

# **PERSONAL AUTO PREDICTIVE MODELING UPDATE: A COMPANY PERSPECTIVE**

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# BACKGROUND

- **MMG is a regional carrier doing business in the Northeast**
- **Approximately \$110M in annual written premium**
- **Roughly 72% of book is in Personal Lines, in four states**
- **52% of Personal Lines book is in Private Passenger Auto**



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# BACKGROUND

- **Traditional rating followed ISO rating manual structure, with modifications**
- **MMG Introduced Credit Based Insurance Scoring into the existing auto rating plan in 2006**
- **MMG began project to develop an auto rating plan based on predictive modeling in early 2007**
- **New rating plan implemented in New Hampshire 10/1/2008, currently filed and awaiting approval in Maine**



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# First Step: Choose Your Partner



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# First Step: Choose Your Partner

- **Issued RFP For Actuarial Partner, Seeking**
  - **Expertise with Predictive Modeling**
  - **Experience working with Smaller Companies**
  - **Regulatory assistance**
  - **Implementation Assistance**
  - **Willing to train MMG staff – Knowledge Transfer**
- **Chose Pinnacle Actuarial Resources as consulting partner for the project**



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# Next Step: The Data

- **Critical to get IT involved at the earliest stages**
- **Consider as many variables as you can for possible inclusion**
- **No matter how well you think you know your data, be prepared for surprises**
- **Understand how your definitions may have changed over time**
- **Consider acquiring supplemental data from outside sources when your information is sparse**



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# The Initial Results



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# The Initial Results

- **Modelers and Managers need to work together to understand initial model results**
- **Consulting partners can pick up on any points that appear unusual relative to commonly seen results in a typical PM project**
- **Company managers have a feel for whether variations from industry norms are likely based on company philosophy and practices or whether to look for an error.**
- **Unexpected results need an explanation.**



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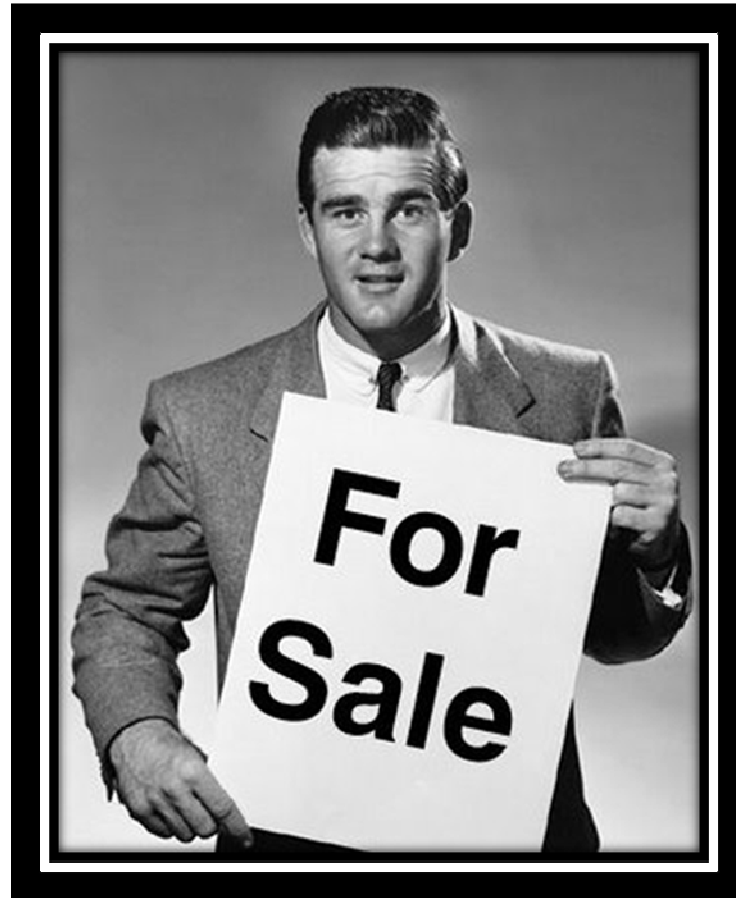
# The Final Rating Plan

- **You will likely need to vary from the model results due to**
  - **Regulatory requirements**
  - **Market needs**
  - **Data or System limitations, etc**
- **Understand why you make the variations you choose, and if it may be possible to move closer to “the science” in future versions**
- **The task now becomes primarily a persuasive effort**



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# Selling the PM Rating Plan



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# Selling the PM Rating Plan

- **Introduction of PM Rating is a major change.  
Must achieve buy-in from:**
  - **Management and Other Internal Staff**
  - **Regulatory Agencies**
  - **Agents and Marketing Force**



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# Internal Buy-In

- **Critical to examine the effect of the proposed strategy on the existing book of business.**
  - **What are the potential benefits?**
  - **What are the sensitive areas?**
  - **What are the major changes? What looks the same?**
- **What are the challenges we are addressing by introducing PM? What metrics will we use to measure our success in meeting them?**
- **What kind of mitigation strategy will the company use to ease the transition? New business only? New and renewal? Renewal caps and floors?**
- **What will be the impacts to workflow in the short-term and long-term? How will we manage them?**



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# Regulatory Approval

- **Pre-filing Meetings with Regulators have proved helpful**
  - **Indicates willing to work with regulators to develop acceptable plan**
  - **Identifies sensitive areas that need to be addressed in the formal filing**
- **Each Regulator will likely have a different focus in the approval process**



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# Agencies and Sales Force

- **Inform agents and sales force early that this is coming. Solicit feedback from key agents on what did and didn't work when competitors introduced PM.**
- **Determine the message the company wants to convey to the sales force and to the consumer. Make sure everyone is familiar with it.**
- **Use the impact analysis to determine areas of “challenge” and “opportunity” for sales and gear efforts appropriately**



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# Agencies and Sales Force (Cont.)

- **Provide sales force with the tools to deal with the change effectively**
- **Challenge to balance agent's desire for a straightforward, easily explainable rating system with the inherent complexities of a responsive rating plan based on a complex multi-variate analysis with many interacting factors.**
- **We want to provide any information needed to increase understanding and confidence, but too detailed explanation can easily lead to misunderstanding.**



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# Post-Implementation



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# Post-Implementation

- **Monitor Market Activity Closely**
  - **Beware the anecdote**
- **Make sure internal reporting is in place to capture new variables being used, and those that are under consideration for future use**
- **Select a time horizon to evaluate model updates if all is going well**
- **Take what has been learned to the next product/state**



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# Thanks for Your Attention!

*(Come back next year and I'll tell you how it  
went . . . )*



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