NAIC
Property and Casualty (C) Committee
Public Hearing on Proposed Risk Classification Data Call
and Other Risk Classification Tools
Kansas City, Missouri
Thursday, September 30, 2010

Testimony of

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Director McRaith, Director Richardson, and committee members, I am pleased to share results of my academic research and experience with insurance mathematics as they pertain to the subject of this hearing. I appear in my role as Policy Advisor to The Heartland Institute. I hold the Whitbeck-Beyer Chair of Insurance and Financial Services at the University of Arkansas – Little Rock. I also serve as editor of the *Journal of Insurance Regulation*. As such, I participate in this hearing to serve as a resource to this committee, rather than to represent a political or economic interest. Credit based insurance scoring is among my primary research interests. I am familiar with mathematics used to calculate insurance scores. My research focuses on the effects of insurance scoring on insurance markets and consumers.

While the specific focus of this hearing is the Risk Classification Data Call, I also direct committee members to my published research and previous testimony on insurance scoring as broader treatises on this topic.[1]

The Risk Classification Data Call lists the following four objectives:

1) Evaluate how insurers use credit-based insurance scores.
2) Determine how current economic conditions have affected policyholder premiums related to credit-based insurance scores.
3) Evaluate the role played by credit-based insurance scoring vendors.
4) Evaluate the use of new and innovative risk classifications and risk evaluation tools used by the industry and what impact these risk classifications have on consumer rates.

My research addresses objectives one and two. My expertise also envelops objectives three and four. Therefore I will be pleased to take questions on any of these subjects.

## The Data Call

Having reviewed the proposed draft data call, I offer several comments that I hope will aid the committee in shaping its final effort on this topic. For reasons I develop below, I find

[1] See Powell, Lawrence S., 2009. "Credit-Based Scoring in Insurance Markets," *Independent Policy Report*, (The Independent Institute, Oakland, CA, 2009) ISBN: 13: 978-1-59813-037-9, and forthcoming in *Insurance Choices.* Available at http://www.independent.org/pdf/policy_reports/2009-10-01-scoring.pdf; and Testimony of Lawrence S. Powell, U.S. House of Representatives, Financial Services Committee, Subcommittee on Oversight and Investigations, "The Impact of Credit-Based Insurance Scoring on the Availability and Affordability of Insurance," 5/21/2008 available at http://financialservices.house.gov/hearing110/powell052108.pdf

the data call more extensive than necessary for achieving its objectives. In addition, some of the requested data elements present potential for measurement error when interpreting results of data analysis.

***Achieving Objectives of the Data Call***

The second objective of the data call is to "determine how current economic conditions have affected policyholder premiums related to credit-based insurance scores." Preliminary results of my academic research address this objective without collecting additional data from insurers. I measure the effects of changes in overall credit on loss ratios for automobile and homeowners insurance. Loss ratios are calculated at state aggregate levels using NAIC InfoPro data for 2000 through 2008. The measure of credit risk is the relative change in TransUnion's credit risk index.

Because property and casualty insurance markets are highly competitive[2], it follows that insurers must recalibrate credit scores and other metrics frequently to adjust for changes in average population characteristics. Otherwise, they will lose market share or suffer consequences of adverse selection.

Results of statistical analysis support this hypothesis. I regress loss automobile loss ratios on the credit risk index and fixed effects controls for other differences across states and years. If insurers do not recalibrate credit based insurance scores, we would expect a negative relation between loss ratios (the inverse of unit prices) and credit risk. In my analysis, the coefficient estimate (0.08) is not statistically different from zero (p-value = 0.454). This result is consistent with insurers recalibrating their pricing models to accommodate changes in average population measures.

