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*I am looking forward to 2018 with mixed feelings. It is a great honor to have been selected to serve as President of the National Association of Insurance Commissioners (NAIC). I am in awe of the power of this position. I am equally in awe of the challenges that we face and all that must be accomplished for this to be a truly successful year. With the support of NAIC members and their teams, the industry, the consumers we all serve and the NAIC support staff, we can accomplish many positive things this year.*

*So I write this with the purpose of sharing my thoughts on some very important issues we will face together in 2018 and beyond, including: an overview of the NAIC Strategic Plan—State Ahead; cybersecurity initiatives; innovation and technology, insurance implications of Big Data; consumer engagement, long-term care challenges, healthcare and health insurance challenges; infrastructure investments; group supervision and the development of group capital standards; and engagement with international standard setting relations with international regulators.*

### The Increasing Risk of Wildfire and Insurance Implications

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*With insured losses from wildfires in California this year topping \$10 billion, insurers may become far more selective about the geographical distribution of their policies potentially leaving millions of households in several high-risk areas uninsured or vastly underinsured. While insurers' ability to raise premiums as a response to perceived higher risk is limited, their decisions whether to offer insurance are much less scrutinized. Available and affordable insurance coverage for wildfire risk is at the core of an effective risk management strategy along with private and public risk mitigation efforts.*

*This article discusses the rising fire risk threatening vast areas of the country and specifically in California and the need to enhance and expand coverage. It also explores the lessons learned in California regarding the provision of catastrophic fire insurance and presents the actions taken by the California Department of Insurance. The California example is extremely useful for policymakers in devising risk management policies to secure the economic and social well-being of all citizens and the stability of the insurance market.*

### Swipe Right for On-Demand Insurance

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*The ever growing on-demand economy—where consumers get immediate fulfillment of orders for goods and services by means of technology—is revolutionizing the way people transact business and manage their daily lives. It has also substantially raised consumer expectations across industries. Companies like Uber, Airbnb and even Amazon Prime are leading the way, with business models conveniently matching supply and demand of livery, temporary housing, groceries, consumer goods and more.*

*As our culture continues to evolve into one of instant gratification, entrepreneurs and fast-paced technology startups have now targeted the next business frontier—insurance—by offering new, innovative products such as on-demand insurance. With on-demand insurance, consumers can use their smartphone to activate, amend or pause insurance coverage for very specific items or needs, such as: electronics, home sharing, renters, personal auto, and drones. Previous articles in the CIPR Newsletter have explored emerging innovation and technology in the insurance sector with artificial intelligence, blockchain and wearable devices. This article will explore another innovative approach to insurance—on-demand insurance—and discuss how it's reshaping the traditional insurance business model.*

## IMPORTANT ISSUES FOR CONSUMERS, INSURERS AND INSURANCE REGULATORS

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By Julie Mix McPeak, NAIC President and Tennessee Commissioner of Commerce and Insurance

I am looking forward to 2018 with mixed feelings. It is a great honor to have been selected to serve as President of the National Association of Insurance Commissioners (NAIC). I am in awe of the power of this position. I am equally in awe of the challenges that we face and all that must be accomplished for this to be a truly successful year. With the support of NAIC members and their teams, the industry, the consumers we all serve and the NAIC support staff, we can accomplish many positive things this year. So I write this with the purpose of sharing my thoughts on some very important issues we will face together in 2018 and beyond.

The challenges we face are many and our resources are precious. Let me start with noting some recent accomplishments that will help shape our future:

- Work began on development of a strategic plan for the NAIC members to provide guidance and direction to NAIC staff. The plan was drafted and vetted during 2017 and was adopted on Feb. 3, 2018. It is a three-year plan covering 2018-2020. The title of *State Ahead* was chosen to reflect the forward-looking nature of the plan. *State Ahead* will be discussed in more detail in the section of this article called *Key Initiatives for 2018*.
- When natural disasters occur, it is time for the insurance industry and its regulators to step up. In 2017, insurers and consumers faced heartbreaking and record-setting challenges as insured losses from flooding, hurricanes and massive wildfires topped \$134 billion. In a perfect world, one would hope every family and business would have the foresight to fully insure their homes and businesses against the perils they could face.
- The reality is many carried no insurance or purchased insufficient limits, particularly for the flood peril. Insurers sent in their catastrophe teams to help their policyholders at their greatest time of need. State insurance regulators banded together to provide mutual assistance to each other during this difficult time. I am very proud of those efforts and the caring nature of the dedicated state employees who volunteered when their skills and assistance was sorely needed. Support continues for Puerto Rico and the U.S. Virgin Islands as they recover from the deadly hurricanes.
- On March 9, 2017, then NAIC President and Wisconsin Insurance Commissioner Ted Nickel announced the appointment of an Innovation and Technology (EX) Task Force and asked it to focus on cybersecurity, Big Data and helping regulators stay in touch with new and innovative products and services being offered by start-ups and incumbent insurers.
- On May 16, 2017, the NAIC hosted the 11th annual International Insurance Forum bringing together more than 300 people from 20 jurisdictions to discuss global insurance markets and regulation. Topics covered included reinsurance, international capital standards and systemic risk.
- After insurance regulators expressed concerns about the U.S.-EU Covered Agreement, the U.S. Treasury's Federal Insurance Office (FIO) and the United States Trade Representative (USTR) worked with us and representatives from the European Union to clarify the agreement. Among the important improvements were recognition of the U.S. state-based regulatory system as sufficient to meet "equivalency" tests and agreeing to a timeframe for development of U.S. group capital standards.
- On October 11, 2017, the NAIC and the Stanford Cyber Initiative hosted a joint cybersecurity forum providing insight into the current cyber-threat landscape and the role of insurance in managing and mitigating these risks. An inspirational keynote speech from Richard A. Clarke, former U.S. National Coordinator for Security, Infrastructure Protection and Counter-Terrorism, provided attendees with some thought-provoking insights and suggestions for action.
- On October 24, 2017 we adopted the NAIC *Insurance Data Security Model Law* (#668) paving the way for its introduction in state legislatures. The model creates a common regulatory framework for licensed entities to responsibly manage their cybersecurity exposure. It requires regulated entities to maintain a risk-based information security program to assure the public sensitive personal information is being made as secure as possible.
- On December 1, 2017, the NAIC hosted the Fourth Annual Asia-Pacific Forum offering an opportunity for regulators and industry representatives to discuss common issues facing the U.S. and the Asia-Pacific region.

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## **KEY INITIATIVES FOR 2018**

### **◆ STATE AHEAD STRATEGIC PLAN**

Last year, NAIC leadership embarked on a mission to develop a comprehensive strategic plan to guide the efforts of the organization over the next few years. I am happy to report the *NAIC Strategic Plan: State Ahead* was adopted by the NAIC members on Feb. 3, 2018. It covers the years 2018 to 2020. *State Ahead* provides a blueprint for the NAIC's future. I would be pleased to provide you with an overview of *State Ahead* in this article. I do encourage you to visit [http://www.naic.org/state\\_ahead.htm](http://www.naic.org/state_ahead.htm) to read the entire plan.

*State Ahead* relies on three foundational pillars: data, technology and talent. The NAIC hopes to expand upon its world class data infrastructure to support the state insurance regulators needs in the coming years. Data is useless unless it is converted to meaningful and insightful information. That leads to the second pillar—technology. We must evolve to use modern technology for collection, storing and analyzing the data we receive. Finally, the NAIC and the states must continue to employ top-notch talent to gather the data and turn it into useful information.

*State Ahead* is organized around three themes. Each theme is supported by one or more goals providing details on how the theme will be addressed to execute the plan.

The three themes should be no surprise to longtime followers of the NAIC. They are:

1. Safe, Solvent and Stable Markets;
2. Consumer Protection and Education; and
3. Superior Member Services and Resources.

The goals underpinning each theme might prove more instructive.

Under *Safe, Solvent and Stable Markets* is the goal to “provide insurance regulators with the data, training, and tools required to support a collaborative regulatory environment that fosters reliable and affordable insurance products.” There are two main objectives being considered to achieve this goal:

- To optimize data and information for regulator-focused analytics, and
- To evaluate regulatory opportunities arising from macroprudential surveillance.

The plan calls for modernizing the way data is collected and organized to make it more consumable for state insurance

regulators, NAIC staff, the industry and consumers. This will empower users with self-service business intelligence tools to give greater insight into insurer financial condition and market practices. The second objective relates to analysis of how the insurance sector is impacted by broader financial markets, common risk exposures and the economy. Together these objectives should lead us to better organization and analytical reporting on the financial health of the insurance industry.

