



AMERICAN ACADEMY *of* ACTUARIES

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CONSIDERATIONS REGARDING A  
STUDY OF THE USE OF CREDIT  
HISTORY FOR PERSONAL LINES  
OF INSURANCE:

PUBLIC COMMENT TO THE  
FEDERAL TRADE COMMISSION  
RELATING TO GUIDANCE OFFERED  
TO THE NAIC

**American Academy of Actuaries  
Risk Classification Subcommittee of the  
Property/Casualty Products, Pricing, and Market  
Committee**

**August 15, 2004**

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## Purpose

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.

The Risk Classification Subcommittee of the Academy is charged with assisting legislators, regulators, and other interested parties in evaluating actuarial practices related to the affordability and availability of insurance in urban areas and risk classification issues in general.

The Federal Trade Commission (FTC) has requested comment on how it might conduct a study on the effects of credit scores and credit-based insurance scores on the availability and affordability of financial products, including property and casualty insurance. This is similar to a request made to the Risk Classification Subcommittee by the Credit Scoring Working Group of the Market Regulation & Consumer Affairs (D) Committee of the National Association of Insurance Commissioners (NAIC), in 2002. This document primarily uses examples based on automobile insurance. The underlying principles apply to any line of insurance, but the FTC should evaluate different lines of business separately. Because we only recently became aware of the FTC request, this document primarily focuses on our efforts with the NAIC. Among other things, the NAIC asked:

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“Provide guidelines/parameters on how the NAIC could conduct a study of credit scoring, including suggestions on how the NAIC could determine (by study) causality (the relationship between credit history and risk of loss) and whether insurance scoring disproportionately affects protected classes and whether it disproportionately affects low-income groups.”

In November 2002 we provided a report to the NAIC that included our initial response to this request. The response was considered “initial,” because it was pending further discussions with the NAIC that have not taken place. This public comment to the Federal Trade Commission is based on that initial response. (The full text of the November 2002 report is available at [http://www.actuary.org/pdf/casualty/credit\\_dec02.pdf](http://www.actuary.org/pdf/casualty/credit_dec02.pdf))

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## Recommendations Regarding a Study by the FTC

The following recommendations are quoted directly from our November 2002 report to the NAIC, and therefore contain references to the NAIC and to specific issues raised by the NAIC. We believe that the material quoted below is directly applicable to the study being proposed by the FTC.

### Causality

(Note: Although the FTC did not specifically identify “causality” as a subject for its study, the information provided below may be helpful background information.)

The NAIC asked that the subcommittee provide advice for how the NAIC could conduct a study to determine causality between credit history and risk of loss. The Risk Classification Subcommittee does not recommend that the NAIC conduct a study to determine if there is a *causal* relationship between credit history and future insurance claims experience, because in our opinion it would not be possible to prove a *causal* relationship. The NAIC could conduct a study to evaluate the strength of any *statistical* relationships between credit history and insurance claims experience. In the subcommittee’s opinion, any finding of *causality* in any context or field of study is a statement of a *theory* or *conjecture* based on the observation that there is a strong statistical relationship between the “cause” and the “effect.”

If the NAIC chooses to develop opinions about the relationships that may exist between credit histories and driving record, we recommend that the NAIC consider that both credit history and insurance claims experience may be manifestations of one or more other personal characteristics. For example, the frequency of a person becoming momentarily inattentive might be highly correlated with both credit history and with driving record. Alternatively, perhaps one or more

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characteristics, such as aggressiveness, the willingness to take risks, or the ability to make quick judgments, are correlated with both credit history and with driving record. As far as we know, no one has identified which relevant personal characteristics might be correlated with both credit history and driving record, but it is not necessary to identify those characteristics to measure their impact. In our opinion, these personal characteristics would be difficult to identify and to directly measure, otherwise insurance companies likely would be using them in their risk classification systems.

An effective risk classification system is one that effectively differentiates between groups of policyholders who will have different levels of loss experience in the future. Each criterion in the risk classification system should contribute to the ability to differentiate among different levels of future loss experience. The contribution of each criterion can be measured statistically. Although the NAIC did not ask the subcommittee to review the validity of using credit history as a rating tool for personal lines of insurance, the subcommittee's opinion is that credit history can be used to effectively differentiate between groups of policyholders. This opinion is based on review of the Monaghan paper (referenced later in this document) and on our general knowledge of rate filings that have been submitted in many states.

