Predictive Modeling Applications in Actuarial Science

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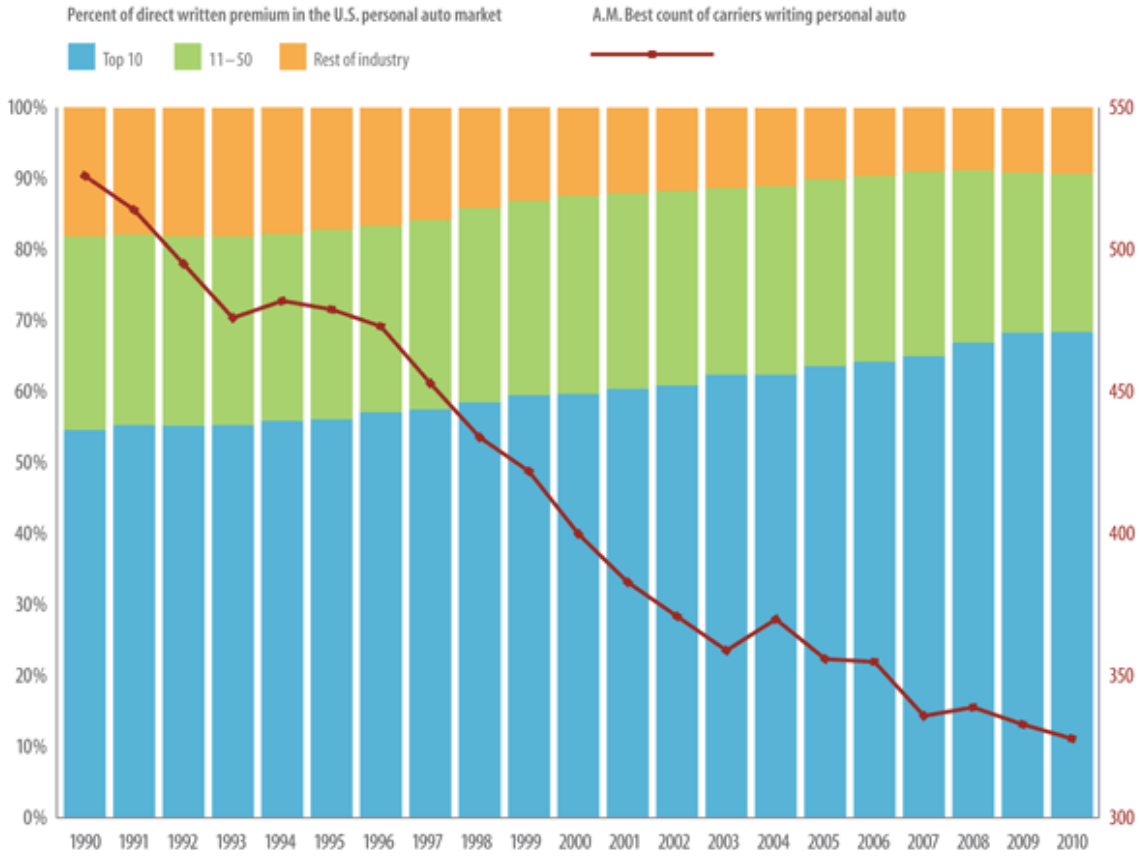
Why the New Emphasis on Predictive Modeling?

- Actuaries have been doing it for years
  - "Insurance Rates with Minimum Bias"
    - By Robert A. Bailey – *PCAS* 1963
  - "A Systematic Relationship Between Minimum Bias and Generalized Linear Models"
    - By Stephen J. Mildenhall – *PCAS* 1999

Why the New Emphasis on Predictive Modeling?

- Insurers who invest in predictive modeling are gaining market share.



