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National Organization for Women's insurance project

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Cost-Based Pricing of Individual Automobile Risk Transfer: Car-Mile Exposure Unit Analysis

Patrick Butler*

Abstract

Every mile traveled by a car transfers risk to its insurer. This paper posits that the product of a cents-per-mile rate based on class experience and the miles recorded on the car’s odometer appropriately earns prepaid premium while the car is driven. Operation of a practical car-mile system is described briefly. To test the competing idea that driver-record pricing responds to known large differences in risk transfer, a model used to validate claim free discounts is reexamined with the car-mile as the measure of individual cost. Driver-record pricing is found to inflate car-year price-to-cost differences. Consequences of accident rate variability for a car-mile system are reviewed. The per mile cost of individual risk transfer is a class property because of the random nature of accidents. Driver-record pricing attempted on a per mile basis would amplify differences within classes.

Key words and phrases: Per mile insurance, accident rate, risk classification, driver record model, merit rating

1 Introduction

Cost-based pricing of individual risk is a key ratemaking principle promulgated by the Casualty Actuarial Society (CAS). The principle states that “A rate provides for the costs associated with an individual risk transfer;” see CAS (1993). The question for automobile insurance is how the cost of individual driving risk should be measured. When a car is not being driven, its owner has no risk to transfer for driving coverage (for all losses as a direct consequence of the car’s being driven) so the cost to its insurer is zero. Every mile a car is driven adds to its risk of accident; the total cost of risk transfer increases mile by mile. Both conditions point to adoption of the car-mile (as opposed to the car-year that currently is used) as the unit of

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risk transfer, that is, the exposure unit. Conversion of class rates from dollars per car-year to cents per car-mile for driving coverages would be required by a one sentence amendment to rate regulatory law proposed in several states.

The purpose of this paper is to demonstrate that the car-mile exposure unit is essential to cost-based pricing of individual risk transfer. The effect of driver-record pricing on individuals is analyzed with the car-mile unit as the objective measure of cost.

2 Car-Mile Exposure Unit

The entire entry on the exposure unit in the CAS statement of ratemaking principles is: “The determination of an appropriate unit or premium basis is essential. It is desirable that the exposure unit vary with the hazard and be practical and verifiable.” The currently accepted assessment of the car-mile exposure unit for automobile insurance seems to have been established by Dorweiler (1929). Regarding the variation-with-hazard requirement, Dorweiler states: “The mileage exposure medium is superior to the car-year medium in yielding an exposure that varies with the hazard, as it responds more to the actual usage of the car.” Note that Dorweiler’s phrase “responds more” obscures the fact that the car-year does not respond to actual use of the car. In addition, suspension of coverage during periods of no use requires administrative intervention. Dorweiler further states that “[t]he devices and records necessary for the introduction of [the car-mile] medium make it impractical under present conditions,” and that while the car-year “measures the exposure prospectively, the [car-mile] require[s] a final adjustment which would be determined retrospectively.”

Despite Dorweiler’s assessment of superiority of the car-mile exposure unit over the car-year unit in a fundamental characteristic and his qualified judgment concerning its practicality, no substantive actuarial reassessment has been published. Bouska (1989) updates Dorweiler’s paper and notes without comment that conversion to the car-mile unit has been advocated by the National Organization for Women. In a discussion of Bouska’s paper, Diamantoukos (1991) observes only that the car-mile exposure unit is “perhaps a theoretically superior one in some respects” to the car-year unit.

The National Organization for Women completed a 1992 study for Pennsylvania legislators on operation of a car-mile system which

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suggests that such a system would follow the odometer-limit and non-tampering conditions used in mechanical breakdown insurance policies, but otherwise would not differ much from current practice. The study follows transactions involving an example car, including a midyear sale, for four policy years. Premium payment in advance would be required to keep insurance protection in force. The premium for driving coverage at car-mile rates is prepaid in mile amounts and at times chosen by the car owner. Administrative expense and a premium for nondriving coverages are based on yearly rates and are prepaid at each policy-year renewal. Premium would be earned by the car's insurer by the day for nondriving coverages, as is currently done for all coverages, and by the mile recorded on the odometer for driving coverages. The car's insurance ID card displays the odometer-mile and date limits at which protection lapses pending further premium prepayment.

