DISCUSSION BY MICHAEL J. MILLER

The best time to reach agreement on the rules of the game is before the first pitch. A rules debate during the seventh inning of a close game may produce more heat than light.

The author acknowledges the current debate over risk classification and observes that some reformers have "fashioned new literature" to form the basis for their desired changes. He attempts to avoid this expediency by defining risk classification standards which flow from the nature of insurance and are consistent with insurance statutes. The seven standards suggested are summarized into three broad categories: homogeneous, well-defined, and practical.

The author also discusses seven additional characteristics: controllability, incentive value, causality, separation, reliability, social acceptability and admissibility. These are classifed as non-standards because, in the author's view, they are not as important in judging a risk classification plan.

The author concludes by discussing how competitive forces in the marketplace will tend to reinforce his risk classification standards.

We now have at least four treatises of relatively recent vintage that discuss risk classification standards: the Massachusetts report,[1] the Academy report,[2] Mr. Walters' paper, and the recent New Jersey decision.[3] As an aid in placing Mr. Walters' paper in perspective, it is instructive to compare the relative importance given to the various risk classification characteristics by each of the four authors (see Exhibit 1).

All four agree that homogeneity of risks within a class is a desirable classification standard. Both the Massachusetts and New Jersey reports advocate the choice of a statistical model to directly assess the extent of homogeneity within a class. Mr. Walters advocates a method which essentially disproves the homogeneity of a broader class by attempting to identify homogeneous subsets of the

[1] Division of Insurance, Commonwealth of Massachusetts, *Automobile Insurance Risk Classification: Equity and Accuracy*, 1978.

[2] American Academy of Actuaries, Committee on Risk Classification, *Risk Classification Statement of Principles*, June 1980.

[3] New Jersey Department of Insurance, "Final Determination—Analysis and Report," Hearing on Automobile Insurance Classifications and Related Methodologies, April 1981.

class. The Academy report is silent on the method of determining the extent of homogeneity, but does refer to the absence of clearly identifiable subsets.

Separation, or between-class differences in expected losses, is given high priority in the Massachusetts and New Jersey reports. Mr. Walters considers separation to be an insignificant non-standard. In his opinion, classifications with prices close together are acceptable if the price gradation is gradual. Similarly, the Academy report places emphasis on the smooth gradation of prices from class to class, but does state there should be few enough classes "so that differences in prices between classes are reasonably significant."[4]

According to the Massachusetts report a classification plan should provide a practical and reliable way of predicting losses. This reliability standard explicitly includes characteristics involving ease of administration and objectively defined distinctions which are easy to verify. The terminology "practical and reliable" seems to *imply* that the class plan should be economically feasible and provide credible experience data in order to accurately predict losses. Both the implied and explicit characteristics set forth by the Massachusetts standard of reliability are embodied in two New Jersey standards: reasonable relation to hazard of loss, and adequacy of definition. In these two standards the New Jersey report agrees that class definitions should be clear and objective, not subject to manipulation; should maximize inclusion of similar risks in the same class; should have a direct relation to vehicle operations; and should provide data sufficiently credible to derive accurate premiums. The New Jersey report states that the only cost trade-offs which can be measured are those affecting premium differences between classes and therefore that these are the only costs which should be considered in evaluating the economic feasibility of the classification plan. Mr. Walters agrees that class definitions should be clear and objective, not subject to manipulation; should be exhaustive; should have a reasonable relation to hazard of loss; should be cost-effective; and should provide data susceptible to measurement. The Academy endorses similar standards in its discussion of these characteristics: absence of manipulation, absence of ambiguity, measurability, credibility, predictive stability, expense, and constancy.

The Massachusetts report endorses incentive value as a standard. The New Jersey report does not set forth incentive value as a separate standard, but does endorse it as a desirable characteristic. Mr. Walters considers incentive value to be a non-standard, but nevertheless a desirable addition to a classification

[4] American Academy, *Risk Classification*, p. 18.

plan. The Academy report indicates that hazard reduction incentives are desirable, but not necessary, in the design of a classification system.

The final standard set forth in the Massachusetts report is admissibility. This standard deals with issues of legality, social acceptability, and fairness in general. According to the Masschusetts report, if the class factors are subject to the control of the insured and are causally related to the hazard of loss, then the factors will be more admissible or acceptable to the public. The admissibility standard is embodied in the fairness standard of New Jersey. The fairness standard says that classifications must meet legal requirements and fairly address the responsibility issue. This responsibility issue concerns whether an individual should be accountable for the full extent of his inherent risk. Mr. Walters categorizes the characteristics of controllability, causality, social acceptability, and admissibility as non-standards. He observes that controllability and causality may be desirable in increasing public understanding. He agrees that using rating variables which are acceptable to the public makes good business sense, but he would not sacrifice accuracy to achieve popularity. The Academy report observes that public acceptability issues should be balanced with the economic effects, that causality should not be a requirement for a classification system, and that controllability may have both positive and negative aspects.

The Academy report discusses availability of coverage as a desirable characteristic of a classification system. Mr. Walters does not discuss this as a separate standard. He does acknowledge that the failure to use appropriate rating factors may cause availability problems for some individuals. Neither the Massachusetts nor the New Jersey report discusses the availability of coverage concept. In fact, both reports tend to downplay the role of economic forces in the marketplace.

It would appear that the authors of the four papers are in general agreement on standards pertaining to predictive accuracy and operational considerations (there is some disagreement with respect to separation and the importance of economic feasibility). The greatest disagreement arises with the concept of social or public acceptability. Both the Massachusetts and New Jersey reports rely heavily on the regulator's view of equity. The Academy recommends that regulatory restrictions on classification systems should balance public acceptability and economic considerations. Mr. Walters advocates a much heavier reliance on competitive forces.

In the concluding section of the paper, regulation versus competition, Mr. Walters concludes that a class plan would fail the homogeneity standard if it

did not reflect premium differences for identifiable subsets within a broader classification. The degree of failure would be dependent upon the economic cost of maintaining the separate rating class. This situation raises an interesting actuarial and legal question. If a homogeneous subset of a broader classification is identified, is cost effective to maintain, and is predictively accurate, is it unfairly discriminatory to fail to reflect the difference in the price? Based upon a narrow reading of standards in the four treatises referred to in this review, an insurer, to avoid unfair discrimination, may be forced to separately rate an identifiable subset, even if that action placed the insurer at a competitive disadvantage. For that reason, this reviewer would suggest that competitive considerations should be given a more explicit position on any list of classification considerations.

EXHIBIT I

COMPARISON OF RISK CLASSIFICATION STANDARDS AND NON-STANDARDS

Massachusetts	New Jersey	Walters	American Academy
Homogeneity	Within class differences	Homogeneity	Homogeneity
Separation	Between class differences	(Separation)	Avoidance of extreme discontinuities
Reliability —Practical predictor —Clear and objective —Ease of administration —Reduce error or fraud	Reasonable relation to hazard Adequacy of definition	Clear and objective Manipulation Exhaustive Reasonable relationship Administrative cost Measurement (Reliability)	Manipulation Absence of ambiguity Measurability Credibility Predictive stability Expense Constancy
Incentive	(Incentive)	(Incentive)	(Incentive)
Admissibility —Legality —Social acceptability —Controllability —Causality	Fairness —Legality —Shared responsibility	(Admissibility) (Controllability) (Causality) (Social acceptability)	Public acceptability balanced with economic side effects (Causality) (Controllability)

( ) denotes non-standard or not required.