

The banner features a blue background with a pattern of white stars. On the left, there is a vertical strip showing the dome of the U.S. Capitol building. The text is centered in white, and the year '2016' is displayed in large, light blue digits on the right side.

AMERICAN ACADEMY *of* ACTUARIES Annual Meeting and Public Policy Forum

NOVEMBER 3-4, 2016 ★ CAPITAL HILTON WASHINGTON, D.C.



Focus on Big Data



Speakers

- Jim MacGinnitie (moderator)
 - Academy Senior Casualty Fellow
- Harold Weston
 - Clinical Professor of Risk Management and Insurance at Georgia State University
- Mike McKenney
 - Pennsylvania State Regulator

Big Data = Big Changes

Mike McKenney
PA Insurance Department



Regulatory Concerns

- **Data accuracy**
 - Big data?!?! Insurers have enough trouble getting small data correct!
 - How accurate and complete is the data? Who validated it?
 - Reliance on (unregulated) third parties.
- **Mathmagicians**
 - Just because you can prove correlation doesn't mean you have to use it!
 - Does it matter if your agents and customers can't understand it?
 - Minor changes in a risk's characteristics that lead to large and non-intuitive changes in rates.

Regulatory Concerns

- **Micro-territories**
 - Does discontinuous territorial ratemaking really make sense?
 - How much do rates vary from block to block or neighborhood to neighborhood?
 - How do regulators check that the predictive models are getting it right?
- **Potential conflicts with state insurance laws**
 - Can you really say that you don't rate on a prohibited variable or that you offer certain statutory discounts as class sizes become very small and even individualized?

Regulatory Concerns

- **Non-insurance benefits and services**
 - Are they specified in the policy?
 - Are they provided equitably across all policyholders?
 - How much cost are they adding to the premium?
 - Should the cost be spread to policyholders unable or unwilling to use them?

Regulatory Concerns

- **Rate filings**

- 40,000+ pages ... all filed correctly?
- Can it really be programmed?
- “... every manual of classifications, rules and rates, every rating plan and every modification of any of the foregoing” – 40 P.S. § 1184;
- Rate filings are public records;
- Use of “unknown/other”;
- “That’s what the model said”;
- Limited regulatory resources.

Regulatory Responses

- **Big Data Working Group (Task Force)**
 - Evaluate ability of current regulatory structure to deal with big data;
 - Shared resources.
- **Auto Insurance Working Group**
 - Affordability and availability study;
 - Shared resources.

Regulatory Responses

- **Casualty Actuarial and Statistical Task Force**
 - Price optimization white paper;
 - GLM survey;
 - Shared resources.
- **Pennsylvania's zip code based auto insurance ratemaking study**

Q & A