Policy renewal under this plan would be conditional on taking the car to a garage designated by the company for an annual odometer audit. The odometer would be inspected and read, and tamper-evident seals would be applied at the initial audit. Theft of insurance protection is controlled because tampering with the odometer—already a federal crime—automatically voids the policy. Driving with the cable unhooked does not steal insurance protection, because tampering usually would be detected after an accident, and tampering voids protection. The cents per car-mile rate would depend on coverage and the car’s classification as appropriate by territory, use, driver, and other categories.

3 Driver-Record Pricing

Advertisements such as those promising “good rates for good drivers” lead consumers to believe that accidents can be avoided and that the important condition in individual risk of accident is how a car is driven, not how it much it is driven. This belief is encouraged through the use of merit ratings by automobile insurers to raise or lower individual prices at policy renewal time.

The actuarial literature has neglected to examine the effect of driver-record pricing on individual price-to-cost ratios where the claim rate average for the class is taken as the price and defined individual claim rates are taken as the costs of hypothetical individuals composing the class. Recent studies of driver records have

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focused on general questions of variation in individual risk without reference to pricing or cost. For example, Mahler (1991) examines the state accident records of drivers for variation in individual risk over time (14 years), but does not discuss how the information could be applied to pricing automobile risk transfer. An earlier actuarial study done for insurance regulators, however, provides information on individual price-to-cost effects.

A widely circulated 1979 report on risk classification by insurance company actuaries on the industry Advisory Committee to the National Association of Insurance Commissioners contains a section on driver-record pricing. The report describes the issue of pricing individual risk transfer: "Many accidents are the result of chance. The problem becomes—how can insurers identify the 'bad' drivers from the 'good' drivers who were unlucky?" The impossibility of solving this problem through driver records, although downplayed in the report, is illustrated with a compound Poisson model composed of specified numbers of drivers defined to have uniform high and low annual rates of accident involvement.

In a subsequent study of driver-record pricing, Butler and Butler (1989) analyze the high and low accident rate model in terms of the car-mile exposure unit. They value the price-to-cost ratio for individual cars in terms of cents per mile and conclude that pricing based on accident, claim, or traffic violation records greatly increases the existing overpricing for unlucky owners of cars driven less than the annual average for their risk class.

Continuing justification for driver-record pricing, however, relies on the fact that cars whose drivers have had recent accidents (or traffic convictions) average more accidents in a subsequent year than do cars identically classified whose drivers have not had a recent accident. A simplified explanation for this fact—in terms of a uniform claim rate per mile—is presented below through reinterpretation of a classic model for a claim free discount plan. Assumption of a cents-per-mile cost for all cars of the model provides a base for analyzing the price-to-cost effects of driver-record pricing on individual cars. This article also considers the variation in claim rates per mile and its consequences for classification and driver-record pricing under a car-mile system in place of the assumed uniform claim rate per mile.

4 Bailey & Simon Model for Claim-Record Experience

The CAS paper “An Actuarial Note on the Credibility of Experience of a Single Private Passenger Car,” by Bailey and Simon
(1959) is the chief reference on the CAS examination syllabus which shows and models the application of driver-record pricing to insurance for individual cars. Familiarity with its method of calculating Poisson models is required for questions on the CAS exam on advanced ratemaking; see Murdza (1992).

Bailey and Simon examine the Canadian liability claims experience of about 4 million insured car-years. The claim rate of the undivided class for each of five classes defined by car use and driver type is compared with the rates calculated for four subclasses created by sorting the records according to how many full years have elapsed since the last claim was incurred by the car’s drivers.

The relative effects of sorting cars by the prior claim records of their drivers are similar for all five classes and are not affected significantly by a correction for territorial class differences. The experience for the largest Canadian class, Class 1, is shown in Table 1. The recalculated rate relative to the claim rate for the undivided class was 9 percent lower for the three year claim free subclass and progressively higher with decreasing time since the last prior claim.

