March 28, 2014

Commissioner Adam Hamm
President, National Association of Insurance Commissioners

By Electronic Mail

Re: **Prohibiting the Use of "Price Optimization" in Insurance Pricing as Clear Violation of Unfair Discrimination Provisions in State Rating Laws**

Dear Commissioner Hamm and Members of the NAIC:

The Consumer Federation of America (CFA) and the Center for Economic Justice (CEJ) write to urge state insurance regulators, individually and as members of the NAIC, to stop the use of "price optimization" by insurers to set premium charges for consumers. In this letter, we explain what "price optimization" is, why it clearly violates statutory and actuarial standards barring unfairly discriminatory rates, and why it will lead to higher rates for the most vulnerable consumers for reasons completely unrelated to risk of loss.

Price optimization is a software / data mining / predictive analytics tool marketed by Earnix. It promises to help insurers maximize revenue and profitability by adjusting rates based upon consumer price elasticity of demand (i.e., responsiveness to price changes). ***Stated differently, with price optimization models, insurers charge higher prices to those consumers deemed least likely to shop around in the face of a rate increase.*** Since price optimization is a rating factor – based on Earnix's evaluation of a consumer's responsiveness to price changes – and since such a rating factor is unrelated to risk of loss or expenses associated with the transfer of risk, insurers' use of price optimization leads to consumers of similar risk and expense being treated differently.

We believe most regulators are not aware of insurers' use of price optimization because insurers do not file price optimization factors or models with regulators and do not include price optimization in filed rates or underwriting guidelines. Rather, based on guidance by Earnix, insurers treat price optimization as "management discretion" to deviate from cost-based rates for "competitive purposes."

CFA and CEJ call on state insurance commissioners to immediately stop insurer use of price optimization software based on price elasticity of demand. Such price optimization is an unfair rating factor that clearly violates statutory and actuarial standards for rates. Moreover, since research shows that low- and moderate-income consumers shop less than wealthier Americans for a variety of reasons including fewer points of access to the market, time constraints and lack of financial experience, price optimization has a disproportionate impact on these consumers – compounding the difficulty they already have affording state-required auto and lender-required homeowners insurance. We respectfully request and urge the NAIC to adopt a resolution calling on states to ban the use of price optimization.

1. What Earnix Tells Regulators versus What Earnix Tells Insurers

In a March 17, 2014 presentation to the National Association of Insurance Commissioners (NAIC) Auto Insurance (C/D) Study Group, Earnix representatives presented its product in a substantially different manner than it had in prior communications, marketing materials and public statements. At its essence, Earnix hopes that by calling a risk classification something else – "management discretion" – that a risk classification will somehow be transformed to something else in the eyes of regulators. We have seen this scenario in the past when insurers decided to call rating factors something else – tier placement factors – and then treat the rating factors as underwriting guidelines which then were not filed with regulators. Advising insurer actuaries how to use of "tier placement factors" to avoid filing rating factors with state insurance departments has been a staple of the Casualty Actuarial Society annual Ratemaking and Product Management meeting for many years.

In an appendix to this letter, we detail several misrepresentations made by Earnix to regulators, including:

- hiding the purpose of price optimization as something other maximizing insurer profitability;
- hiding the foundational factor of price optimization – price elasticity of demand or, stated more simply, raising prices for those consumers less likely to shop around in the face of a premium increase; and
- representing price optimization as something other than a risk classification based on a factor – price elasticity of demand – unrelated to loss costs or other costs associated with the transfer of risk

2. Price Optimization is a Prohibited Risk Classification

It is clear why Earnix has changed its presentation of price optimization to be something outside of the ratemaking process – using price elasticity of demand clearly violates statutory rate standards for unfair discrimination and actuarial standard for cost-based pricing. Now, Earnix argues that price optimization is a tool to systematically move rates and rating factors away from the actuarially determined cost-based price levels but claim this violates neither the rating laws' requirements that rates not be excessive, inadequate or unfairly discriminatory nor the actuarial standard that rates be cost-based.

Knowing that price elasticity of demand is a prohibited risk classification, Earnix attempts to rebrand it as something other than a risk classification. But, price elasticity of demand through a price optimization model is a risk classification subject to statutory limitations on unfair discrimination. It is a characteristic of the consumer used to determine the premium charge for that consumer – like any other rating factor or tier placement factor.

State insurance regulators have not kept up with insurer developments in data mining and advanced modeling of rates. Insurers are combing all available databases to mine data for maximizing profit and the Earnix price optimization is the latest example. ***But price optimization represents a watershed event, the use of factors unrelated to insurer costs for the setting of rates for individual consumers. It is a textbook example of unfair discrimination in which two consumer posing the same risk of loss will be charged different premiums because one of the consumers is less likely to shop around in the face of, say, an 8% premium increase than the other.***

3. Price Optimization Will Disproportionately Hurt the Most Vulnerable Consumers.

During the March 17, 2014 call, Earnix made the incredible claim that price optimization would promote greater competition among insurers and that consumers would benefit from such competition. The claim is preposterous because the entire premise of price optimization is that insurance markets are not competitive – that some consumers will pay more than a cost-based premium because they are not expected to shop for a lower price. Rather than promoting competition, price optimization raises insurer revenues due to the absence of consumers exerting market pressure to discipline insurers.