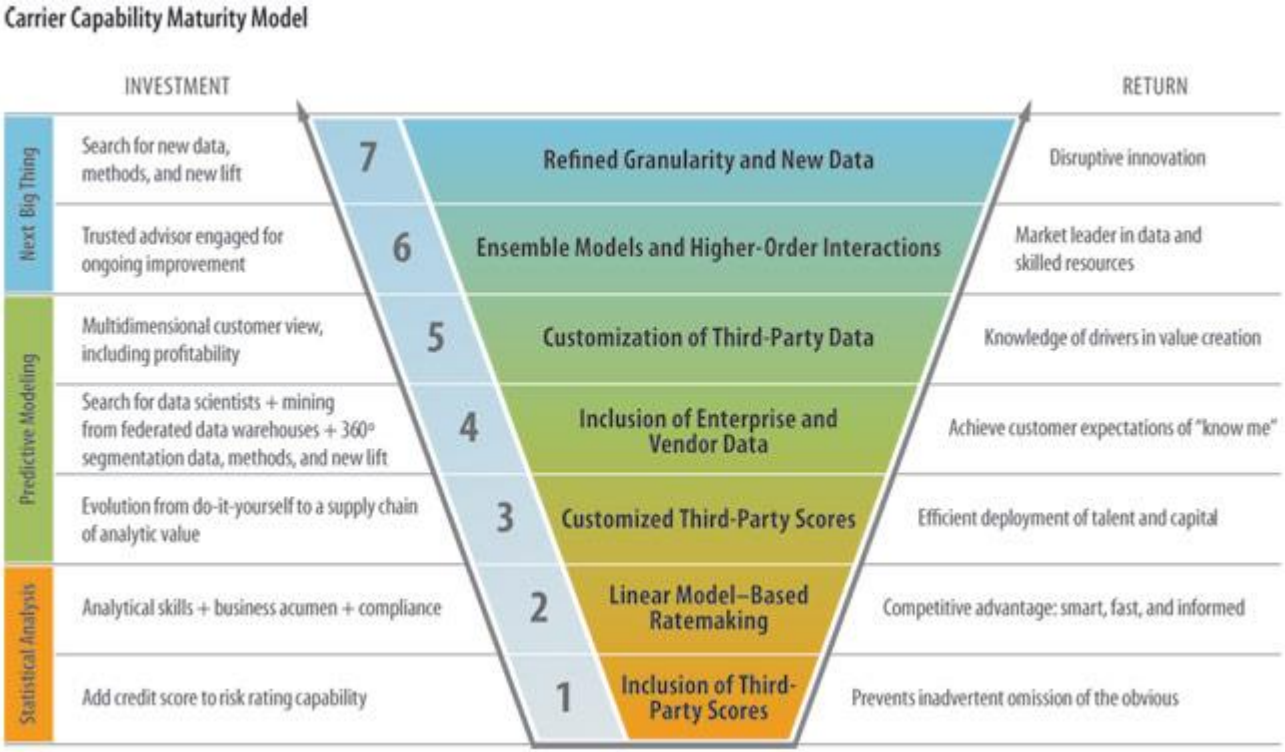
Source - Marty Ellingsworth – President of ISO Innovative Analytics

Current Predictive Modeling Environment Here at the CAS RPM Seminar

- Workshops
  - Predictive Modeling - Quickly sold out
  - Introduction to R
- Roundtable Discussions (A sample)
  - Usage Based Auto Ins (2)
  - Validating a Predictive Model
  - Predictive Modeling Beyond Ratemaking
- Sessions
  - Group of 12 sessions under “Predictive Modeling”

What is Involved in Predictive Modeling?

- More than learning how to run a GLM.



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The Idea Behind the Book

- Volume 1 – Foundations
  - Nearing completion.
  - Authors are mainly academic experts in the field of various aspects of predictive modeling.
- Volume 2 – Applications
  - Several chapter proposals have already been accepted.
  - Will consider additional proposals until April 15.

Volume 1 – Foundations

Table of Contents

Selected Chapters

- Fat Tailed Regression Models – Peng Shi
- Unsupervised Learning – Louise Francis
- Transition Modeling – Bruce Jones

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