![Table 1](image)

As part of their examination of the statistical justification for claim free discounts, Bailey and Simon structure a model that reproduces the decrease in the claim rate observed in the Canadian data. The model comprises cars with three annual amounts of risk transfer representing a fourfold range in annual claim rates: 100,000 cars with a uniform risk transfer rate of 0.05 claims per car-year (Amount I); 100,000 cars with a uniform rate of 0.10 claims per car-year (Amount II); and 50,000 cars with a uniform rate of 0.20 claims per car-year.
(Amount III). The average claim rate of the model class is 0.10 claims per car-year. Bailey and Simon calculate the number of cars that would be claim free with a Poisson distribution after three years and combine them into a claim free subclass for each of the defined risk transfer rates. They calculate that the average claim rate for the new mix of the three defined rates would be 8 percent less than the class average. A subclass reduction in claim rates requires an offsetting claim-rate increase, however, to maintain the overall class average.

Because the present study concerns how all cars are affected individually by the pricing of risk transfer, the Bailey and Simon model calculations are extended here to include the subclasses with more recent prior claims. The results are compared with the Canadian experience in Figure 1. (Table 2 shows the calculated distribution of cars with the three defined risk transfer rates among the four claim-record subclasses.)

The extended model reproduces the general features of the Canadian claim data. (Bailey and Simon point out that further adjustment of model parameters would achieve more detailed agreement of the model with the Canadian data. For the present purposes, however, such adjustment would add to complexity but not to understanding.) If claim rates are taken as a measure of relative insurance prices:

- The price level for the claim free majority of cars decreases below the rate that the undivided class would pay; and
- This relatively small decrease is balanced by sharp price increases for the minority subclasses with recent claims.

The Bailey and Simon model, by reproducing empirical claim record insurance experience, shows the large variation in individual risk transfer that exists within automobile insurance price classes. Individuals in the same class are charged different prices for the same amount of risk transfer. The Amount I cars (0.05 claims per car-year) are charged four pure premiums and Amount II cars (0.10 claims per car-year) are charged two pure premiums for the same amount of risk transfer that costs the Amount III cars (0.20 claims per car-year) only one year's pure premium.

5 Risk Transfer and Miles Driven

Bailey and Simon (1960) consider reasons for the large variation in annual risk transfer within single price classes as indicated by the
Figure 1—Claim Rates of Prior-Claim Subclasses

**Canadian Experience**

![Graph showing claim rates for different prior-claim subclasses.]

**Bailey & Simon Model**

![Graph showing claim rates for different prior-claim subclasses.]

Subclasses by Number of Claim Free Years Prior to Experience
Canadian claim record experience and posited in the Bailey and Simon 1959 model for the experience. They note that driver-record and class plans are "quite ineffective in separating the better risks from the poorer risks," and conclude that:

[W]e have reached the point where we may state that the still unanalyzed cause (or causes) of variation among individual risks: (1) has a wide dispersion, (2) varies significantly from year to year for an individual risk, and (3) is measured only to a limited extent by the class plan and the merit rating plan. Annual mileage, which has long been felt to be an important measure of hazard, fits all these requirements better than any other single cause.

The first characteristic—dispersion of cars by annual miles driven—is corroborated by the U. S. Department of Transportation's nationwide personal transportation surveys. In 1977 one in five household cars was driven less than 3,000 miles, and one in ten was driven more than 20,000 miles; see Butler, Butler, and Williams (1988, p. 376).

The second characteristic—significant individual year-to-year variation in miles driven—is one that can be measured only by the car's odometer. Nevertheless, Bailey and Simon do not note a need for the car-mile exposure measure, but seem to view mileage as a lump sum class definition from which experienced car-year cost averages are used prospectively to set base price multipliers.

The third characteristic implies that variation in risk transfer amounts among individual cars resulting from differences in miles driven can be measured by class and driver-record plans. Modern class plans continue to show narrow distributions of cars by base price multiplier, in contrast to the range in miles driven; see Butler, Butler, and Williams (1988).

6 Bailey & Simon Model With Uniform Claim Rate Per Mile

Within-class variation in individual amounts of risk transfer per year can be seen as variation in the product of a rate variable and an exposure variable for each car; that is, variation in the product of a hypothetical average claim rate per mile for a car over the course of a year and the number of miles the car is driven. The current practice of charging annual rates for risk transfer implicitly assumes that the two variables cannot be resolved. In a car-mile system, however, the value of the exposure variable is recorded by each car's odometer. The following analysis of the Bailey and Simon model assumes that
all of the model cars share the same average risk-transfer rate, 0.000001 claims per mile. (The effect of presumed within-class differences in individual average claim rates per mile is considered later.) The model differences in annual risk transfer amount, therefore, are measured by the exposure variable.