Causality is not a requirement for any element in a risk classification system. For example, drivers with past accidents and driving violations have been shown to have higher rates of accidents in the future, and therefore driving record is a useful and commonly accepted element of risk classification systems for automobile insurance. However, histories of past accidents and violations do not *cause* a driver to have more accidents. The rating practice that does exist is based on the fact that, as a group, drivers who have been accident-prone in the past are likely to be accident-prone in the future.

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## **Impact of Credit-Related Insurance Rating for Policyholders without a Credit History**

(Note: Although the FTC did not specifically identify “lack of a credit history” as a subject for its study, the information provided below may be helpful background information.)

In regard to the protected classes as defined by the NAIC (race, religion, and ethnicity), the subcommittee understands that the NAIC may have a concern that certain groups traditionally avoid the use of credit, and that credit-related insurance rating and underwriting practices might therefore tend to cause affordability and availability problems for these groups because of the lack of credit history. To the extent that the NAIC has this concern, we recommend that the NAIC conduct a survey of insurance companies to determine how insurance rates and underwriting decisions are affected by a lack of credit history. Although some rating plans may adversely affect a consumer who does not have a credit history, there are a number of rating plans that treat such consumers as “average” or “preferred” for eligibility and rating.

## **Absence of Conclusions regarding Disproportionate Impact of Insurance Rating based upon Credit-Related Factors**

[Note: The following information is based on our review of the following four papers, which the NAIC had asked us to review:

- The Impact of Personal Insurance Credit History on Loss Performance in Personal Lines by James E. Monaghan (2000);
- Insurance Scoring in Personal Automobile Insurance - Breaking the Silence by Conning & Company (2001);

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- Predictiveness of Credit History for Insurance Loss Ratio Relativities by Fair, Isaac (1999); and
- Use of Credit Reports in Underwriting by the Commonwealth of Virginia, State Corporation Commission, Bureau of Insurance (1999).]

None of the four papers that the subcommittee reviewed contained the necessary information for us to evaluate whether credit-related insurance scoring results in a disproportionate impact for protected classes or for low-income policyholders. The Monaghan paper provides the most detailed analysis of the use of credit history, but the Monaghan paper is based on insurance data and insurance databases that do not include information about race, religion, ethnicity, or income.

Only the Virginia study attempted any treatment of this subject. The results of that study included an indication that income and race are not reliable predictors of credit scores, but that study relied on aggregate data by ZIP codes rather than a rigorous analysis that matches the credit history and demographics of individuals.

## **Defining Study Objectives**

(Note: The discussion below is directly relevant to any study that might be conducted by the FTC. Among other things, the NAIC had requested that we evaluate whether insurance scoring “disproportionately affects protected classes and whether it disproportionately affects low-income groups.” In the following text, we first recommend that the NAIC define what it means by “disproportionate” impact, and then offer our definition of “disproportionate” impact and explain how it differs from the related concept of “disparate impact” as sometimes used in the context of federal civil rights legislation.)

We recommend that the NAIC define its objectives for any study that it intends to undertake, so that any potential study can be designed to meet its objectives as efficiently and effectively as possible. This includes, among other things, the following:

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- Defining what is meant by “disproportionate impact”;
- Defining the magnitude that any disproportionate impact would need to reach in order to merit regulatory concern, if any;
- Deciding what further information, if any, would be needed if it is determined that there is a disproportionate impact; and
- Deciding how the protected classes and low-income consumers would be subdivided for analytical purposes.

Following is some discussion of each of these points:

We interpret “disproportionate impact” to mean that a rating tool results in higher or lower rates, on average, for a protected class, controlling for other distributional differences. We would expect that many rating tools would have disproportionate impact, because protected classes (and all other classes) are likely to have different demographics than the general population. For example, if any protected class has a younger average age than the general population, the use of age as a rating variable would have a disproportionate impact on that class (resulting in higher rates, on average). As another example, to the extent that lower-income families are less likely to own expensive cars, charging lower premiums for less expensive cars will have a disproportionate impact on low-income drivers (resulting in lower premiums, on average.)

*Disproportionate* impact is different from *disparate* impact. Disparate impact is a concept that has been widely discussed in the context of federal civil rights legislation. This is outside of our area of expertise, but we understand, for example, that a hiring practice is said to result in disparate impact if it results in substantial disproportionate impact and there is not a business necessity for the practice. Thus, disparate impact is determined using a two-step process, and the determination of disproportionate impact against members of a protected class is only the first step of that two-step process.

