AMERICAN ACADEMY of ACTUARIES

March 1, 2000

Mr. Cheye Calvo
Policy Specialist
National Conference of State Legislators
Employment and Insurance Issues
1560 Broadway, Suite 700
Denver, CO 80202

Subject: Joint Auto Insurance Task Force

Dear Cheye:

I am writing on behalf of the American Academy of Actuaries'[1] Risk Classification Work Group in response to the questions you raised regarding the automobile insurance market in Connecticut. These are the questions that you and Ms. Patricia Born intend to address in your study for the Joint Auto Insurance Task Force of the Connecticut General Assembly.

A. What is the existing process for establishing automobile insurance rates in Connecticut? How does it operate? What factors are used in rate setting? How does the process in Connecticut compare with other states?

The factors used in rate setting will vary, to some degree, from insurer to insurer. We suggest that you review the rating manuals and rate filings of several large insurers in order to get a good overall understanding of the process used to establish rates and the factors used by insurers.

We are not aware of any major differences between Connecticut and other states, in regard to the process used to establish rates. There are two minor differences worth noting. They are the "75/25" rule, which dampens the rate changes on a territory by territory basis, and the unique Connecticut requirement that all insurers use Town Codes for the purpose of establishing rating territories; in other states, insurers use zip codes or other geographic boundaries for the purpose of establishing

1 The American Academy of Actuaries is the public policy organization for actuaries practicing in all specialties within the United States. A major purpose of the Academy is to act as the public information organization for the profession. The Academy is non-partisan and assists the public policy process through the presentation of clear and objective actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification and practice, and the Code of Professional Conduct for all actuaries practicing in the United States.

rating territories.

You may want to contact the insurance companies or the Connecticut Insurance Department with any questions regarding the rate filings and rating manuals. If you still have questions after contacting these parties, please feel free to request our assistance.

B. How does private passenger automobile insurer profitability in Connecticut compare with other states?

Based on my discussion with you and Patricia on February 25, we understand that you intend to address this question by comparison of loss ratios (the ratio of incurred losses to earned premium) published in the National Association of Insurance Commissioners' (NAIC) *Profitability Report*. In our opinion, this is a reasonable way to address this question.

A comparison of loss ratios provides insight into the profitability of automobile insurance in *relative* terms (in other words, Connecticut versus other states), but not in *absolute* terms.

The NAIC's *Profitability Report* provides loss information on a calendar year basis, rather than on an accident year basis (a sorting of losses based on the date of the accident). Results for any calendar year can be affected by reserve increases or decreases for prior accident years. We recommend that you discuss this issue with representatives of the insurance department to determine if they are aware of any significant reserve adjustments that might have affected the data that you intend to review.

The approach that you intend to use, a comparison of loss ratios, is based on the implicit assumption that expenses other than losses will be uniform on a state by state basis. Although this is probably a reasonable assumption for most types of expenses, we recommend that you explicitly consider the possible distortion caused by premium taxes and acquisition costs.

Premium tax rates vary by state. It will be relatively easy to obtain a list of premium tax rates, by state, by year. Differences in premium tax rates should be offset by differences in loss ratios, all other things being equal. The premium tax rate in Connecticut is currently 1.75 percent. If the average premium tax rate in the rest of the country is 2.0 percent, for example, then Connecticut loss ratios should be expected to be about 0.25 percentage points higher than loss ratios in the rest of the country, all other things being equal.

Average acquisition costs may vary by state, depending on the market share of some insurers which commonly have lower than average acquisition costs. One way to address this issue would be to identify major insurers that have relatively low acquisition costs, and determine what their market share has been in Connecticut versus other states. If it appears, for example, that the average acquisition costs in Connecticut are one percentage point higher than in the rest of the country, then Connecticut loss ratios would be expected to be about one percentage point lower then loss ratios in the rest of the country, all other things being equal.

We also suggest that you review the loss ratios over a number of years, rather than just one year, in order to avoid being inappropriately influenced by what may be random fluctuations in the loss ratios by state.

In the event that you find significant changes in the Connecticut loss ratios, we recommend that you investigate further to determine whether these were followed by rate changes. For example, if Connecticut loss ratios decreased significantly, did Connecticut insurance companies subsequently reduce their rates?

C. How do premium and loss experience compare among different geographical areas in Connecticut?

We understand that you intend to obtain three years of data for your study. This is a sufficient period of time to enable you to reach valid conclusions for most, if not all, geographic areas that you review.

We understand that you expect to obtain collected earned premiums and reported losses (paid losses plus case reserves), by town code.

For liability coverage, we understand that the loss data will be provided on both a basic limits basis (reflecting the minimum limits of coverage that are available) and a total limits basis (reflecting the actual limits of coverage that are purchased). The advantage of reviewing basic limits losses, as opposed to total limits losses, is that the loss experience will not be subject to a high level of distortion from large claims that are in excess of the basic limits of coverage.

However, the collected earned premium will not be provided on both a basic limits basis and a total limits basis (premium is not typically recorded in this level of detail). In our experience there are likely to be material differences between town codes in regard to the average limit of liability that is purchased. As a result, a comparison of basic limits loss ratios (basic limits losses divided by collected earned premiums) is likely to be distorted.

In our opinion, there are several ways by which you may be able to minimize the effect of this distortion. First, we recommend that you review total limits loss ratios as well as basic limits loss ratios. It is likely that, at least for the geographic areas that have a large number of insured vehicles, the distortion caused by large claims is not significant.

Second, for town codes for which the total limits loss ratio appears to be especially high, we recommend that you review the total limits loss ratios and the basic limits loss ratios. In these cases, it may become clear whether or not the high total limits loss ratio is merely the result of large claims.

Third, you may want to request that the statistical agencies provide a distribution of the limits of liability purchased in each geographic area, although it is likely that they will not have this level of detail. Alternatively, you may want to request this information from a sample of insurance companies, in order to obtain perspective on the extent to which the average limit of liability is likely to vary by geographic area.

It will be important to adjust your conclusions based on the volume of claims experience within each geographic area. You may want to do this by using an actuarial credibility technique, or by using tests of statistical significance.

The data that you will be using to evaluate geographical differences will be appropriate for evaluating relative differences, but will not be appropriate for reaching conclusions about absolute levels of profitability by geographic area.

In regard to item B (the statewide profitability assessment), we provided comments regarding the premium taxes and the average acquisition costs. These comments do not apply to your analysis of geographical differences.

D. How do premium and loss experience for driver-related rating variables in Connecticut compare with other states? How do premiums and loss experience for rating variables compare among different geographical areas in Connecticut?

With one exception, the same comments that we have above, for Item C., apply to this item as well. As compared to the evaluation by geographic area, this phase of your study may involve analyzing data for key class groups within each geographic area. This further differentiation of the data will increase the need for you to use actuarial credibility techniques or tests of statistical significance.

Our comments and suggestions have been pulled together on a very short time-frame, and may not be as complete as they otherwise would have been. However, we believe that they will be helpful to you, and we look forward to providing additional assistance as your study progresses. If I can be of further assistance, please do not hesitate to contact me at 212-345-7430 or Greg Vass, Casualty Policy Analyst at 202-223-8196.

Sincerely,

Walter C. Wright, FCAS, MAAA
Chair, Risk Classification Work Group

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