# Center for Economic Justice Comments 

## To NAIC Auto Study Group on

## Price Optimization

August 16, 2014

The Auto Study Group has received lengthy presentations by Earnix and Towers Watson describing price optimization and explaining, in their view, why price optimization is not a rating factor and, consequently, not subject to regulatory oversight. The purveyors of price optimization services for insurers make the following points:

1. Insurers have always deviated from indicated rates for a variety of competitive and business reasons, relying on management judgment for such deviations. PO is simply a more scientific, data-driven approach to employing such management judgment.
2. Rating factors are factors related to costs of transfer of risk - loss costs or expenses. Since PO is not related costs of transfer of risk, it is not a rating factor and, consequently, not subject to regulatory oversight.
3. There is a statistical confidence interval around the indicated rate and any selection based on management judgment within that confidence interval is actuarially sound.

Each of these contentions is clearly erroneous. Demonstrating the falsehood of any one of these assertions renders PO illegal and unfair under current statutory rate standards. Clearly, demonstrating the falsehood of all three should make clear that regulators should take immediate action to stop PO under existing regulatory authority.

Insurers have historically and routinely deviated from indicated rates and PO is simply an extension of this historical practice.

It is correct that insurers have deviated from indicated rates in the past, but that deviation has not been anything like PO. Historical deviation from rates has typically been an insurer selecting a lower rate than the indicated rate. Regulators have not routinely approved insurer requests for, say, a $20 \%$ rate increase when the insurer's indication is for a $5 \%$ rate increase. Historical deviation from indicated rates has almost always been a lower selected than indicated rate and the lower selection has been across broad risk groups. For example, the indicated rate change is $+20 \%$, but the insurer selects a base rate increase of $5 \%$.

PO is new on both quantitative and qualitative bases. It employs consumer-specific information to deviate from indicated rates not by broad risk groups but by individual consumer and those deviations are as likely or more likely to be higher than indicated rates than lower than indicated rates.

The engine of PO is price elasticity of demand - meaning the rate charged is dependent on the consumer's likely response to a higher rate. PO means that an insurer will charge a higher rate to a consumer for whom the PO scoring model indicates the higher rate will not prompt the consumer to shop for insurance from other providers. This is not a symmetrical exercise in which some consumers will see lower rates while other will see higher rates. PO is optimization of price to maximize profit so higher prices will be assessed on these consumers the insurer believes will accept prices greater than the expected and indicated cost of the transfer of risk.

Insurers' definition of a rating factor has historically been fungible to justify shielding their practices from regulatory oversight.

Historically, there was a clear demarcation between underwriting and rating factors. Underwriting utilized very few and simple criteria to determine if an insurer would offer coverage and, if so, in which company - during a period in which insurers might have one company (and one set of rates per company) for preferred, standard and non-standard underwriting evaluations. Rating factors were any characteristic of the consumer, vehicle or property used to determine the premium charged for an individual policyholder. Historically, underwriting was left to insurer and not subject to routine regulatory oversight, while regulators did require the filing of rating manuals and reviewed those rating manuals for compliance with the statutory requirement that rates not be unfairly discriminatory.

Around the time of introduction to credit scoring, some insurers figured out that if they took a rating factor and use that rating factor to create different base rates, then they could call the rating factor a tier placement factor, declare it as part of underwriting and not tell regulators about. So instead of using credit score as a rating factor with, say, relativities of .75, 1.0 and 1.25 (reflecting a discount of $25 \%$, base rate and a surcharge of $25 \%$ ) the insurer could call credit score a tier placement factor and have three sets of base rates: $25 \%$ below the average, the average and $25 \%$ above the average.

Clearly, this approach was an effort to avoid regulatory scrutiny. For many years, there have been sessions at the Casualty Actuarial Society's Annual Ratemaking Seminar instructing company actuaries how to utilize "tier placement" to avoid regulatory scrutiny.

Given this history, is it reasonable to ask if PO is another effort by insurers to avoid regulatory scrutiny by simply calling a rating factor something else? And the answer is yes.

At this point, it is necessary to have a definition of rating factor. A rating factor is any characteristic of the consumer, vehicle or property utilized by the insurer to determine the premium charge. Rating factors must be risk classifications to comply with statutory rate standards; that is, a rating factor must related to expected costs of the transfer of risk - expected losses or expenses to issue and administer the policy.

By this definition of rating factor, PO is clearly a rating factor as it is based on individual consumer characteristics and is applied to individual consumers to determine the premium charge for that consumer. At once, it is now obvious that PO is an impermissible rating factor because it is not related to the cost of transfer of risk, as admitted by both Earnix and Towers Watson.

Simply stated, the definition of a rating factor must be a constant and not subject to redefinition any time insurers want to introduce new pricing methods without regulatory oversight.

The concept of a confidence interval around indicated rates misapplies a statistical concept to insurance ratemaking and regulation. The confidence interval is a function of choices made by the insurer in specifying the rate development model and, consequently, is subject to manipulation. It is incorrect that any rate within the confidence interval is as reasonable an estimate of the expect cost of risk transfer as the indicated rate.

A confidence interval is created around the output of a statistic or statistical model. The size and nature of the confidence interval is determined by inputs chosen by the modeler, including the type of probability distribution used and the size of the data set used (e.g., number of observations), among many other factors. Consequently, the size and nature of a confidence interval - like the results of the underlying ratemaking model - can be manipulated by the insurer.

In the Towers Watson presentation, an example was given showing an indicated rate of $\$ 500$ and a confidence interval of $\$ 400$ to $\$ 600$. It is incorrect that a rate of $\$ 599$ is as good an estimate of the expect cost of transfer of risk as $\$ 500$.

Given that the size and nature of confidence intervals (as well as the results of the underlying ratemaking model) are subject to manipulation based on selected inputs and data and given that it is incorrect that any rate within an alleged confidence interval is as reasonable an estimate of the rate as the indicated rate, this third pillar of the PO justification crumbles.

While there are many issues within the world of insurance regulation that reasonable people can disagree upon, surely PO is not one of them. PO is clearly related to lessened auto insurance affordability for low- and moderate-income consumers.

As I wrap up, I ask regulators, do you accept all three pillars of insurer justification for PO?

If no, why haven't you taken action?
If yes, how do you respond to the points raised by CEJ, CFA and others? I hope you will take the time during this meeting to explain why you accept the industry arguments.

The final thought I will leave you with is that PO means higher prices predominantly for those low- and moderate-income consumers least able to afford auto insurance because these are consumers living in communities with the least competition among auto insurer for business. PO means taking advantage of those with the fewest alternatives. Addressing PO is not only an issue of enforcing existing statutory standards regarding unfair discrimination, but also an issue essential to promoting greater affordability of insurance among those consumers for whom the cost of auto insurance is the greatest burden.