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While designing a regulatory study, a primary consideration should be the potential usefulness of its results. This requires that there be some determination, prior to the study, of the magnitude of disproportionate impact that would trigger regulatory concern. The decision regarding the magnitude would then influence the size of the population that would need to be sampled in order to generate statistically significant findings.

In designing a regulatory study, it will be important to decide what further information, if any, would be needed if it is determined that there is a disproportionate impact of a magnitude sufficient to trigger regulatory concern. For example, a study that only estimates *disproportionate* impact will not necessarily tell whether there is *disparate* impact and it likely will not provide sufficient information for regulators to determine whether the disproportionate impact is in line with a disproportionate level of insurance losses for the affected protected class. If the NAIC found a material disproportionate impact on a given protected class, and wanted to find out if that disproportionate impact was consistent with insurance loss experience for that class, then the study would need to include the collection of insurance experience in addition to the credit and demographic information. When designing a regulatory study, it will be important to decide what categories of protected classes and low-income groups will be examined for disproportionate impact. The NAIC should identify which racial categories it will evaluate. The 2000 Census form identified the following five races:

- White;
- Black;
- American Indian or Alaska Native;
- Asian; and
- Pacific Islander;

(The Census form also permitted the write-in of other races.)

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The NAIC should identify which religions it will evaluate. Depending on how religious groups are defined, there could be many hundreds of different religions. For example, each “major” religion consists of many sects or denominations. The NAIC will need to define exactly which groups are important to the study. The NAIC should identify which ethnic backgrounds it will evaluate. Depending on how ethnicity is defined, there could be dozens or hundreds of ethnicities. The NAIC will need to define exactly which ethnic groups are important to the study.

The NAIC should define the low-income group(s) that it will evaluate. For example, the NAIC might decide to use the “poverty thresholds” used by the U.S. Census Bureau, which are defined based on the number of people in the family unit and the number of related children under the age of 18. Alternatively, the NAIC might decide to use a simpler measure, such as total family income regardless of family size and number of children.

#### *Other Considerations*

Depending on the objectives and design of the study, the NAIC may need to conduct the study for a *very substantial* population. Consider an example. Suppose that a protected class constitutes ten percent of an entire population. It follows that an unbiased sample of 5,000 would be expected to have about 500 members of the protected class. Depending on the standards of materiality and the degree of confidence selected, this might be an adequate sampling to determine whether or not an insurance rating system has a disproportionate impact on the protected class. But a sampling of the same size would be woefully inadequate to determine whether the degree of disproportionate impact was in line with loss experience, even if several years of insurance experience were available.

The data for this study would need to meet several standards, one that is objective and one that is subjective. Clearly, there would need to be a sufficiently large body of data so that indications of

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*material* disproportionate impact would be statistically reliable. If a disproportionate impact of five percent was considered to be material, then a larger body of data would be necessary to identify that difference than if a materiality standard of 25 percent was selected. The more difficult standard with which to comply, because it would be somewhat subjective would be keeping data unbiased. With a perfectly unbiased sample, statistical variation would be the only reason to expect that the results obtained from a sample population would be different from that of the entire population. Unfortunately, it may be very difficult and expensive to obtain data that will be sufficiently unbiased to satisfy decision-makers.

At this time, the Risk Classification Subcommittee is unaware of any proprietary or open public databases that contain the necessary protected class data to ascertain the existence of disproportionate impact. Unless suitable databases can be found and utilized, an NAIC study to estimate disproportionate impact would need to develop its own data.

Depending on the objectives of the study, and the availability of proprietary or open public databases, the NAIC may decide to conduct a study based on aggregated consumer data rather than on data that is at the level of individual consumers. In this case, we would recommend that the NAIC consider reviewing consumer data at the level of “ZIP + 4” rather than by ZIP code. The ZIP + 4 level of detail is more refined than the ZIP code level of detail, and therefore is likely to be more homogeneous in terms of its population.

In addition to costs, the major hurdle would be to obtain the necessary credit and protected class information in a way that the study will not draw erroneous conclusions based on a biased sampling. Any procedure that relies upon individual consumers to reveal or release credit or protected class information is likely to encounter a lack of cooperation. The question that would then arise is whether or not the conclusions drawn from data on those consumers who did cooperate could be extended to the entire population.

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We are pleased to offer these comments to the FTC. For additional information, please contact Greg Vass, Senior P/C Policy Analyst at 202-223-8196.