The adopted claim rate per mile defines the miles per year driven for the model’s three risk amounts. For Amount I cars, 0.05 claims per year means 5,000 miles exposure per year; for Amount II cars, 0.10 claims per year means 10,000 miles exposure per year; and for Amount III cars, 0.20 claims per year means 20,000 miles exposure per year. The total risk transferred at the end of 20,000 miles traveled is the same for all cars.

### TABLE 2

<table>
<thead>
<tr>
<th>Amount of Risk Transfer</th>
<th>Miles/Year (Each Car)</th>
<th>Class (Undivided)</th>
<th>Years Since Last Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>5,000</td>
<td>100,000</td>
<td>96,071 4,413 4,639 4,877</td>
</tr>
<tr>
<td>II</td>
<td>10,000</td>
<td>100,000</td>
<td>74,082 7,791 8,611 9,516</td>
</tr>
<tr>
<td>III</td>
<td>20,000</td>
<td>50,000</td>
<td>27,441 6,075 7,421 9,063</td>
</tr>
<tr>
<td>Total cars</td>
<td>250,000</td>
<td>187,594</td>
<td>18,279 20,671 23,456</td>
</tr>
</tbody>
</table>

| Avg. Miles per Car-Year | 10,000 | 9,189 | 12,118 | 12,468 | 12,824 |
| Avg. Claims per Car-Year at 0.0001 Claims per Car-Mile | 0.1000 | 0.0917 | 0.1218 | 0.1247 | 0.1282 |

* Number of cars in subclass from Bailey and Simon (1959)

Bailey and Simon use their model to examine the mix of risks in the claim free subclass. The present study extends the analysis to obtain distributions of cars transferring the three risk amounts in the other three claim-record subclasses, as shown in Table 2. (As only the most recent claim is recognized by the plan, the claim-record distribution of the cars is calculated working back in time with a declining balance of claim free cars eligible to have a claim that counts. For example, of the 100,000 Amount I cars eligible in the 0 year, 4,877 have claims by the Poisson distribution at a 0.05 rate. The claim free balance of 95,123 cars similarly is reduced in past year 1 and so on for three years.) The miles-per-car-year average for each subclass is determined by the mix of Amount I, II, and III cars.
Although the number of cars transferring each risk amount (I, II, and III) increases with claim recency (from 2 to 1 to 0 years since the last claim), the number of highest mile cars (20,000 miles) increases most rapidly. Therefore, the average miles driven is highest (12,824 miles) in the most recent claim subclass (0 years). The average of the claim free subclass (3+ years) concurrently decreases from the class average of 10,000 miles to 9,169 miles.

7 Accidents as Random Sampling

If it is assumed that each class has uniform average claim rates per mile, automobile accidents in the Bailey and Simon model can be envisioned as a random sampling of the class population on the road. Accidents can sample only what is exposed. (Bias in the accident sampling of real car-mile class populations that results from differences in the average driving conditions encountered by individual cars is examined later in the paper.) Cars driven many miles and cars driven few miles are included in the random accident sample of the car-miles driven by the cars in the class. Because cars driven more than the class average put more miles on the road, they are overrepresented in the accident sample. Cars driven less than average are underrepresented in this sample relative to their proportion in the class. The average miles per car of the recent claim subclasses are increased through this random sampling process. The preferential selection of cars driven more miles into the recent claim subclasses also concurrently lowers (slightly) the average miles per car of the large remaining population of cars without accidents. Because of their greater average number of miles of exposure, therefore, the recent claim subclasses average more claims in a subsequent year than does the claim free subclass. All of the recent claim subclasses, however, also contain cars driven less than the class average.

8 Price-to-Cost Accuracy for Individual Risk Transfer

The miles-driven interpretation of the Bailey and Simon model provides a cost measure in car-miles for the three individual amounts of risk transferred. A price-to-cost relationship can be established for the three risk transfer amounts (I, II, and III) in the undivided class and in each of the four driver-record subclasses, a total of 15 relationships applied to the 15 groupings of cars in Table 2. (An equivalent 15 price-to-cost ratios would result from dividing the model’s average claim rates per year at the five class and subclass prices by the three defined annual claim rates at the individual costs. Without being
had a recent claim, however, pay 2 cents to 3 cents more per mile

cars, which are individually driven 10,000 miles per year, is most

cent reduction in the cost per mile. Some cars in the class which have

telling. Without subclassification, all Amount II cars pay 10 cents a

mile Amount I cars pay 20 cents a mile, as shown by Figure 2.

percent, the adjustment would not affect the results of the analysis

significance.)