Some of the work product expected includes:

- Creation of an enterprise data strategy and analytics data warehouse;
- Implementation of business intelligence tools with self-service capabilities;
- Exploration of the use of advanced cloud computing capabilities;
- Application of business intelligence tools to NAIC and external data to improve macroprudential surveillance capabilities; and
- Enhanced support for the NAIC Financial Stability (EX) Task Force.

The second theme is *Consumer Protection and Education*. The goal underlying this theme is to “ensure consumer protection keeps pace with changes in the marketplace and consumers have the information and education needed for informed decision-making.” Here are three objectives:

- To optimize use of market data and regulatory processes to enhance consumer protections;
- To provide effective and accessible consumer education and financial literacy tools; and
- To position the NAIC and its members as thought leaders in insurance regulatory innovation.

Consumers expect insurers to deal with them in ways comparable to their experience with other products and services. They increasingly want to transact business over the Internet or their smartphones, and they expect prompt service. State insurance regulators want to work with insurers and innovators to ensure they are mindful of consumer protection obligations. Economists tell us competition works best when there is an informed buyer and seller. To improve transparency in insurance markets we need to make sure consumers are empowered by being financially literate and educated on their insurance and risk management needs.

Some of the work product expected includes:

- Improvements to the Market Conduct Annual Statement (MCAS) filing process for insurers;

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## IMPORTANT ISSUES FOR CONSUMERS, INSURERS AND INSURANCE REGULATORS (CONTINUED)

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- Providing regulators with a solid, secure, cloud-based platform for storage and analysis of MCAS data;
- Implementing business intelligence tools with self-service capabilities for market regulators;
- Combining multiple data sources to enhance market regulatory oversight and insight to protect consumers;
- Creating an enterprise market data strategy and analytics data warehouse;
- Rebuilding the NAIC Consumer Information Source (CIS) to provide an improved consumer-driven experience and enhanced educational materials;
- Developing the NAIC InsureU website into a leading-edge resource for consumer education on insurance related-related topics;
- Engaging regulators in educational events and forums to stay abreast of rapidly evolving insurance products and services;
- Convening an Autonomous Vehicle Insurance Forum to discuss insurance regulatory issues with automakers, motor vehicle administrators, the U.S. Department of Transportation, safety advocates and others;
- Using the NAIC Center for Insurance Policy & Research (CIPR) to enhance focus on insurance regulatory innovation; and
- Creating a Cybersecurity Insurance Institute.

The third major theme is *Superior Members Services and Resources*. There are two goals underlying the theme:

- Provide optimal services to support state insurance regulators, and equip them with the necessary talent and resources; and
- Optimize the efficiency and effectiveness of the NAIC structure to focus on member priorities and maximize member engagement.

Some of the work product expected includes:

- Outreach by NAIC staff to all members to identify training needs;
- Keeping cybersecurity as a top priority and continuing to build out the NAIC cybersecurity framework;
- Improvements to the user experience of NAIC technology services;
- Transformation of platform and development practices;
- Fostering a culture for innovation and continuous improvement;
- Addressing NAIC and state regulator talent and resource needs;
- Conducting a review of the committee structure and reducing the number of active groups to better focus on priorities; and

- Developing appropriate governance factors to ensure a balance between effective engagement and efficiency.

As you can see *State Ahead* is forward looking and innovative. It outlines broad themes, objectives and goals to pave the way toward our future success. I am proud of the efforts and dedication of our members to implement this strategic plan as we move forward.

### ◆ FIDUCIARY REQUIREMENTS AND SUITABILITY

Ensuring consumers' retirement plans are safe and secure is an important duty for regulators. The interplay between state and federal regulators over this subject matter is as complex as it is often misunderstood. The U.S. Department of Labor (DOL), the U.S. Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA) each maintain regulations on standards of conduct for investment advice that were, for decades, in relative harmony with state insurance and securities laws. However, once the DOL launched its fiduciary rule in April 2016, standards were no longer consistent.

Remember that in 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act gave the SEC, as the primary regulator of the securities industry, discretionary authority to establish a uniform fiduciary duty for investment advice. Once it was clear that the SEC commissioners could not agree on specific language, the DOL went forward with its own rule apart from the Dodd-Frank mandate, for ERISA retirement plans such as 401(k), defined benefit, profit sharing, ERISA 403(b) and other 401(a) plans.

The rule also covers all plans otherwise included in Internal Revenue Code Section 4975, such as: traditional IRA accounts and annuities, Roth IRAs, Archer medical savings accounts, health savings accounts, Coverdell education savings accounts, simplified employee retirement (SEP) IRAs, and all 401(a) plans, including church plans, governmental plans and one-participant 401(k) plans. Now, different standards of conduct exist for accounts subject to the DOL rule and those that are not. While the DOL follows a fiduciary standard, state insurance regulators and FINRA have long required those who sell annuities to comply with a suitability standard of care.

The DOL rule expands the "investment advice fiduciary" definition under ERISA to include any professional making a recommendation or solicitation—and not simply giving ongoing advice. Under the rule, the scope of who is considered a fiduciary to ERISA retirement plans and IRAs includes a broader set of insurance agents, insurance brokers, and

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insurers. Previously, apart from ERISA, the Investment Advisers Act of 1940 imposed a fiduciary duty only on advisors who were charging a fee for service (either hourly or as a percentage of account holdings) on retirement plans.

As part of the rulemaking, the NAIC submitted a comment letter in July 2015 and met with DOL officials to underscore the importance of operationalizing a number of the proposed rule provisions and seeking clarity in the rule to limit the potential for unintended consequences, confusion or litigation. Most sales of insurance and annuity products to ERISA plans fall in the Prohibited Transaction Exemption (PTE 84-24).

Under the DOL final rule, PTE 84-24 would only apply to advisors selling non-annuity insurance contracts and annuities that satisfy the DOL's definition of a "Fixed Rate Annuity Contract." Advisors selling variable annuities and fixed indexed annuities would need to satisfy the conditions of the Best Interest Contract (BIC) Exemption rather than PTE 84-24 they were previously allowed to rely upon. The BIC exemption requires advisors to adhere to impartial conduct standards to give advice in the best interest of the client, receive no more than reasonable compensation, and make appropriate disclosures, among other requirements.

The issuance of the DOL rule set off numerous efforts to revise or repeal it in Congress and in the courts. The first phase of implementation of the DOL Rule was scheduled to apply in April 2017. However, the Trump administration issued a presidential memorandum on February 3, 2017, ordering the DOL to reevaluate the rule. The memo asked the Labor Department to study whether the fiduciary rule would reduce access to certain retirement offerings, disrupt the retirement advice industry in a way that may adversely affect investors or retirees or would be likely to increase litigation and the prices investors pay to access retirement services.

The NAIC weighed in with comments in August 2017 to a DOL Request for Information which sought input on the delay and questions on the potential effects of the rule. The NAIC discussed the current regulatory oversight for annuity products and sales and encouraged the DOL to coordinate with state insurance regulators as it considers changes to the fiduciary rule. While the DOL has shared jurisdiction with the states over insurance products sold through ERISA plans, states have regulatory responsibilities with respect to the entire market for such products, including disclosure requirements, professional standards of conduct for agents, and supervisory controls.

A robust system already exists to provide policyholder protections through solvency and market conduct regulations designed to ensure that life insurance and annuity customers are treated fairly. In addition, the NAIC also submitted comments to the SEC in August 2017 on the issue. Because some sales distribution of insurance and retirement products is shared with investment advisers, securities agents and dealers, an appropriate amount of regulatory consistency and harmony with the SEC and FINRA is necessary. The NAIC emphasized the need to work in a coordinated fashion with them as well.

The DOL has now delayed the enforcement mechanisms for the entire fiduciary duty regulation and all the remaining provisions including those pertaining to PTE 84-24 to July 1, 2019. During the transition period, the DOL said it "will not pursue claims against fiduciaries working diligently and in good faith to comply" with the impartial conduct standards that are already in place. The DOL said it needs the extra time to conduct a reassessment of the rule's impact on retirement advice that was ordered by the presidential memo.

Looking forward in 2018, the NAIC Annuity Suitability (A) Working Group is considering updates to the *Suitability in Annuity Transactions Model Regulation* (#275). Our goal remains to provide robust consumer protection, while limiting undue burdens on insurance producers, financial advisors, and the companies they represent. NAIC members have also been engaged on this issue with both the SEC and DOL to seek as much consistency and compatibility as possible as we collectively look to update our respective regulations.

