Insurance and Technology CIPR Event Recap

Emerging technologies, particularly big data applications, have transformed and are continuing to transform the insurance industry. These changes include new approaches to consumer and policyholder interaction for marketing, sales, pricing and claims. Technological innovation and the use of big data also affect insurer interactions with regulators and can transform competition in insurance.

To better understand how technology is shaping the future of insurance, the NAIC Center for Insurance Policy and Research (CIPR) hosted an event, *Insurance and Technology*, April 5 during the NAIC Spring 2016 National Meeting. This event brought together nearly 300 state insurance regulators, insurance industry professionals, technology experts and consumer advocates. For more information about this event, please visit the CIPR webpage at: www.naic.org/cipr_events.htm.

John M. Huff, NAIC president and director of the Missouri Department of Insurance (DOI), hosted the event, which included two presentations: 1) by Ty Sagalow, chief insurance officer of Lemonade, a peer-to-peer (P2P) insurance carrier (session 1); and 2) by Dan Robles, founder of The Ingenesist Project, whose objective is to research, develop and publish applications of blockchain technology related to the technical and financial services industries (session 2).

A panel discussion on the impact of big data on the insurance business and its regulation followed (session 3). Laura N. Cali, commissioner and administrator of the Oregon Division of Financial Regulation, moderated the panel, which included: Raymond G. Farmer, director of the South Carolina DOI; Jim MacGinnitie, senior PC fellow at the American Academy of Actuaries (Academy); David Snyder, vice president of international policy at the Property Casualty Insurers Association of America (PCI); and Birny Birnbaum, director of the Center for Economic Justice (CEJ) and NAIC consumer representative.

Session 1: The Impact of Technological Advances on the Insurance Industry
Mr. Sagalow started his presentation by pointing out the key role innovation plays in transforming our world and how most industries, through innovation, have changed the way they work and relate to their consumers. He explained how the insurance industry needs to continuously innovate to stay relevant and how P2P insurance could profoundly change how the business works. Mr. Sagalow focused his presentation on how P2P insurance is both a return to the old roots of insurance and a new disrupting innovation. To trace the lineage of P2P insurance to those early days of insurance, he briefly recounted the history of insurance dating back to Lloyd's Coffee House and Benjamin Franklin's community-based insurance company, Philadelphia Contributionship.

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Reflecting the very nature of the sharing economy, P2P insurance leverages the latest technological advances in social networking, Mr. Sagalow said, in order to help people pool their resources to cover losses sustained by someone in the group for the betterment of the entire community. This enables insurance to achieve its original mission and do what it once did so well. In good years, Mr. Sagalow explained, when only a small number of claims have been filed, the residual funds (or excess premiums) from the premiums paid return to the members of the community; in bad years, when losses from claims exceed collected premiums, coverage with a reinsurance company covers the difference. Ultimately, he said, at the core of P2P insurance is the creation of consumer benefit.

While a P2P insurance company is in many ways similar to a legacy insurance company and should be licensed and regulated the same way, there are a number of distinct differences, Mr. Sagalow noted. These differences include: lower expense ratios due to the use of the latest mobile technology; lower loss ratios due to the decrease in fraud arising from the community environment; lower claims expenses due to the elimination of conflict between policyholders and carriers during claim submission; and the ability to return the residual funds back to the policyholders and the community. Mr. Sagalow emphasized that the P2P insurance company model can be created using existing regulations.

Session 2: The Use of BitCoin and BlockChain Technologies in the Insurance Industry
Dan Robles opened his presentation by introducing the concepts of Blockchain and Bitcoin as examples of a decentralized economy and how they are connected with the insurance industry. He explained the technology of blockchain helps eliminate unnecessary controls, authorities and securities creating inefficiencies in the exchange of information in the form of data making these interactions faster, cheaper, easier and fairer.

