

BEST'S REVIEW®

ISSUES & ANSWERS:

DATA AND FAIRNESS

A senior consulting actuary discussed the industry's efforts to create more transparency and deal with potential hidden biases that may exist in data usage and in modeling.

Interviewed Inside:



Gary Wang
Pinnacle Actuarial Resources

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A Matter of Fairness

Gary Wang, Senior Consulting Actuary for Pinnacle Actuarial Resources, said that the issue of fairness is a very common social discussion that's taking place across a wide spectrum of industries, and insurance is part of that. Following are excerpts from an interview.

Why is the issue of fairness and bias relevant in both the P/C and broader insurance industries?

We're in an era with heavier reliance on data, with more complex models to investigate that data and gain insight from it. As the amount of data and complexity of models continue to grow, we find that there's greater societal concern for transparency with what insurance companies are doing with data and models. There's fear that the use of this information and related modeling techniques are increasing the risk of potential hidden bias in how we use and implement model insights. That is coupled with a current environment in which discussions are taking place with respect to fairness associated with race.

How have regulations changed in recent times? What are recent regulatory trends?

Regulators are actively asking insurance companies to evaluate the potential for bias or disparate impact in their data and modeling practices, and to contribute to mitigation if unfair bias is found. Last December, the National Association of Insurance Commissioners (NAIC) issued a bulletin on artificial intelligence that has been adopted by 15 jurisdictions as of the end of the first half of this year. In addition, there have been unique efforts taking place in Colorado since 2021 and in New York the last few years that attempt to address the issue of evaluating potential unintended bias within insurance models and, if found, how to mitigate that bias.

What are the challenges in defining fairness?

One of the biggest issues is that many quantitative metrics can be associated with whether or not a model is fair. In the insurance industry, the existing tension is predominantly between the idea of a model, for example, predicting premium, and whether or not that premium, on average, varies across race or ethnicity. In addition, because we know that the premium is meant to reflect potential for losses, there's also a desire for the model to accurately predict a premium based on losses. Because these two measures can be in tension, it is possible for a model to accurately reflect losses yet be different across different races.



Gary Wang

Senior Consulting Actuary
Pinnacle Actuarial Resources



“When it comes to fairness, we’re in an evolving environment where there’s a call for more proactive evaluation and assessment.”

Visit the Issues & Answers section at bestsreview.ambest.com to watch an interview with Gary Wang.

How do you balance fairness regulation and the need for competitive pricing?

The problem with trying to develop equity in pricing along with a sense of accuracy creates difficulty. We create situations in which, in a competitive environment, companies endeavor to price accurately. They may get a certain amount of comfort knowing that the mix of business in the portfolio may change, but because the model is relatively accurate for policyholders, it will continue to be accurate as the mix changes. Regulation may be considered disruptive in terms of constraining how accurate that model can be. Regulation may introduce a level of subsidization into companies' pricing schemes. Because different companies have different portfolio mixes, the way subsidization happens will vary. There's a need and concern for balance that must be kept in mind as insurers look for equitable pricing and ways to help and support underserved communities. That needs to be coupled with an insurance environment in which more companies are able to write and offer products offering competitive pricing for those communities.