Without claim-record pricing, all individuals pay the $1,000 per

year pure premium for the class, the same premium that Amount II

cars would pay at 10 cents a mile. At a $1,000 annual rate, however,
the 20,000 mile Amount III cars pay 5 cents a mile, while the 5,000
mile Amount I cars pay 20 cents a mile, as shown by Figure 2.

When the model class is subdivided on the basis of claim records,
the proportions of cars at the three mile amounts are changed in the
four subclasses created. These new mile averages multiplied by the
assumed rate of 0.00001 claims per mile produce four new pure premi-

ums for the claim-record subclasses: $917 for the claim free subclass

and $1,212, $1,247, and $1,282 for the progressively more recent
claims subclasses. These four annual premiums divided by the three
mile amounts in each subclass produce the 12 new prices per mile for
the model cars shown in Figure 2. The effects on the cars at the three
mile amounts are different.

The effect of claim-record pricing on the risk transfer Amount II
cars, which are individually driven 10,000 miles per year, is most
telling. Without subclassification, all Amount II cars pay 10 cents a
mile for insurance. With subclassification, most of them receive a 1
cent reduction in the cost per mile. Some cars in the class which have
had a recent claim, however, pay 2 cents to 3 cents more per mile
(Figure 2). Claim-record subclassification transforms pricing that is
cost-based by definition for all Amount II individual cars to pricing that is not accurate for any cars.

It could be argued that improved price-to-cost accuracy is needed most for the model car risk transfer amounts that differ most from the class average. Without claim-record subclassification, the cars at the 5,000 mile amount pay 20 cents a mile, 10 cents a mile more than the class average price. In the claim free subclass such cars receive a 2 cent per mile reduction in price. This reduction, however, is much smaller than the 4 cents to 5 cents a mile below the class average price that the cars at Amount III (20,000 miles) pay regardless of their claim-record subclass. Furthermore, provision of this 2-cents-per-mile downward adjustment for the cars at Amount I is gained at great cost to the Amount I cars with recent claims. For these individuals, the 20-cent-a-mile amount they pay without claim-recency pricing is increased 4 cents to 6 cents a mile in the recent claims subclasses. This increase equals the entire per mile price paid by the cars at Amount III regardless of their claim-record subclass. The only negative effect for Amount III cars of pricing on claim record is that some lose a small part of their per mile subsidy (Figure 2).

Statistically, a decrease in the average cost per mile paid by Amount I cars from 20 cents to 19.3 cents coupled with an increase in the average cost per mile paid by Amount III cars from 5 cents to 5.3 cents is evidenced in a 6 percent decrease in variance of price-to-cost ratios from the three ratios of the undivided class to the twelve ratios of the driver-record subclasses. The reduced variance, however, should not mask the disparate cost of the improved statistics on individuals that is evident in Figure 2. Driver-record pricing increases the range in price-to-cost ratios paid by individuals in the same class 40 percent, from a spread of 15 cents a mile before driver-record pricing to 21 cents a mile between the lowest value for Amount III cars and the highest for Amount I cars. Operating at random on individuals, the so-called improvement increases the underpricing of risk transfer for some cars already underpriced and the overpricing of risk transfer for some cars already overpriced.
Figure 2
Effect of Model Annual Premiums on Car-Mile Prices

Class Premium $1000/Car-Year

Effective Price per Car-mile

Cost per Car-mile

Miles Driven by Each Car

Claim Record Premium ($917 to $1,282/Car-Year)

Effective Price per Car-mile

Cost per Car-mile

Miles Driven by Each Car
If the pricing unit were converted from car-year to car-mile so that all of the car-owners in the model class paid the same 10 cents per mile rate, however, each owner would pay only for the on-the-road protection the car consumed, while total premium received by insurers would remain the same. A car driven the model class average of 10,000 miles would experience no change in the $1,000 premium with insurance charged at car-mile rates, provided its mile amount did not change. A car driven 4,780 miles would pay $478, while a car driven 21,240 miles would pay $2,124.