Mr. Robles clarified that blockchain is the underlying technology to what is known as Bitcoin, however, the technology is not exclusive to Bitcoin. All Bitcoin transactions are included in the blockchain and are enforced with cryptography, allowing people to transact directly without relying on a trusted third party.

He also addressed the issue of the nature of Bitcoin. Bitcoin is not money but an anonymous unit to allow the transfer of value in the blockchain using a private key to sign or confirm the validity of all transactions. All transactions are transparent and cannot be altered after the fact in a consensus-based and open system as the blockchain, Mr. Robles explained.

One key issue Mr. Robles brought up is the need for regulation to adapt to a new environment where human behavior is taken out of the equation. The fundamental question is: What new regulations must be created to deal with insurance innovation using blockchain? Additionally, how different would it be to insure a decentralized organization than it would be to insure a centralized organization? Where do the liabilities attach and where is dominion asserted by the owners where decisions and outcomes are determined by a computer algorithm? These are all hard but key questions that need to be answered, Mr. Robles said, as we transition to a decentralized environment.

Session 3: Big Data Panel
Commissioner Cali opened the panel discussion noting that advances in information technology have allowed insurers to capture, store and analyze massive amounts of data. While this enhances insurers' ability to assess risk more accurately, there are privacy, transparency and fairness concerns shared by consumers and state insurance regulators. She added that the Big Data (D) Working Group, created by the Market Regulation and Consumer Affairs (D) Committee to address insurers' use of big data, held a public hearing during the Spring National Meeting, where a lot of perspectives on the use of big data were presented. As discussed during this hearing, she noted, there is no agreed upon definition for big data. Big data can range from specific individual data collected through telematics to aggregated data bought from third parties. The challenge for insurance regulators is to understand the sources and uses of big data by insurers and sort out whether big data is harmful or beneficial to consumers.

Mr. Birnbaum noted in his comments his concern with the unfettered use of consumers' personal data by insurers, particularly the use of non-insurance factors such as credit scores. Mr. Birnbaum said that while big data applications hold the promise of improved insurer-policyholder interaction for loss prevention, increasingly granular segmentation of consumers based on their personal data can reflect and perpetuate historical discrimination and thwart public policy efforts for availability, affordability and loss mitigation incentives of insurance. The task for regulators, he said, is to steer insurers to use big data for risk mitigation and promote loss prevention, affordability and consumer confidence. State insurance regulators should use big data, he added, to improve the effectiveness and efficiency of regulation, better monitor and

evaluate competition in insurance markets, and identify and consider impacts from various practices of insurers in their policy discussions.

Mr. MacGinnitie said there is a lot of hype surrounding big data and its use. More data is always better than less, he explained, and added how data science allows actuaries to develop better predictive models to accurately assess the relative risk each policyholder represents in the risk pool. Pricing segmentation using big data reflects the risk each insured contributes in the pool.

Mr. Snyder centered his comments on the fact that more data allows for more refined and far superior risk assessment and pricing than in the past. He said the increased use of data has actually had a positive impact as it has increased accuracy and competition, and it has helped maintain companies' financial strength. Mr. Snyder pointed to usage-based insurance as an example of the benefits of big data innovation by insurers.

Director Farmer explained state insurance regulators are concerned with the use of non-insurance factors by insurers such as credit scoring because it may unfairly discriminate against segments of the population whose credit may have suffered due to illness, divorce, etc. Price optimization is one of these big data techniques that help promote rates that may be excessive and unfairly discriminatory. His comments emphasized that while regulators should not necessarily oppose the use of big data, insurance companies must always ensure their use of big data is lawful and in full compliance with insurance laws and regulations.

Director Huff offered his closing remarks and thanked all participants and attendees of the CIPR event. He noted that NAIC work on the use of big data continues to be guided by the balance between transparency and consumer protections on one side and the need for innovation on the other side.

For questions or to provide suggestions for future events, contact: Shanique (Nikki) Hall (mailto:shall@naic.org), CIPR Manager, 212-386-1930.

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