The clear losers from price optimization are vulnerable populations – low- and moderate-income consumers and minority consumers. Groups who tend to have fewer marketplace options for reasons of geography, time available, financial literacy or, more generally, tend to shop less than average are vulnerable to having premiums raised unfairly by price optimization.

Research shows that low- and moderate-income auto owners are struggling with affordability of state-required auto insurance. CFA has issued a series of six reports showing this serious problem. For instance, families in the lowest quintile of income in America only have an average income of $10,000. This research shows that these families, particularly in urban areas, have little opportunity to buy minimum state-required auto insurance for less than $500 and frequently can't buy it for less than $1,000. Often, in places like Detroit and Baltimore, the price can be over $2,000. Most of the uninsured motorists in America are lower-income but good drivers who simply cannot afford the coverage. Since research also indicates that the poor do not, for various

reasons, shop as much as other consumers, it is likely that price optimization will make state-required auto insurance even more unaffordable for the poor in America.[1] The fact that price optimization will severely impact lower-income people and increase the uninsured motorist populations around the country requires regulatory action.

4. CFA and CEJ Call on State Insurance Commissioners to Stop the Use of Price Optimization Now.

It is clear at this point in the development of price optimization in insurance in America that, based on our discussions with this Study Group and several individual regulators, most regulators had (until very recently) no idea that price optimization was in use in their states, how it works or which insurers are using it. In a survey of insurers' use of predictive analytics and price optimization, Towers Watson[2] found:

> While many carriers are not currently using either price integration (i.e., bringing together customer behavior, competitor and loss cost models to derive key business metrics, such as profit and volume, to test the impact of different rate scenarios) or price optimization (i.e., the application of a mathematical search algorithm to a price integration framework, aiming to identify the rates that maximize business metrics), they increasingly plan to do so.
>
> 54% of personal lines respondents are using price integration, including 12% that have moved to price optimization.

Earnix itself states that: "Of the companies with over $1B GWP, 45% currently optimize their prices and an additional 29% are planning to adopt optimization in the near future. Only 3% of the companies with over $1B have no plans for price optimization." (Emphasis in the original) (Source: "2013 North America Auto Insurance Pricing Benchmark Survey," Earnix)

The 2013 regulatory modernization report by the Federal Insurance Office identified the problem posed by insurance data mining activities as exemplified by price optimization. The report recommended:

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[1] "In fact, nearly one in three low-income households reports that they do almost no shopping around; only about one in eight higher income households don't. One might hear such figures and respond, 'caveat emptor,' but the fact is that many of these consumers are new to many of these markets and may not fully understand their options. That problem has grown worse as many of these markets have become more complicated over the past decade: From insurance plans to mortgage policies, consumers are often beset with large numbers of choices, making it more difficult to make smart decisions." From Poverty, Opportunity: Putting the Market to Work for Lower Income Families. Washington, DC: The Brookings Institution, 2006, page 11.

[2] *Insights Predictive Modeling: 2013 Predictive Modeling Benchmarking Survey*, Towers Watson, March 2014

(1) States should develop standards for the appropriate use of data for the pricing of personal lines insurance;
(2) states should extend regulatory oversight to vendors that provide insurance score products to insurers;
(3) FIO will study and report on the manner in which personal information is used for insurance pricing and coverage purposes.

With an ever-expanding universe of personal information available, important questions regarding boundaries or limitations on the use of that personal information should be answered in the context of insurance. Therefore, regulatory policy and practice must clarify that the criteria and methodologies actually used by insurers not rely on impermissible or discriminatory factors. Risk classification factors may be an appropriate subject for binding, uniform federal standards, particularly to the extent that insurance scoring methodologies involve factors that implicate rights secured under federal law.

We urge state insurance regulators to not only stop the use of price optimization, but to develop a modern regulatory framework for insurance risk classifications that recognizes insurers' access to and increasing use of mountains of personal consumer information and protect consumers against unfair discrimination.

Thank you for your consideration.

Yours truly:

J. Robert Hunter
Director of Insurance
Consumer Federation of America

Birny Birnbaum
Executive Director
Center for Economic Justice

Cc: NAIC Members
Michael McRaith, Director, Federal Insurance Office
Senator Ben Nelson, Chief Executive Officer, NAIC
Eric Nordman, NAIC
Aaron Brandenburg, NAIC
Representative Greg Wren, President, National Conference of Insurance Legislators

Appendix: What Earnix Tells Regulators versus What Earnix Tells Insurers about Price Optimization

In her March 17, 2014 presentation to the National Association of Insurance Commissioners (NAIC) Auto Insurance (C/D) Study Group, statements and assertions by Earnix's General Manager in North America Meryl Golden were radically different – and contradictory – to statements and assertions by Earnix about price optimization in advertisements and documents produced by Earnix prior to March 17, 2014. At its essence, Earnix hopes that by calling a risk classification something else – "management discretion" – that a risk classification will somehow be transformed to something else in the eyes of regulators. We have seen this scenario in the past when insurers decided to call rating factors something else – tier placement factors – and then treat the rating factors as underwriting guidelines which then were not filed with regulators. Advising insurer actuaries how to use of "tier placement factors" to avoid filing rating factors with state insurance departments has been a staple of the Casualty Actuarial Society annual Ratemaking and Product Management meeting for many years.