[2] See Powell, Lawrence S., 2008, "Assault on the McCarran-Ferguson Act and the Politics of Insurance in the Post-Katrina Era," *Journal of Insurance Regulation*, v26n3: 3-21 (Spring 2008); or Joskow, Paul, 1973. "Cartels, Competition and Regulation in the Property-Liability Insurance Industry," *Bell Journal of Economics and Management Science*, Vol. 4 No. 2, pp 275-427

As a less technical approach, I present charts of these variables for the country and several states. In each case, it is obvious that credit risk does not exhibit a negative relation to loss ratios. Figure 1 shows loss ratios and credit risk at the aggregate country level. Figure 2 through Figure 5 show the same measures for Wisconsin, the state with the highest coefficient of variation in the credit risk measure, Missouri, Illinois, and South Carolina.

Figure 1: United States Average Loss Ratios and Credit Risk Index, 2000 – 2008

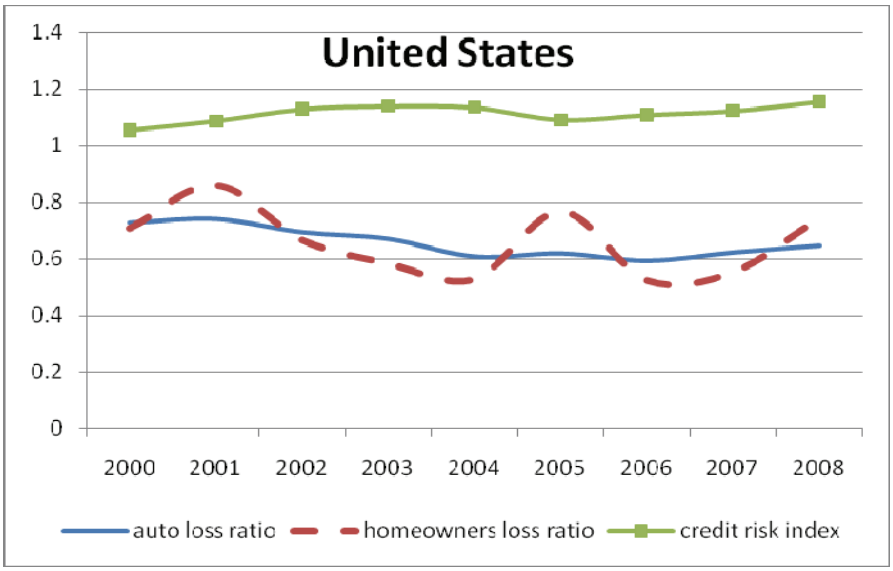



Figure 2: Wisconsin Average Loss Ratios and Credit Risk Index, 2000 – 2008

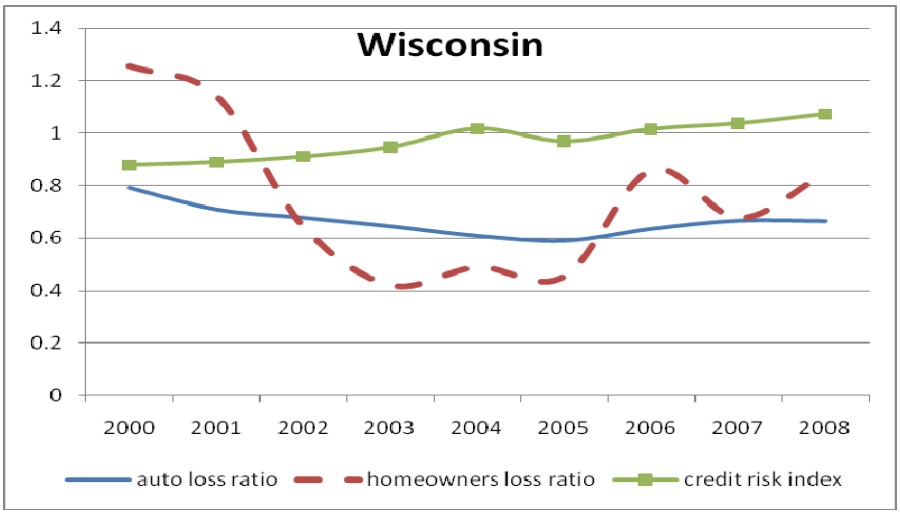


Figure 3: Missouri Average Loss Ratios and Credit Risk Index, 2000 – 2008

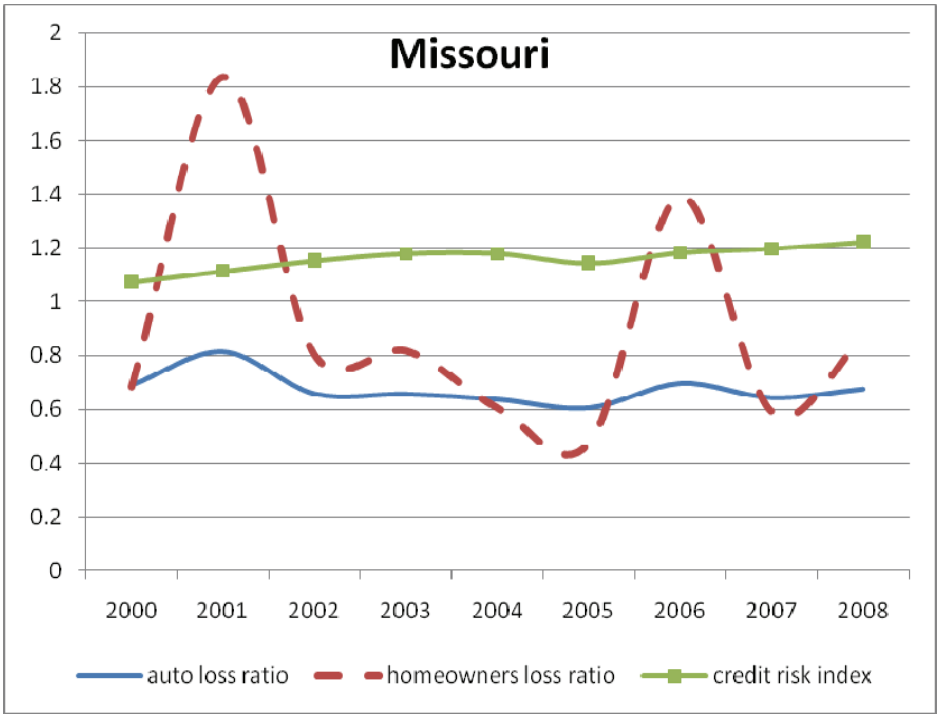



Figure 4: Illinois Average Loss Ratios and Credit Risk Index, 2000 – 2008

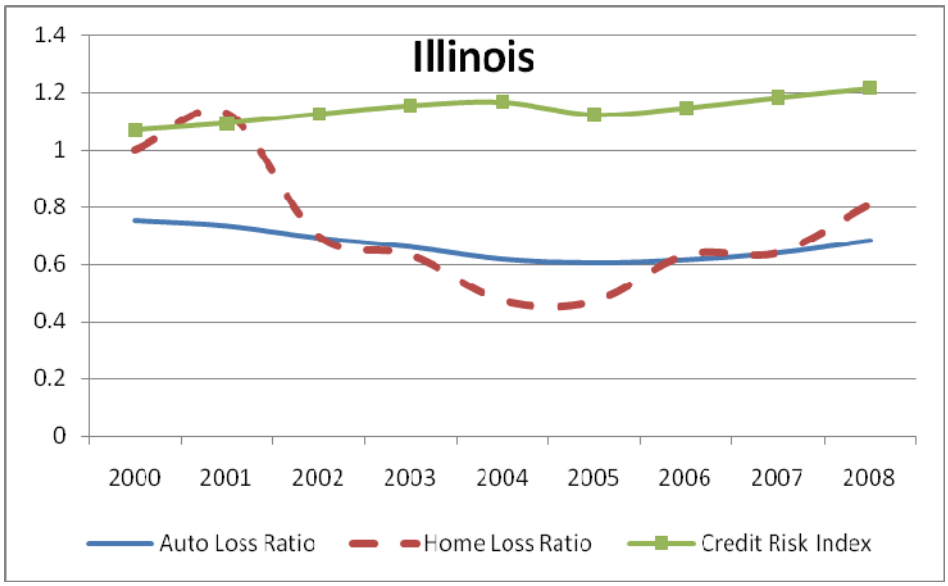
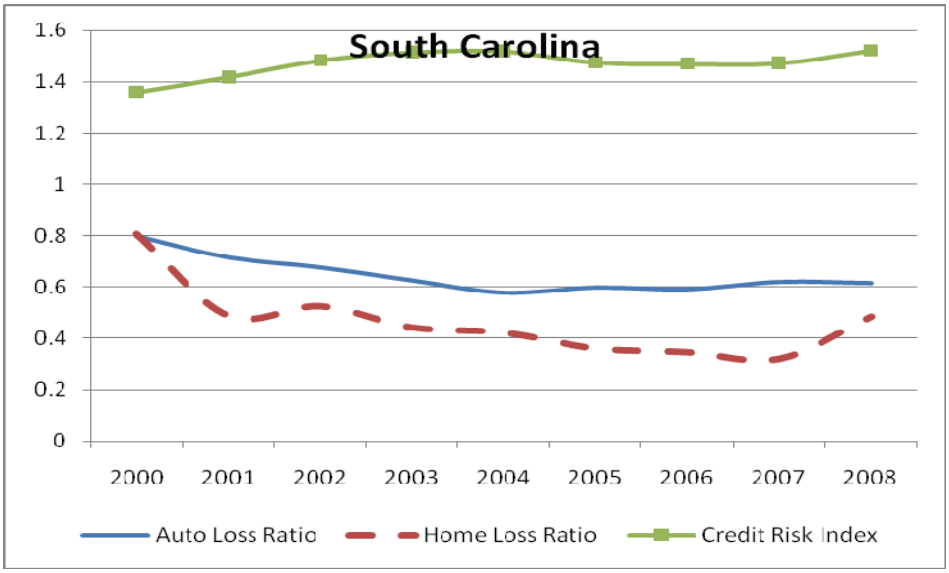