#### ◆ CYBERSECURITY INITIATIVES

Cybersecurity is perhaps the most important topic for the insurance sector today. It is incumbent on insurers and insurance producers to protect the highly sensitive consumer financial and health information collected as part of the underwriting process and for evaluation and payment of insurance claims. This Personally Identifiable Information (PII) is entrusted to the industry by the public. The public has the right to demand it be protected to the maximum extent possible.

The NAIC has completed several cybersecurity activities in recent years. Late last year a significant accomplishment was the adoption of the *Insurance Data Security Model Law*. State insurance regulators also participated in a joint forum with Stanford University on cybersecurity activities. In this section I will discuss my views on the Model Law, the possibility of developing a Cybersecurity Institute and activities related to anti-fraud efforts.

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Implementation of Insurance Data Security Model Law: In October 2017, the *Insurance Data Security Model Law* was adopted. The Model Law requires insurers and other entities licensed by state insurance departments to develop, implement, and maintain an information security program; investigate any cybersecurity events; and notify the state insurance commissioner of such events. States are now working to introduce the Model Law in their legislatures.

The state regulatory system allows us to be close to the people and businesses operating in our jurisdictions and adjust laws and regulations to protect insurance consumers within our boundaries. I believe cybersecurity is an area where we need to recognize diversity is not the answer. A data breach is a data breach regardless of where it happens. As a result, instead of diversity, cybersecurity matters call for a uniform solution. I am convinced we have a workable uniform solution for the insurance sector with the *Insurance Data Security Model Law*.

In an extraordinary step forward, the development of the Model Law was recognized by the U.S. Department of the Treasury in its October 2017 report titled, *A Financial System That Creates Economic Opportunities: Asset Management and Insurance*. In the report, the Treasury states: "Treasury recommends prompt adoption of the NAIC *Insurance Data Security Model Law* by the states. Treasury further recommends that that if adoption and implementation of the *Insurance Data Security Model Law* by the states do not result in uniform data security regulations within five years, Congress pass a law setting forth requirements for insurer data security, but leaving supervision and enforcement with state insurance regulators."<sup>1</sup>

Creation of Cybersecurity Institute: In a remarkable speech given at the NAIC/Stanford University Joint Cybersecurity forum on October 11, 2017, Richard A. Clarke, a former U.S. National Coordinator for Security, Infrastructure Protection and Counter-Terrorism, recommended a cybersecurity institute be formed in the insurance sector.

Creation of a cybersecurity insurance institute would be quite an undertaking. Among the things it might include are:

- Collection and cataloging of data on cyber breaches;
- Studying cybersecurity breach events;
- Providing information on cyber risk mitigation;
- Serving as the "Underwriters Laboratory" for cyber risks;
- Development of an educational component encompassing the development of educational and instruc-

tional materials to provide students with a comprehensive education on cybersecurity matters;

- Creation of a multilevel set of certifications granted for successful completion of educational courses;
- Provision of high quality continuing education for those with certifications;
- Creation of a Federated Digital Identity to replace current use of PII for identity verification purposes, making PII valueless to hackers; and
- A process for continuous tracking of cybersecurity risks.

I am hopeful we can consider the creation of a cybersecurity insurance institute this year and come to some agreement on its scope. The scope might include some of the items listed above and other innovations and ideas not yet contemplated.

Development of Anti-Fraud Depository: One of my concerns is the ease with which people with bad motives can take advantage of unsuspecting consumers. While the cybersecurity insurance institute would concentrate on those who perpetrate fraud by identity theft, ransomware and other electronic means, it might also make sense for us to use a suspected/confirmed fraud database to also collect information on other types of fraud committed by more traditional means.

Too often it is easy for an unscrupulous person to prey on the public. Insurance fraud comes in many forms—perpetrated by many different types of individuals. Fraud can arise when the people stage fake accidents for financial gain or when a person colludes to inflate the value of a claim. While members of the public can defraud insurers, fraud is a two-way street. An insurer might be so tight-fisted during the claim settlement process that an individual does not receive what they paid for. Further, questionable individuals might defraud consumers by collecting premiums and failing to remit them to the insurance underwriter or by simply pretending to be a licensed insurance producer and pocketing the money.

In what it states as a conservative estimate, the Coalition Against Insurance Fraud estimates over \$80 billion is lost each year.<sup>2</sup> It further estimates roughly 10% of property and casualty insurance losses are fraudulent.<sup>3</sup> Clearly the cost of fraud is passed to honest consumers who pay more than

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<sup>1</sup> U.S. Department of the Treasury. *A Financial System That Creates Economic Opportunities: Asset Management and Insurance*. October 2017.

<sup>2</sup> <http://www.insurancefraud.org/statistics.htm>. Accessed on January 18, 2018.

<sup>3</sup> Ibid.

they should for insurance products. It is incumbent on state insurance regulators to take action to prevent insurance fraud. Active monitoring is a helpful first step.

**◆ CONSUMER ENGAGEMENT**

Insurance regulators are statutorily charged with consumer advocacy. Yet we are not the average consumer. For that reason alone, seeking out advice and council from average citizens is important. State insurance laws exist to protect consumers. The insurance commissioner's office is charged with enforcement of the insurance laws. It is important for state insurance regulators to know if what they are doing is effective.

This year we are committed to ensuring consumer protection measures keep pace with the rapid changes in the marketplace. Further, we must be sure consumers are empowered with the information and education they need to make informed decisions about the insurance products they are buying.

Technological evolution has been the driving force around changes in the way the public chooses to interact with insurers. Business models are changing in response to the on-demand world. People expect to be able to do business with insurers in the same on-the-go manner they do with other segments of the economy. They want what they want and they want it now. Insurers and insurance producers are beginning to react to this change. All the while, there will be consumers who do not want to use modern technology and prefer to use more traditional methods. Insurers have to serve both sectors of the market.

Yet our laws and regulations, while well intended in another time, might hinder progress. For example, a law devised to protect consumers by requiring 10-30 days advance notice of cancellation was needed when the notices were delivered by the U.S. Post Office. This assured the consumer would receive knowledge of a cancellation in time to secure replacement coverage before the policy was no longer effective. We may need to revisit this provision and others to see if the laws allow for consumers and insurers to transact business by electronic means if they choose.

My pledge to you for 2018 is to begin the process of looking at our consumer protection framework to see if modernization of the NAIC model laws is needed to reflect the changing world we live in. To accomplish the goal we may receive unanticipated help from social media. The collective voice of insurance consumers can be a powerful agent of change.

**◆ INNOVATION AND TECHNOLOGY**

Our world is rapidly changing. Change is being driven by consumer demand and expectations. People expect insurers and insurance producers to meet their expectations in the same ways they have experienced with other businesses. They want to do business by electronic means at the time of their choosing. As noted earlier, insurers and producers are starting to make changes to meet these changing consumer expectations.

Consumers are voicing their concerns through social media. It is likely consumers will demand insurers follow higher standards than regulators could ever imagine imposing upon them. One only needs to look at recent use of social media to find examples of businesses that got it wrong. Take for instance United Airlines where a video of armed officers dragging a passenger off a plane resulted in public outcry. A Twitter hashtag #BoycottUnited was used over 3 million times. This led to a serious and sudden drop in the value of United's stock.

State insurance regulators need to be informed about innovations being implemented by start-ups and incumbent insurance operations. State insurance regulators need to support innovation, but should not end up picking winners and losers as things evolve. To learn about innovations and discuss public policy issues related to them, the NAIC created the Innovation and Technology (EX) Task Force last year.

This group will continue in 2018 and has been asked to provide a forum for discussion of innovation and technology developments in the insurance sector. They have the latitude to develop regulatory guidance, best practices or draft white papers. They have a specific charge to study autonomous vehicles and the impact they will have on the auto insurance markets. One should look at the Task Force as the hub of activity for anything related to innovation in the insurance sector.

It is also incumbent on state insurance regulators to know what data is being used by insurers and understand how the data flows into insurer models. The development of credit-based insurance scores was perhaps the first example of using non-traditional data to assess insurance risk. Now insurers are exploring the use of Big Data and Artificial Intelligence (AI) to uncover previously unknown relationships related to risk. They use this for pricing, underwriting and claim settlement.

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The NAIC is rapidly changing the way it does business. There are ongoing and planned efforts to rewrite and move some of the NAIC databases to the Cloud. Applying machine learning and human interpretation, and the move to Cloud-based data collection and storage, the NAIC is building the tools to enhance our ability to transform data into high-quality information, useful for state insurance regulators and insurers. The *State Ahead* strategic plan contains many details about what is planned from 2018 to 2020.