Here are three examples, among many, of Earnix misrepresentations to regulators:

1. Earnix tries to hide the purpose of price optimization as something other maximizing insurer profitability.

Prior to March 17, 2014 Presentation: Earnix promised prospective American insurance company customers that price optimization was a profit-maximizing tool:

> "Price optimization is defined as using mathematical algorithms to determine optimal values of rating factors to meet business goals and constraints (e.g., maximizing profitability while achieving X% of policy growth.)"
> Source: 2013 North America Auto Insurance Pricing Benchmark Survey

March 17, 2014 Presentation: Price optimization as a tool for profit for profit maximization is a "misconception."

> Misconception: "PO is about profit maximization."
> Correction: In some countries, this is the case.

It is clearly disingenuous for Earnix to indicate price optimization is not about profit maximization. Earnix admits that its tool is used by insurers to achieve certain goals, such as reducing lapse rate while maintaining rates or minimizing lapse rates with a rate increase. These "goals" are simply the means of maximizing profit. In pitching the product to insurers, Earnix was more forthcoming:

> In a Best's Review 2012 advertisement featuring Ms. Golden, Earnix promises "Companies that adopt price optimization realize substantial financial benefits...Late adopters will be at a competitive disadvantage."

> Source: "Price Optimization at the Tipping Point," Bests Review
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> Another company document explained: "The financial benefits of price optimization can be significant. Companies that adopt optimization as a pricing strategy can realize improvement of 1-4 points in the combined ratio and/or as much as a 10-20% increase in new business conversion rates." Source: "Price Optimization in North America: Myth vs. Reality," September 2012

2. Earnix hides the foundational factor of price optimization – price elasticity of demand or, stated more simply, raising prices for those consumers less likely to shop around in the face of a premium increase.

Prior to March 17, 2014: Earnix has repeatedly touted its product as an advanced predictor of a customer's likely reaction to price increases –price elasticity of demand. Earnix even referred to price optimization as an "elasticity model."

> Referring to its own report that nearly half of America's largest insurers "currently optimize their prices," Earnix claimed that "[t]he most common use of elasticity models is for factor selection, mentioned by 58% of the companies that use such models." Earnix added that "[w]hen asked to rate the top challenges in their pricing processes, respondents pointed out the following challenges: (1) Effectively incorporating knowledge of consumer price elasticity..."
> Source: "2013 North America Auto Insurance Pricing Benchmark Survey"
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> Earnix explained that price optimization allows insurers to "[a]nalyze the price elasticity of each customer profile and uncover the efficient pricing frontier for each product in your portfolio."
> Source: Earnix.com "Price Optimization: Insurance Price/Rate Optimization"
>
> "Earnix best-in-class analytics and patent-awarded optimization technology empowers insurers to implement pricing strategies that go beyond traditional risk cost pricing, incorporating demand elasticity models to maximize profit and growth objectives." (Emphasis added)
> Source: Earnix.com "Insurance Pricing and Customer Value Optimization"

March 17, 2014 Presentation: The driving force in the price optimization model – assessing individual consumer price elasticity of demand – was not mentioned. Instead, Earnix referred to an analytical model based on "competitive" factors. It was only after a question from a regulator that Earnix admitted that price elasticity of demand was the key factor in their software.

3. Earnix misrepresented price optimization as something other than a risk classification based on a factor – price elasticity of demand – unrelated to loss costs or other costs associated with the transfer of risk.

Prior to March 17, 2014: Earnix marketed its software as an iconoclastic tool to get past the tradition of actuarially based rates.

> Prior to the presentation, the company claimed: "Earnix best-in-class analytics and patent-awarded optimization technology empowers insurers to implement pricing strategies that go beyond traditional risk cost pricing, incorporating demand elasticity models to maximize profit and growth objectives…In today's competitive insurance market, traditional ratemaking based on risk and cost alone is no longer sufficient. The answer to the needs of insurers in the customer-driven age is incorporating demand and risk cost considerations to optimize pricing and customer value." (Emphasis added) Source: Earnix.com "Insurance Pricing and Customer Value Optimization"

March 18, 2014 Presentation: Earnix now presents price optimization as something outside of the ratemaking process and in the world of management discretion on how close or far from actuarially-indicated rates the selected rates should be. Earnix now tells regulators that price optimization is merely a tool for "suggesting" minor adjustments that "helps inform an insurer's judgment."

Additional analysis of the Earnix presentation by CFA can be found at http://www.consumerfed.org/pdfs/CFA-Response-to-Earnix-March17-Presentation.pdf