

AN ECONOMETRIC MODEL OF WORKERS' COMPENSATION

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Essentially, this paper describes a model for using regression analysis in the forecasting of Workers' Compensation underwriting results and in evaluating past underwriting results.

In my line of work, which is in the research department of an insurance-oriented stock brokerage firm, we are continually forecasting results for property and casualty insurance companies.

One of the most surprising developments during the present underwriting cycle has been the deterioration in Workers' Compensation insurance results. We had always thought that Workers' Compensation ratemaking was the ultimate in ratemaking methodology and that this would protect Workers' Compensation results from adverse developments. However, this has turned out not to be the case.

We have learned some lessons from this development. The first is that we should not get too comfortable with a ratemaking method just because it has served us well in the past. The second is that we should step back from the ratemaking scene and do some independent forecasting of results using the latest social and economic factors in our forecasting. At that time, we can then ask ourselves whether or not we believe that the present ratemaking formulas will deliver the rate needed to produce a profit under the developing social and economic scene.

We believe that the value of the Sturgis-Lommele paper is that it presents a *technique* for forecasting Workers' Compensation results. The models presented are just a beginning, but they represent valuable steps in the direction of doing independent forecasting.

If we were to be critical of the models, we would caution against using too much ratemaking data in the forecasting models. If the same assumptions are used in the models that are used in ratemaking, then any inadequacies in the ratemaking formula may be equally present in the forecasting model. To provide an independent forecast of results, it seems that the models should use assumptions and data that are independent of those used in the ratemaking area.

Overall, this paper represents a valuable step in the direction of independent forecasting of Workers' Compensation results. In speaking with the authors, I have learned that they have since revised some of the models and they expect that the models will be continually revised and improved upon.