9 Variation In Claim Rates Per Mile

The large differences in the type of risk environment that cars can encounter are indicated by comparing statistics for accident severities and per mile accident rates between interstate highways and city streets or between day and night driving on the same road. For example, the injury rates per million vehicle-miles of travel ranged from 0.36 on rural interstates to 3.0 on local urban roads in 1991; see Federal Highway Administration (1992). In principle, therefore, the diverse individual mixtures of car use and driving environment make it inevitable that changes in class definition would result in different claim costs per mile for new classes.

Accident rates per vehicle mile depend not only on traffic engineering classification of accidents experienced under roadway or other relevant conditions during some time period, but also on determination of the number of vehicle-miles of exposure to risk that produced the classified accidents. The same relationship holds for automobile insurance. Only if car-miles of exposure are determined can the number and cost of claims incurred within a certain time period by a certain class of cars provide any quantitative information on the expected risk transfer cost of each mile that cars in the class will travel in a subsequent rating period.

As an example of the effect of classifiable per mile differences within a business-use class of cars with adult drivers, assume two types of car use by sales representatives. With reference to the government injury rates given above, assume that one type of use covers the whole state and averages 0.25 claims per million car-miles (statewide cars), while the other covers only a metropolitan area and averages one claim per million car-miles (metro cars). Any lower average cost per claim by the metro cars resulting from lower speed urban accidents would narrow the effect on the claim cost per mile of the 4:1 claim-rate difference. Separately classifying the statewide and metro cars, provided there were enough car-miles of each usage
type for statistical reliability, would show the differences in car-
mile cost.

10 Accidents as Biased Random Sampling

The analogy used above for viewing accidents as a process of sam-
pling car-miles on the road can be extended to presumed variations
within classes in per mile accident rates. To the extent that cars are
not classified by driver age and experience according to the known
per mile differences in accident involvement for these categories, the
accident random sampling of class car-mile populations would be
biased toward the cars driven by inexperienced drivers and by
drivers near the beginning and end of the driver age range. Further,
owing to differences in driving conditions by time and place, the
accident random sample of car-miles would be biased to the cars used
more under conditions of higher risk per mile. The accident samples,
however, also will contain cars used on average under conditions of
lower risk per mile. For example, with a Poisson distribution of
claims at the rates given for the hypothetical business use cars, 18
percent of the metro cars will incur claims in 200,000 miles of driving,
but so will 4.9 percent of the statewide cars.

11 Driver-Record Pricing on a Car-Mile Basis

Like the current driver-record pricing on a car-year basis, driver-
record pricing under a car-mile exposure unit system would have an
apparent justification in cost. The inevitable bias in an accident sam-
ple assures that the subclass of cars defined as incurring a claim in
the most-recent-miles-traveled interval—within the most recent
50,000 miles, for example—will average more accidents per mile in a
following miles-traveled interval than the class average. Applying a
recent claim surcharge to the cents-per-mile class price, however,
would constitute a deliberate, random, and unjustifiable increase in
what is paid per mile by the recent claim cars with lower than
average claim rates compared to what they would pay if they were
classified separately. Furthermore, the higher per mile charges for
the recent claim cars with significantly higher than average claim
rates per mile still would be less than what they would pay if they
were classified separately.

Because both the claim free and recent claim subclasses of a class
are mixtures of cars with above average and below average claim
rates per mile, any action to separate them must be through class
redefinition applied to the whole class.
12 Conclusion

CAS introduces its ratemaking principles with the specification that "[r]atemaking is prospective because the property and casualty insurance rate must be developed prior to the transfer of risk." In a car-mile system, evaluation of the cost per mile to be used in a prospective class rate can be done only on the basis of claim experience for a group of cars referenced to the group's total measured car-miles of exposure that produced the claims.

What cannot be known prospectively, because it is controlled by individual car owners, is the amount of risk that will be transferred through operation of each car. Although risk transfer is paid in advance at a class rate per mile, protection is not consumed (premium is not earned by the insurer) until the risk is transferred, mile after mile, by driving. Conversely, premiums charged at car-year rates invert this cost-based relationship by charging less per mile for each mile of protection consumed, a contradiction of cost-based pricing. The assumption that this contradiction is unavoidable on practical grounds is not neutral. It favors all owners of cars driven more miles per year than the average for their class.

References


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