Among the things within the purview of the Task Force are:

- Discussion about the concept of a regulatory sandbox;
- Meetings with accelerators and others supporting start-up innovators;
- Meetings with actual innovators to discuss the innovation and identify any regulatory issues before a product or process is rolled out to the public;
- Attendance and participation in national forums discussing and showcasing innovations;
- Identifying the impact of the gradual introduction of the autonomous vehicle and evaluating the need to change current laws and regulations to keep consumers first;
- Listening to reports from its two Working Groups; The Big Data Working Group and the Speed to Market Working Group; and
- Addressing issues related to cybersecurity and implementation of the *Insurance Data Security Model Law*.

As you can see, innovation and technology will be front and center at many NAIC events.

### ◆ HEALTHCARE AND HEALTH INSURANCE CHALLENGES

It is clear to everyone the U.S. system for delivery of healthcare is not working optimally for all those seeking care. According to the Centers for Disease Control and Prevention (CDC), the per capita national health expenditures are \$9,990.<sup>4</sup> Further, the total national health care expenditures were \$3.2 trillion.<sup>5</sup> The total national healthcare expenditures represent 17.8% of the Gross Domestic Product.<sup>6</sup> These costs are clearly unsustainable for us as a nation.

Many misperceive the solution lies in “fixing” health insurance. However, health insurance is simply the canary in the coal mine. It exposes systemic costs by shining a light on them when insurance renewals arrive. The insurance mechanism simply passes along the underlying healthcare costs. It is in these underlying costs where solutions lie.

There are a number of significant sources of healthcare. Some involve private insurance while others involve a varie-

ty of government programs, both state and federal. If we listen to news reports, it is easy to misperceive the Affordable Care Act (Obamacare) is where most Americans receive health insurance coverage. On the contrary, most people still receive health insurance benefits from an employer-based plan. For those over age 65, Medicare provides most coverage. For the economically disadvantaged there is Medicaid and several flavors of assistance for specific groups such as State Children’s Health Insurance Programs (SCHIP/CHIP). The CDC has extensive statistics available on who is covered and the source of the coverage.<sup>7</sup>

The CDC found there were roughly 28.2 million people under age 65 who were uninsured or 10.4% of the population.<sup>8</sup> The CDC estimates 65% of the population under age 65 had some form of private insurance with 26.3% receiving benefits from some type of governmental program.<sup>9</sup>

What I am proposing for 2018 is for regulators to study health care cost drivers to see if there are some insights to be gained. I have tasked the NAIC Health Insurance and Managed Care (B) Committee and the staff of the NAIC Center for Insurance Policy & Research (CIPR) with studying these cost drivers and reporting findings and recommendations.

As part of the Committee’s work I will ask them to study the movement from a fee-for-service to a value-based reimbursement model. I suspect the fee-for-service model is contributing to the general cost of healthcare as neither the medical provider nor the patient have any incentive to control the cost of unnecessary care. In a value-based reimbursement model healthcare providers are rewarded for managing system costs and creating positive outcomes for patients. The groundwork for this change has been described in the Medicare Access and Children’s Health Insurance Program (CHIP) Reauthorization Act of 2015. Our study needs to look at the possibility of exporting these ideas to the private insurance markets, both on the ACA Exchanges and for employer-based coverage.

Other things I plan to ask be considered include: the impact of vaccinations, the impact of cybersecurity breaches on healthcare costs, dietary implications such as obesity, genetic modifications to basic foods such as wheat, the costs

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<sup>4</sup> <https://www.cdc.gov/nchs/fastats/health-expenditures.htm>. Accessed Jan. 4, 2018 based on 2015 data.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> <https://www.cdc.gov/nchs/fastats/health-insurance.htm>. Accessed on Jan. 4, 2018 based on 2016 data.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

and treatment of asthma, Alzheimer's, diabetes, cancer treatments and items within a person's ability to control such as smoking and alcohol consumption.

I expect this study will bring together parties that do not generally work collaboratively. Hopefully the results will prove fruitful.

◆ **LONG-TERM CARE CHALLENGES**

The provision of long-term care for older Americans and the disabled has been a challenge. Long-term care refers to a wide range of medical, personal and social services. You may need this type of care if you have a prolonged illness or disability. This care may include help with daily activities, as well as home health care, adult daycare, nursing home care or care in a group living facility. Long-term care insurance (LTCI) is one way to pay for long-term care. It is designed to cover all or some of the services provided by long-term care.

The long-term care market has evolved significantly since its introduction in the 1960s. It now covers more than seven million lives. According to the U.S. Department of Health and Human Services (HHS), about 12 million of America's senior citizens will require long-term care by 2020. The major issue with the provision of long-term care is the inability to accurately predict how much the housing and health care will cost many years into the future.

As a result, traditional LTCI sales have fallen precipitously in recent years, from 754,000 individual policies in 2002 to 129,000 in 2014. Likewise the number of insurers offering the coverage has diminished from slightly over 100 in 2002 to about a dozen today, and premium rates for newly issued policies have risen as the remaining writers have refined their pricing.

These numbers reflect the fact in many cases; insurers struggled to accurately price LTCI initially and made a number of assumptions which turned out to be inaccurate. The result has been significant losses for many insurers selling this line of insurance and many LTCI consumers facing significant premium increases they did not anticipate. Ultimately, LTCI has proved to be a more expensive product as many insurers have refined their pricing. Hence, many consumers may be interested in exploring alternatives to traditional LTCI insurance as they consider ways to finance their potential long-term care needs.

When LTCI policies were first introduced, they were intended to supplement payment for the primary form of long-term care at that time—namely, nursing homes. As LTCI policies evolved, they now incorporate a myriad of long-

term care service alternatives, including home health care, respite care, hospice care, personal care in the home, services provided in assisted living facilities, adult day care centers and other community facilities. Public programs, such as Medicare and Medicaid, also cover certain long-term care services. As our population ages, the need for long-term care support and services will become increasingly important and require innovative new approaches.

A May 2016 study by the NAIC Center for Insurance Policy and Research (CIPR) titled, *The State of Long-Term Care Insurance: The Market, Challenges and Future Innovations*, identified two key factors driving life insurance product development: 1) mortality risk; and 2) longevity risk. In recent years, the product focus has shifted to address longevity risk as baby boomers reach retirement age in a time when defined benefit pension plans are becoming a thing of the past. Technology and medical advances enable people to live longer. The blessing of a longer life is accompanied by the need to generate sufficient income in retirement to be able to enjoy the extra years and pay for long-term care if it becomes necessary.

It is the unknown factors presenting the primary challenges for insurers and state insurance regulators in the LTCI markets. Actuarial assumptions regarding longevity and persistency for early LTCI products proved to be inaccurate. Insurers underestimated how long people would live. As people lived longer, the likelihood they would need to call upon LTCI policies for coverage increased. It was soon apparent the actuarial longevity estimates were wrong. The obvious solution seemed to be to raise rates. This answer proved to be difficult and challenging politically, as the additional premium generally came from those on fixed incomes and least able to afford it.

A second assumption made by actuaries related to what they call persistency. In other words, the actuaries assumed many people would drop the coverage over time. This proved not to be the case, as dropping a policy meant the consumer would receive nothing in return for the premiums paid over time.

An additional unknown was the extent of the incidence of cognitive memory disorders such as Alzheimer's disease. There currently is no cure for Alzheimer's disease. However, advancements have been made in pharmaceutical and non-drug treatments of both cognitive and behavioral symptoms of the disease. People can live for a long time with Alzheimer's disease and similar memory challenges. If a cure for Alzheimer's disease were to be found, the cost of LTCI products would drop significantly.

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What you have read so far may suggest there is no hope for saving the LTCI market. But there is some hope, and NAIC members are working on solutions. I would like to share some recent activities with you and discuss plans for 2018.

We are working to enact protections designed to keep abreast of the changes in product design and to address historical problems encountered in the marketplace. The NAIC membership adopted amendments to the *Long-Term Care Insurance Model Regulation* (#641) in August 2014 aimed at improving rate-stabilization provisions. The NAIC is producing and evaluating proposals related to:

- LTCI rate stability for existing policies; developing a new mortality standard for long-term care reserves based on the 2012 Individual Annuity Reserving Tables;
- Developing new tabular voluntary lapse standard for long-term care reserves;
- Working with interested parties to determine the appropriateness of a principle-based framework for LTCI valuation; and
- Developing regulatory guidance for premium deficiency reserve calculations.

