dealing with credit insurance reserves (VM-26) contains a standard that single premium credit disability reserves will be based on a modified version of the 1985 CIDA table. With the potential adoption date of PBR within the next few years, it is important to ensure the standard remains appropriate. This study examines the experience in 2008 and 2013 in this regard.
http://bit.ly/1NzUVsz

STUDENT RESEARCH COMPETITION

During the Actuarial Research Conference, the SOA unveiled a new case study research competition for colleges and universities. The competition will provide a forum for students to showcase their knowledge, develop new and creative research ideas, and enhance their exposure to the profession. A formal document outlining the competition rules along with the research topic will be issued in February 2016.
http://bit.ly/1Eh11uS

To view a complete listing of Completed Experience Studies and Completed Research Studies, visit **http://SOA.org/Research**.