Figure 5: South Carolina Average Loss Ratios and Credit Risk Index, 2000 – 2008




In addition to addressing the specific question of how recent economic events affect insurance prices, this analysis also supports the general conclusion that insurance markets are extremely competitive; providing the best and most effective form of consumer protection.

***Specific Variables in the Data Call***

The proposed data call is a very comprehensive effort to collect data on insurance pricing. My concern with its approach is that some of the variables present challenges to producing meaningful analytical results and other variables do not seem to represent information that relevant to analyzing individual companies. As such, the data call can be more efficient and effective by eliminating or altering some of these variables.

Table 3 requests the range of rate relativities for 35 variables plus additional spaces for write-ins. One concern with this approach is that many rating variables are not applied in a univariate method. They interact and form interdependence with other rating variables. Even when holding all other variables equal, each company's rating method may create different results depending on where each variable is held equal. For example, if there is a strong interactive relation between geographic location and credit, holding location at a certain level

could mute or amplify the affect of credit on an insurance rate. I am not aware of a uniform way to mitigate this issue for all companies. Therefore, analysis of the data collected in Table 3 would likely produce biased or misleading results.

Table 4 and Table 5 request the distributions of observed deviations from the median value and average value, respectively. Without controlling for the distribution of each variable for total applicants, conclusions drawn from these data would not be applicable to individual insurers. Such control may not be possible with data available most insurers.

Administrative costs of producing these data are likely to be large. Ultimately, these costs will be borne by policyholders. Traditional means of market regulation have not shown any deficiency in application to this issue. Consumer complaints are rare, residual markets are small in most places, and credit based insurance scores are clearly indicative of risk. For all of these reasons, I urge caution in casting such a wide and potentially porous net without further consideration of how these data could be analyzed to achieve the objectives of the data call.

Thank you for this opportunity to share with the Committee. I will be pleased to address your questions.