Additionally, the NAIC Senior Issues (B) Task Force is taking a broad look at recent changes in the LTCI market, including shifts in the profile of purchasers, evolution of the types of products being sold, other changes in the marketplace and goals of regulation of this product. The Task Force created the Long-Term Care Innovation (B) Subgroup in 2016 to examine the future of LTCI, what type of LTCI products should be on the market going forward, and who is likely to buy these products.

The Subgroup developed two documents: 1) a list of federal policy changes for Congress to consider to help to increase private LTCI financing options for consumers, and 2) a list of private market options for financing LTCI services to provide regulators, policymakers, consumers, and other stakeholders an overview of the landscape of long-term care financing mechanisms currently available in the private market. The Subgroup intends to turn its attention to identifying and addressing potential regulatory barriers to innovation in the private market in order to spur innovative private market solutions to financing Americans' long-term care needs.

The LTCI benefits of insolvent insurers are covered under the NAIC *Life and Health Insurance Guaranty Association Model Act* (#520). The NAIC Receivership and Insolvency (E) Task Force will address issues and concerns with guaranty fund coverage developing as a result of new or ongoing discussions and work occurring in other LTCI groups.

There also have been public hearings and the release of a NAIC Center for Insurance and Research (CIPR) study, *The State of Long-Term Care Insurance: The Market, Challenges and Future Innovations*. The study provides a detailed overview of the state of the LTCI market, the economics and benefits of private long-term care insurance, the future demand of improved LTCI, long-term care reform proposals and regulation of LTCI rates.

Work on LTCI issues will continue in 2018 to build on the significant progress made last year. There will be challenges as issues related to a few significant insolvencies of past LTCI providers are being addressed. Because the industry is creative and resilient, there is hope that the combination product they are developing will be appealing to the public.

#### ◆ GROUP SUPERVISION AND THE DEVELOPMENT OF GROUP CAPITAL STANDARDS

There is often a misperception that the entity-based solvency framework in the U.S. does not address group-level capital needs. The U.S. system of state-based insurance regulation has considered the financial condition of the holding company system, as well as any transactions with affiliates, for decades. However, state insurance regulators continue to place an emphasis on each insurance legal entity since that is where the legal contract with the policyholder exists. In light of the 2007–2008 financial crisis and the globalization of the insurance business models, state insurance regulators have begun to modify their group supervisory framework and have been increasingly involved in developing an international group supervisory framework.

Under the U.S. system of state-based insurance regulation, the need for group supervision was recognized early on, and the first NAIC model law adopted in 1969. While changes have been made in model laws since that time, the general principles of group supervision, including as reaffirmed in the 1978 NAIC Proceedings,<sup>10</sup> still remain. More recently the U.S. approach to group supervision adopted in the NAIC *Insurance Holding Company System Regulatory Act* (#440) and the *Insurance Holding Company System Model Regulation with Reporting Forms and Instructions* (#450) has been described as a “windows and walls” approach.

Regulators have “windows” to scrutinize group activity and assess its potential impact on the ability of the insurer to pay its claims and “walls” to protect the capital of the insurer.

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<sup>10</sup> NAIC Proceedings. 1978. Volume I. Pages 213-234.

er by requiring the insurance commissioner's approval of material related-party transactions. This approach is particularly effective in U.S. insurance groups, as the insurers in the group are typically the primary source of revenues and deployment of excess capital for the holding company.

The contagion effects experienced by U.S. insurers in the American International Group (AIG) holding company systems near collapse during the financial crisis caused U.S. state insurance regulators to reevaluate their group supervisory framework. Beginning in 2008, through the NAIC Solvency Modernization Initiative (SMI), U.S. state insurance regulators reviewed lessons learned from the financial crisis, and, specifically, studied AIG and the potential impact of noninsurance operations on insurance companies in the same group. Through the SMI, U.S. state insurance regulators devised plans for revisions to group supervision, maintaining the "walls" but enhancing the "windows" of the system.

The concepts addressed in the enhanced "windows and walls" approach include: 1) communication between regulators and supervisory colleges; 2) access to, and collection of, information from groups; 3) enforcement measures; and 4) group capital assessment.

To enhance systems for group supervision, the NAIC adopted revisions to Model #440 and Model #450 in 2010. The revisions included: 1) expanded ability to evaluate any entity within an insurance holding company system; 2) enhancements to the regulator's rights to access books and records and compelling production of information; 3) establishment of expectation of funding with regard to regulator participation in supervisory colleges; and 4) enhancements in corporate governance, such as responsibilities of board of directors and senior management.

Additionally, state insurance regulators adopted an expansion to the Insurance Holding Company System Annual Registration Statement (Form B) to broaden requirements to clarify the requirement to include financial statements covering all affiliates. A new Form F (Enterprise Risk Report) was also introduced for firms to require the group to identify its material risk throughout the enterprise, but specifically intended to identify the risk posed by the non-insurers that could have an impact on the group as a whole and in turn the regulated insurers.

In addition, state insurance regulators put into effect the international concept of the Own Risk and Solvency Assessment (ORSA). Pursuant to the NAIC *Own Risk and Solvency Assessment (ORSA) Guidance Manual* and the *NAIC Risk Management and Own Risk and Solvency Assessment Mod-*

*el Act* (#505), large and medium-size U.S. insurers and insurance groups are required to regularly perform an ORSA and file a confidential ORSA Summary Report of the assessment with the regulator of each insurance company upon request, and with the lead state regulator for each insurance group regardless of whether a request is made. Model #505 provides the requirements for completing an annual ORSA process and provides guidance and instructions for filing an ORSA Summary Report.

The lessons about group supervision are lessons insurance supervisors all over the world have learned. It is an element of the European Union (EU) Solvency II directive and continues to be a focus of discussions at the International Association of Insurance Supervisors (IAIS). As part of the enhancement to international supervisory cooperation and coordination, U.S. state insurance regulators are engaged at the IAIS on a number of work streams.

The IAIS has been focused on improving group supervision internationally through three main initiatives: 1) standard-setting through ongoing revisions to the IAIS Insurance Core Principles (ICPS); 2) the Supervisory Forum; and 3) the Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame). State insurance regulators have been, and continue to be, actively engaged in all of these initiatives.

In 2016, the NAIC formed the Group Capital Calculation (E) Working Group and tasked it with constructing a U.S. group capital calculation using a risk-based capital (RBC) aggregation methodology. Since its inception, it has been focused on developing the details of how such a calculation will consider specific items. Also since its inception, regulators involved with the Working Group and regulators with the Federal Reserve Board have shared views on the development of their respective calculations. A subset of Working Group members have been working with volunteer insurers who have submitted data to their regulator which is shared confidentially in a way to better inform the development of the details of the calculation on specific items. The Working Group has also set a goal of field testing a beta version of the calculation by the end of 2018.

◆ **ENGAGEMENT ON INTERNATIONAL STANDARD SETTING**

The U.S. insurance market is the largest and most competitive in the world. More than 5,900 insurers operate here with assets of almost \$8 trillion and more than \$2 trillion in annual premium. The insurance sector employs 2.2 million people directly and provides investment capital to fund local infrastructure projects, which also provide jobs. Twenty-six

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U.S. states are among the world's 50 largest insurance markets, and, collectively, the states play a prominent role in promoting the growth and preserving the strength of the U.S. insurance sector, which, in turn, supports financial risk management and growth in all sectors.

The NAIC has a long history of engagement with our international regulatory counterparts. In fact, the NAIC was instrumental in the formation of what is now known as the International Association of Insurance Supervisors (IAIS). The IAIS was formed in 1994 and the NAIC served as its secretariat during its formative years. The IAIS later moved to Switzerland and hired its own staff. International organizations based in Europe, including the Financial Stability Board (FSB) and the IAIS, are working to develop global standards that may be well-intentioned in theory but ineffective in practice. Moreover, in some cases, the global standards may be inconsistent with current U.S. policy, our state-based system of insurance regulation, and the best interests of U.S. consumers and U.S. insurance industry.

The NAIC has enabled the states to coordinate domestically and internationally for many years. The state-based system's track record has been excellent for protecting policyholders and maintaining stable and competitive markets. I should note the system in the European Union (EU) (i.e., Solvency II) is not based on protecting consumers and encouraging strong competitive markets, but rather, on requiring sufficient capital so no insurer becomes insolvent. Further, much of the IAIS regulatory work is done in closed meetings while the U.S. state-based regulatory system operates with a great deal of transparency. It is a fundamentally different approach to regulation.

