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Innovation is What Captives Do. Here's How Actuaries Make It Possible.

Captives are known for creating novel coverages for emerging risks, but they need actuarial prowess to ensure new products are priced appropriately.

Captives have always been in the business of innovating, creating new coverages where and when the traditional market has none to offer -- or at least none that are available quickly enough at an affordable price. It takes time for commercial carriers to prepare a new rate filing, submit it to regulators, allow them to review and approve it, and subsequently get it implemented.

The problem with that timeline is that the world is changing rapidly. Risks emerge and evolve constantly, and they sometimes demand more speed and agility from insurers than the traditional market can deliver.

With more regulatory flexibility than commercial carriers, captives have the benefit of speed on their side.

"Novel types of coverage often emerge from the captive industry to address risks that were not even considered insurable a decade ago," said Aaron Hillebrandt, Director and Consulting Actuary with Pinnacle Actuarial Resources, Inc.

Innovation of new coverages, however, is not without challenges. Actuaries are being pushed into uncharted territory as they build rating models to project losses and derive premiums for emerging risks.

"It comes down to data and methodology. Is there enough data on this new risk for an actuary to fulfill their role, and will traditional methodologies suffice for an untraditional exposure?" Hillebrandt said.

Three examples demonstrate how innovative products born in the captive industry can test the bounds of actuarial capability in those two dimensions of data and methodology, and why actuarial expertise is critical to create coverage for emerging risks:

1. Medical Stop Loss: Pricing Aligns with Traditional Techniques

Medical stop loss coverage, though well-defined and familiar, is gaining popularity as a way for companies to fund their employee benefit plans while placing limits on liability. A captive insurer would cover any claims in excess of what the company can retain itself, up to its reinsurance attachment point. As with any healthcare coverage, there is an abundance of data available to actuaries.

"Every time an employee goes to the doctor or incurs some medical cost, there's more data for us to use. The more data we have, the more confident we feel in the conclusions we're going to reach," Hillebrandt said.

Medical stop loss claims also tend to close quickly, meaning actuaries don't have to contend with long lags in loss

Aaron Hillebrandt, Director and Consulting Actuary with Pinnacle Actuarial Resources, Inc.

development. Losses can be evaluated once per month, as opposed to once per year.

Because the coverage is widely understood and the data so rich, actuaries are able to employ traditional methods like pure experience rating to create a pricing structure.

"Medical stop loss is an example of an emerging risk that is not bucking the system. Though it's becoming popular in the captive market, you can still use traditional techniques," Hillebrandt said.

"That's not the case with some newer, less clearly defined coverages."

2. Cyber: Lack of Data Increases the Challenge

Cyber insurance is one of those less clearly defined coverages. One reason is sparse claims data.

"With cyber you do have claims data, but it's much thinner. For any given company you're not going to have enough claims history to develop a premium," Hillebrandt said. "So you have to look outside, to some industry benchmark."

But because "cyber risk" is not clearly defined and current insurance products lack standardization, the relatively meager loss data available in the market can point in different directions and make it challenging for actuaries to determine which sources provide the best benchmark.

Organizations like NetDiligence and the Ponemon Institute that conduct cyber claims and data breach studies may be focused more on total economic impact, including factors such as opportunity cost associated with business interruption and damaged reputation. There may also be variation in insured loss estimates because breadth of coverage varies widely from carrier to carrier.

Despite the data challenges, "there are plenty of commercial carriers that offer cyber insurance. That gives us another benchmark to look at," Hillebrandt said.

To date, commercial rate filings provide the best guide against which captive insurance products can be priced, even with a dearth of company-specific data. This allows actuaries to develop premiums for captives that are at least market-comparable.

From a methodology standpoint, actuaries may not be able to employ traditional techniques as easily, but still can derive captive rating models based on commercial rating plans. Given the ever-evolving nature of cyber risk, "a lot of research is required to ensure these models stay market comparable year to year," Hillebrandt said.

3. Enterprise Risk: Lack of Industry Benchmarks Push Actuaries into Uncharted Territory

If insuring cyber risk pushes the envelope of actuarial capability, insuring enterprise risk rips the envelope in half.

Enterprise risk is an umbrella term encompassing a range of difficult-to-place exposures including reputation damage and loss of a key person, among others. The only thing these risks have in common is a lack of claims data. Unlike cyber insurance, however, there are often no comparable commercial products to serve as a benchmark in place of a strong data set.

"Sometimes the only place you'll find a similar type of coverage is in the excess and surplus lines market, where rate filings aren't required. So, we don't have that information to draw from," Hillebrandt said.

Pricing captive coverage for these risks, therefore, requires a customized, bespoke approach. From a methodology perspective, actuaries have no pre-formed models and techniques form which to draw. Instead, actuaries must refer to Actuarial Standards of Practice for estimating future costs for risk transfer, risk classification, credibility procedures and managing data quality.

While these standards provide a high level and rich set of ground rules to follow, drilling down to the specifics of enterprise risk coverages is pushing actuaries into uncharted territory.

Actuarial Expertise Is Critical to Success in the Captive Market

When it comes to these well-suited and novel coverages used in the captive industry, actuarial expertise is critical to ensure premiums match exposure. Too often when dealing with more traditional risks, actuarial work can be viewed as a commodity -- a matter of plugging in numbers and letting pre-set equations and models do the heavy lifting.

Building those models in the first place, however, demands dedication of resources, time, research, planning and expertise; especially when models must be built from scratch to price brand new products.

“Captives are dealing with emerging risks all the time where the path forward to price the risk is not always clear,” Hillebrandt said. “Pinnacle is working to be the voice for our profession to help guide not just our own actuaries, but all actuaries that practice in the captive space.”

Pinnacle does this in part by producing external educational materials such as free monthly APEX Webinars and an internal library of research for Pinnacle’s actuaries to reference. It also works to build two-way partnerships with clients, ensuring clear communication so that the methodologies used to arrive at a pricing structure are never hidden in a black box.

“We use a more fundamental approach to price these types of coverage that is very transparent. We’re very good at communicating our practices,” Hillebrandt said.

Pinnacle is also well-positioned to lead because it has been serving the captive industry for decades.

“We have teams who do this all day long. Handling emerging risks is their bread and butter, so we’re prepared to serve our clients as new demands emerge,” Hillebrandt said.

To learn more, visit https://www.pinnacleactuaries.com/.

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