

From: Will Davis [mailto:WDavis@doi.sc.gov]
Sent: Thursday, June 15, 2017 1:53 PM
To: DeFrain, Kris
Subject: Predictive Model Questionnaires

Kris, here is what we ask in SC. This is taken from one of our filing exhibits related to rating variables:

When using generalized linear modeling, provide an overview of how the GLM analysis was performed and include a Quantiles Test, sum of squared errors, mean squared error, average absolute error, and a comparison of predicted and actual frequencies and/or losses demonstrating that the proposed rating plan is a better predictor of losses than the current rating plan

- a) The quantiles should be defined based upon the product of all relativities assigned by the proposed rating plan (i.e., if quintiles are used, then quintile 1 contains the 20% of risks with the lowest overall relativity assigned by the proposed plan, and quintile 5 contains the 20% of risks with the highest overall relativity assigned by the proposed plan)
- b) Sufficient information and documentation explaining the data and calculations being used should be submitted
- c) At a minimum, the following values should be included: actual losses from the holdout data set (show Countrywide and state-specific results; include comments regarding credibility if applicable), predicted losses from the current rating plan, and predicted losses from the proposed rating plan
- d) Errors for the proposed values should be lower than errors for those currently in use
- e) For the Department to conclude that the proposed rating plan is acceptable, it is necessary to demonstrate that the proposed rating plan does not introduce a pattern of errors (including overcorrection at the endpoints) when comparing the proposed relativities to the actual relativities from the holdout data set

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