It is important to state insurance regulation to engage with international regulators through the IAIS and the FSB. It has become clear over time that the EU members are trying to impose their Solvency II regime on the rest of the world's regulators. We must remain engaged with the IAIS to ensure there is recognition of the effectiveness of the U.S. state-based regulatory framework. Engagement is needed to make sure global standards inconsistent with the U.S. regulatory approach are not forced upon us.

An important project for 2018 is work on development of a group capital calculation using an aggregation approach. We have a five-year window to develop, test and implement a group capital calculation that will achieve equivalent results to the IAIS Solvency II approach.

The U.S. Congress recognizes state insurance regulators oversee 100% of the U.S. private insurance market and are en-

gaged in international leadership roles as group-wide supervisors who coordinate the oversight of large complex U.S. insurance groups operating across many jurisdictional borders. While the NAIC and its members are effectively the largest member of the IAIS, the Federal Insurance Office (FIO) and the Federal Reserve are also members, each with their own objectives, more narrow authorities and more limited insurance experience. The FIO and the Federal Reserve are also members of the Financial Stability board (FSB), which excludes state insurance regulators and the NAIC.

State insurance regulators, legislators, policyholders and insurers have all called for greater transparency in the discussions and decisions of the FSB and the IAIS. We are pleased with the recent efforts of the Administration and Congress to insist on greater accountability in the activities of the Treasury Department and the Federal Reserve Board on international insurance matters.

Recent directives have ordered FIO, Treasury and the Fed to support the state-based insurance regulatory system when dealing with international standard-setting bodies. We are happy with recent outreach by the Treasury and FIO and believe there will be a more collaborative and congenial relationship with them in the future. Although international standards are advisory only and non-binding, they nevertheless could be implemented in many jurisdictions and ultimately impact the competitiveness of the U.S. insurance sector.

Many U.S. stakeholders and state insurance regulators continue to question whether some aspects of the proposed international standards are warranted given the current financial strength of the insurance sector. The potential costs of new global group capital standards could discourage long-term investment and limit the variety of insurance products available.

All we are asking of our international counterparts is mutual recognition of each other's regulatory frameworks. We should not try to push our system on them and, in return, they should not attempt to impose their largely untested system on us.

◆ **INSURANCE IMPLICATIONS OF BIG DATA**

The public often feels the term "Big Data" is synonymous with "Big Brother." The public understands businesses collect information about them and want to use the data to increase revenues. Generally speaking, consumers believe data about themselves is their data, and they have some control over their data and how it is used. In many cases, people are willing to trade access to their data for some

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benefit. Examples in the insurance sector include lower price, faster claim settlement, ability to do business online and instant communication with their insurer or insurance producer. They also want privacy and expect if a business collects and maintains information about them, the business will do whatever is necessary to protect that data from falling into the wrong hands.

It is interesting that the European Union's General Data Protection Regulation (GDPR) appears to be more concerned about privacy than are the laws and regulations in the U.S. The soon-to-be-implemented GDPR provides EU citizens with a right to access and a right to be forgotten. The right to access allows people to obtain information about what a business collects, how it is stored and the purpose for it being collected. The right to be forgotten allows the public to tell a business to delete or erase any data it may have related to the person making the request. We may find it necessary to become a bit more like the EU with respect to management of Big Data.

Advancements in technology have enabled the collection and storage of large and diverse amounts of information. So what is Big Data? There is no generally accepted definition of it. For our purposes we will assume Big Data is collection and compilation of data too complex for traditional data processing techniques to handle. For insurance purposes, Big Data refers to unstructured and/or structured data being used to influence underwriting, rating, pricing, policy forms, marketing and claims handling. Structured data refers to data in tables and defined fields. Unstructured data, comprising most data, refers to things such as social media postings, typed reports and recorded interviews. Predictive analytics allows insurers to use Big Data to forecast future events. The process uses a number of techniques—including data mining, statistical modeling and machine learning—in its forecasts.

As insurers collect more granular data about insurance consumers, state insurance regulators need greater insight into what data is available to the insurance industry, how it is being used, and whether it should be used by insurers. While the use of Big Data can aid insurers' underwriting, rating, marketing, and claim settlement practices, the challenge for insurance regulators is to examine whether it is beneficial or harmful to consumers.

Additional consumer concerns include how collected data is safeguarded and how consumer privacy is maintained. Another issue with Big Data is state insurance regulators need data beyond what has been traditionally collected. State

insurance regulators may need to collect more useful data (beyond financial and market conduct data collected today) to allow for greater insight into insurers' models to further enhance regulation.

Insurers use Big Data in a number of ways. Some ways improve things for insurance consumers; while others might be detrimental. In some cases an element of Big Data might be beneficial to some, but not all people. Today we know insurers use Big Data to:

- More accurately underwrite, price risk and encourage risk reduction and pre-loss mitigation. Telematics, for example, allows insurers to collect real-time driver behavior data and combine it with premium and loss data to provide premium discounts to those who drive safely;
- Enrich customer experience by quickly resolving service issues;
- Improve marketing effectiveness by tailoring products to individual preferences;
- Create operating efficiencies by streamlining the application process (an example of this is a pre-filled homeowner's application);
- Facilitate better claims processing by applying machine learning algorithms to outcomes;
- Reduce fraud through better identification techniques (for example, text analytics can identify potential "red flag" trends across adjusters' reports); and
- Improve solvency through the ability to more accurately assess risk.

Despite this tremendous potential, Big Data has its critics. All disruptive technologies create winners and losers. It is incumbent on insurance regulators to address several concerns regarding Big Data. Among them are:

- The complexity and volume of data may present hurdles for smaller-sized insurers perhaps ultimately reducing rather than enhancing competition;
- Insurance regulatory resources for reviewing complex rate filings must be enhanced for greater understanding of how the information is being applied to the public;
- Lack of transparency and potential for bias in the algorithms used to synthesize Big Data might lead to unfair treatment of consumers or claimants;
- Highly individualized rates<sup>11</sup> could lose the benefit of risk

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<sup>11</sup> Essentially a risk pool of one. Some question if a risk pool of one is a risk pool at all.

- pooling that is part of the current insurance structure;
- Oversight of insurers' collection of information sensitive to consumers' privacy or potentially discriminatory must be enhanced;
- Resolution of the "who owns the data?" question is imperative; and,
- Consumers need to be assured the data they provide is adequately protected from cyber-threats.

It appears transparency is a large part of the answer to dealing with Big Data. If insurers are to be able to successfully use Big Data, they must be transparent to their customers. In this definition of customers the insurers need to remember the insurance regulators are their customers. For consumers, insurers need to be willing to tell them what information they collect, where it is stored, how it is safeguarded, and how it is used. If insurers are unwilling to do that, they can expect more resistance over time from those they hope to serve.

For regulators, transparency over the use of data is a necessity. In fact, it is the law. Insurers are generally compelled to support the rates they choose to employ. Opacity of the Big Data going into rating algorithms is not an option. Insurers must empower regulators and insurance producers with the information they need to explain to the public why the use of Big Data is a good thing. After all, what is insurance? It is simply a written promise to perform in the future when a contingent event occurs.

In 2018 the Big Data (EX) Working Group will be asked to:

- Review current regulatory frameworks used to oversee insurers' use of consumer and non-insurance data. If appropriate, recommend modifications to model laws and/or regulations regarding marketing, rating, underwriting and claims, regulation of data vendors and brokers, regulatory reporting requirements, and consumer disclosure requirements.
- Propose a mechanism to provide resources and allow the states to share resources to facilitate their ability to conduct technical analysis of, and data collection related to, the review of complex models used by insurers for underwriting, rating and claims. Such a mechanism shall respect and in no way limit the states' regulatory authority.
- Assess data needs and required tools for state insurance regulators to appropriately monitor the marketplace and evaluate underwriting, rating, claims and

marketing practices. This assessment includes gaining a better understanding of currently available data and tools as well as recommendations for additional data and tools, as appropriate. Based on this assessment, propose a means to collect, house and analyze needed data.

As you can see, there will be a lot of activity around Big Data in 2018. I remain hopeful meaningful progress will be made to encourage its use in ways beneficial to consumers and competition in insurance markets. Further, any Big Data elements deemed detrimental to consumers or completion will be curtailed. I am optimistic significant progress will be made this year.

◆ **INFRASTRUCTURE INVESTMENTS**

Insurers have access to substantial amounts of capital. U.S. life insurers have more than \$3.7 trillion in invested assets. Overall, U.S. insurers approach \$8 trillion in assets to invest. The Trump administration has highlighted the need to invest in the nation's aging infrastructure to keep America competitive.

One of the challenges for the modern world is how to invest profitably and maximize rate of return while minimizing risk. Our lengthy stay in a low-interest-rate environment has not helped. Insurers, particularly life insurers, seem interested in infrastructure investments, because they find them attractive for asset-matching purposes as they are of long-duration, offer stable and secure cash flows, and would allow insurers another form of risk diversification. Yet, the current regulatory treatment does not encourage insurers to invest in infrastructure projects.

Investing in infrastructure is consistent with the Trump administration's goal of modernizing our nation's infrastructure. President Trump's recent statements suggest spending \$1 trillion on infrastructure projects. The spending would potentially stimulate economic growth and add jobs.

Why not explore whether insurers might provide some of the capital needed to support these infrastructure projects? In 2018, state insurance regulators will discuss whether insurers should be investing in infrastructure projects. On the surface, it seems like a beneficial approach. While there might be liquidity challenges with long-term investments of this nature, life insurers can asset-match and are most interested in the stable, secure cash flows and attractive risk-adjusted returns offered by infrastructure projects.

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◆ **CLOSING REMARKS**

Regulatory compliance and sound corporate governance go hand-in-hand. For state insurance regulation to be successful we need to promote safe and sound insurers operating in a culture of sound corporate governance and we need to encourage healthy competitive environments to provide choices to insurance consumers. We need to encourage innovation while keeping consumer protection front-of-mind.

What might have been considered science fiction a few years ago is now reality for us today. Artificial intelligence (AI) is changing the world as we know it and impacting our future. Advances in health care are being made allowing doctors to diagnose and manage new diseases even before the symptoms are detected. This has implications for the cost and quality of health care delivered to Americans. As regulators we need to stay in front of these developments and monitor the impact on health insurers and health insurance.

Eventually AI might be used to discover and catalog risks in all areas. Using AI technology to extract new risk and cyber-threat intelligence from large volumes of unstructured and structured data offers amazing potential for us to operate in a safer, more secure world. State insurance regulators might be able to use Big Data and predictive analytics to monitor insurer market performance and nip consumer abuses in the bud. AI offers tremendous potential in guarding against fraud. We also need to understand how these tools are being used by insurers so we can work with them to keep rates fair and claim settlement practices above board.

Our State Ahead strategic plan provides us with a roadmap for success. I appreciate all the support of NAIC members, consumers, the industry and our staffs as we move this plan from concept into action. Working together we can—and will—make a difference.

**ABOUT THE AUTHOR**



*Commissioner Julie Mix McPeak was appointed by Governor Bill Haslam to lead the Tennessee Department of Commerce and Insurance in January 2011. Before being named to lead the department, McPeak practiced as Counsel to the insurance practice group of law firm Burr & Forman LLP. She also served as the Executive Director of the Kentucky Office of Insurance (KOI). Before her appointment as Executive Director, she spent nine years as an attorney for KOI, the final five as*

*general counsel. She also served as general counsel to the Kentucky Personnel Cabinet.*

*McPeak brings more than 20 years of legal and administrative experience in state government. She is the first woman to serve as chief insurance regulator in more than one state.*

*Her leadership as TDCI Commissioner garnered recognition from Business Insurance Magazine which honored her as one of the 2013 Women to Watch.*

*In November 2015, McPeak was elected Secretary-Treasurer of the NAIC. She has been an active NAIC participant for nearly 20 years and has served on the NAIC's Executive Committee since 2013. In addition to her leadership duties with the NAIC, McPeak is also an Executive Committee member of the International Association of Insurance Supervisors (IAIS) and a member of the Federal Advisory Committee on Insurance (FACI).*

*McPeak served as co-counsel for the Kentucky Association of Health Plans v. Miller, a case heard before the Supreme Court of the United States, regarding ERISA preemption and state "Any Willing Provider" statutes. McPeak is a frequent author and lecturer on insurance issues, having addressed members of the American Council of Life Insurers, the National Association of Mutual Insurance Companies, the National Alliance of Life Companies and the Million Dollar Roundtable. McPeak authored chapter 9: "Licensing of Insurers" for New Appleman on Insurance, Library Edition and co-authored the article, "The Future of State Insurance Regulation: Can it Survive?" featured in Risk and Management Insurance Review.*

*McPeak is a member of the Tennessee Bar Association, Kentucky Bar Association, and the Nashville Bar Association. She has been a member of the American Bar Association, Tort and Insurance Practice section, where she served as vice-chair of the Insurance Regulation Committee and a member of the Federal Involvement in Insurance Regulatory Modernization Task Force. McPeak has also served on the Board of Directors of NIPR.*

*McPeak received her J.D. from the University of Louisville, School of Law in 1994. She is a 1990 graduate of the University of Kentucky, where she received her B.B.A., With Distinction, in Marketing.*

# THE INCREASING RISK OF WILDFIRE AND INSURANCE IMPLICATIONS

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By Dimitris Karapiperis, CIPR Research Analyst

## ◆ INTRODUCTION

Wildfire is an essential, often beneficial natural process as it helps regenerate the forest, revitalize the watershed and renew the soil. However, wildfire can also be a frightening and horrific natural peril threatening human lives and property. The wildfires which ravaged large swaths of northern and southern California in 2017 were the deadliest and most destructive fires in the state's history. According to the latest estimates, these California wildfires killed at least 46 people, damaged or completely destroyed nearly 16,000 homes and more than 700 businesses, and caused more than \$10 billion in insured damages.<sup>1,2</sup>

Beyond the tragedy of the thousands of stories of personal loss, there is a general recognition of the exceedingly high social and economic consequences of wildfires and the need to devise appropriate strategies to manage the risk and protect people and their homes. Available and affordable insurance coverage for wildfire risk is at the core of an effective risk management strategy along with private and public risk mitigation efforts.

## ◆ THE STATE OF WILDFIRE RISK

Human settlement in close proximity with forested lands and peoples' interaction with forests has transformed wildfire from a natural process into a socioecological process with profound implications for the surrounding communities. The absence of low-severity fires, which had maintained the health of forests for millennia, partly as a result of decades of total fire suppression policy, has contributed to the large accumulation of deadwood, cones, needles, and overgrowth of brush and grass, providing the perfect biomass fuel to feed massive high-severity wildfires.<sup>3</sup>

The increased intensity and frequency of wildfires is also associated with changing climatic conditions and particularly with the dry west and southwest parts of the country and continuous development bringing an influx of people living along the wildland-urban interface (WUI). The WUI is described by the International Association of Fire Chiefs as "areas where homes are built near or among lands prone to wildland fire,"<sup>4</sup> and as such it is an area of heightened wildfire risk and a key part of current decision-making around wildfires. The National Fire Protection Association (NFPA) defines the WUI more broadly as a set of conditions—including types of vegetation and structures in the area and their proximity to each other, weather and climate patterns, and general topography of the land—increasing communities' vulnerability to wildfire.<sup>5</sup>

While the climate in states such as Arizona, California, Colorado, New Mexico and Texas is favorable to wildfires, they should not be considered a problem exclusive to those states. Across the country, it is estimated 30% to 40% of the population lives in WUI areas, and more than one-third of all new houses built since 2000 are also in designated WUI zones.<sup>6</sup>

As an increasing number of people are drawn to these areas, attracted by the natural setting providing spectacular views, clean air, less congestion, and more affordable properties, the WUI continues to grow nationally. As more houses and businesses are built in the expanding WUI, the risk of wildfires will keep rising, resulting in higher costs for property owners, insurers, emergency responders and government agencies.<sup>7</sup>

A 2007 study showed the WUI had increased by 52% from 1970 to 2000 and estimated by 2030, the WUI area would total approximately 197,000 square miles or 126 million acres, with the largest expansion taking place in the intermountain west states.<sup>8</sup> A more recent study by the Forest Service estimated the WUI has actually already surpassed that number standing, as of 2010, at about 298,000 square miles (191 million acres) or nearly 10% of the entire area of the conterminous U.S. This WUI area includes about 44 million houses, equivalent to one in every three houses in the country, and is home to about 99 million people, or about one-third of all people in the U.S.<sup>9</sup>

To more accurately assess the degree of risk of wildfire to a WUI area and the threat to the population, a study by the Forest Service classified residential population densities and burn probabilities into three risk categories: low, medium and high. By incorporating risk-based information into WUI mapping products, this study aids the development of tools to identify high risk communities, thereby prioritizing areas for risk mitigation efforts to reduce the likelihood of residential disasters. The study found about 40 million people or 13% of the country's total population are at risk to wildfire.<sup>10</sup>

The states with the largest WUI areas are Georgia, North Carolina, Pennsylvania and Texas, with each having about 15,000 to 20,000 square miles (10 to 13 million acres) of WUI. The states with the greatest number of houses inside the WUI are California (4.5 million) and Texas (3.2 million), followed by Florida, North Carolina and Pennsylvania (2 million to 2.6 million). States with the greatest number of people living in the WUI are California (11.2 million) and Texas

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## THE INCREASING RISK OF WILDFIRE AND INSURANCE IMPLICATIONS (CONTINUED)

(8 million), followed by Florida, Georgia and North Carolina, with 4.6 million to 5.3 million people living in WUI areas.<sup>11</sup>

The importance of assessing and mapping wildfire risk becomes evident by the fact 96% of the homes endangered by the catastrophic Thomas fire which hit Southern California in December 2017 were located in areas of high or extreme wildfire risk, according to Verisk.<sup>12</sup> This kind of information is critical in wildfire risk management and can help support community planning efforts and sound policy decision making.

Verisk wildfire risk analysis has found in the 13 most wildfire-prone states, approximately 4.5 million homes are at high or extreme risk from wildfire, and another 6.7 million homes are in areas of moderate risk (Figure 1.) The housing numbers are based on data from the 2010 U.S. Census, and Verisk assesses wildfire risk at the address level using advanced remote sensing and digital mapping technology to determine the impact of three contributing factors: fuel, slope and access.<sup>13</sup>

California tops the list with a little more than 2 million homes or 15% of all homes in the state at high or extreme risk zones. An additional 12% of California homes are at moderate risk from wildfire. The percentages of homes at high or extreme risk from wildfire across the 13 states range from 27.6% in Montana to 5.4% in Washington (Figure 1.)

In the last 10 years, wildfires have increased dramatically in the U.S. According to Verisk, between 1970 and 1999, wildfires burned on average about 3 million acres each year. In the 2000s, the average increased to approximately 6.8 million acres, and since 2010, the average has surpassed 7 million acres a year. Across the top 13 states in terms of wildfire risk, 3.9 million acres were burned in 2016. Oklahoma topped the list with about 768,000 acres, California was second with 561,000 acres, followed by Idaho, Texas and Arizona, which averaged 342,000 acres burned (Figure 2 on the following page.)

*(Continued on page 18)*

**FIGURE 1: HOMES AT WILDFIRE RISK BY STATE**

State	Housing Units	Homes at High or Extreme Risk from Wildfire	Homes at Moderate Risk from Wildfire	Percentage of Homes at High or Extreme Risk from Wildfire	Percentage of Homes at Moderate Risk from Wildfire
California	13,680,100 <sup>14</sup>	2,044,800	1,667,100	14.95%	12.19%
Texas	9,977,400	715,300	2,331,100	7.17%	23.36%
Colorado	2,212,900	366,200	308,000	16.55%	13.92%
Arizona	2,844,500	234,600	477,600	8.25%	16.79%
Idaho	667,800	171,200	124,900	25.64%	18.70%
Washington	2,885,700	154,900	439,700	5.37%	15.24%
Oklahoma	1,664,400	152,900	342,100	9.19%	20.55%
Oregon	1,675,600	148,800	354,600	8.88%	21.16%
Utah	979,700	133,100	136,800	13.59%	13.96%
Montana	482,800	133,000	121,100	27.55%	25.08%
New Mexico	901,400	127,700	217,600	14.17%	24.14%
Nevada	1,173,800	63,500	120,900	5.41%	10.30%
Wyoming	261,900	35,500	71,100	13.55%	27.15%
<b>Aggregate</b>	<b>39,408,000</b>	<b>4,481,500</b>	<b>6,712,600</b>	<b>11.37%</b>	<b>17.03%</b>

Source: Verisk.

**FIGURE 2: ACRES BURNED IN 2016 BY STATE**

State	Number of Acres Burned in 2016
Oklahoma	767,800
California	560,800
Idaho	361,600
Texas	356,700
Arizona	308,200
Washington	293,700
Nevada	265,200
Oregon	219,500
Wyoming	218,100
New Mexico	212,400
Colorado	129,500
Montana	114,600
Utah	101,100
<b>Aggregate</b>	<b>3,909,200</b>

Source: Verisk, National Interagency Fire Center.

In 2017, with California experiencing the worst wildfire season in its modern history with devastating fires in Northern and Southern California, the number of acres burned in the U.S. came close to breaking a record. Although the numbers are still preliminary and the final numbers could be even higher, about 9.8 million acres were burned across the contiguous 48 states, the second highest since reliable records have been kept. Moreover, this is 49% higher than the average over the last 10 years.<sup>15</sup>

Given the rising costs associated with wildfire suppression and defending residential areas, a number of initiatives and solutions to reduce fire risk have been explored, including information and education campaigns about mitigation strategies for homeowners and business owners, reducing forest fuels, and improving land-use planning and zoning to control development in wildfire-prone areas. Home insurance is a key component in risk management strategies, which could incentivize risk mitigation, discourage residential overgrowth in WUI zones and reduce firefighting costs.<sup>16</sup>

This process requires the direct and full involvement of the public sector of all government levels and private industry. A close working relationship is needed between the owners and operators of critical infrastructure and emergency response systems and the insurance industry in order to devise better strategies and improve resilience. Risk mitigation, insurance and fire suppression should be treated as

complements rather than substitutes for meaningful land-use reforms and restrictions, building code updates, and responsible forest management.

At the same time, the wide availability and pricing reflecting risk mitigation or the lack of mitigation for homeowners insurance are very important for encouraging effective mitigation. Properly designed pricing and policy options recognizing community-wide and individual efforts can encourage WUI area homeowners to undertake wildfire risk mitigation actions. Incentivizing individuals would not only reduce risk to a single homeowner, but to the entire community as well.

A concern among many wildfire risk experts is insurance may become increasingly unavailable—and far more expensive when it is available—in the WUI zones following large and hugely expensive fires, transferring an enormous burden to state governments. Some suggest homeowners in those fire-prone areas should be compelled to assume a more equitable share of the fire suppression efforts through an insurance mechanism designed to ensure costs reflect actual wildfire risk.

The mechanism they advocate for is a federally-run program inspired by the National Flood Insurance Program (NFIP) and administered by the Federal Emergency Management Agency (FEMA).<sup>17</sup> Using the lessons learned by the strengths and weaknesses of the NFIP, a National Wildfire Insurance Program (NWIP) would not offer any form of subsidies. However, charging actuarially sound premiums would shift wildfire suppression costs to those who benefit the most and successfully disincentivize the overdevelopment of the WUI areas.<sup>18</sup> On the other hand, most insurance professionals would probably rate the chance of success for such a venture as minimal and offering no advantage over existing residual markets.

◆ **THE CALIFORNIA EXPERIENCE**

Following last year’s devastating fires, insurance availability and affordability has become a key issue of the policy debate in California. In fact, the California Department of Insurance (CDI) had already observed a significant rise in insurer-initiated non-renewals of policies in parts of the state with the highest percentage of homes located in high-risk fire-prone areas during the two-year period since the 2015 wildfires. Many homeowners have complained to the CDI insurance coverage has become exceedingly difficult to obtain, and when available it is typically priced above what is affordable for many of them.<sup>19</sup>

*(Continued on page 19)*

## THE INCREASING RISK OF WILDFIRE AND INSURANCE IMPLICATIONS (CONTINUED)

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Insurers, at least in principle, promote the idea of mitigation and risk-based insurance premiums and caution policies would not be renewed in the event of homeowner noncompliance with the insurer's mitigation requirements. However, there are reasonable concerns expressed by the CDI and other state agencies regarding insurer wildfire risk models used to rate homes and price homeowners insurance policies. The main concern is the models are not accurate and do not take into account mitigation done by homeowners such as home fortification and/or community efforts such as use of firebreaks and more stringent building codes. Moreover, insurers' models lack for the most part sufficient claims data to support the differences in rate in their filings for rate segmentation.<sup>20</sup>

Although the CDI is exhausting all possible measures within its statutory authority to address the problems, it lacks the authority to mandate all needed requirements to fully resolve the existing concerns. For this reason, the CDI has proposed a legislative effort to develop the necessary set of solutions.

The California Legislature should provide legislation requiring insurers to: 1) offer homeowners insurance in the WUI if the homeowner takes specific mitigation measures, but also allow insurers to decline coverage and instead make available a "difference in conditions"<sup>21</sup> policy or a "premises liability"<sup>22</sup> policy; 2) offer mitigation premium credit to those homeowners who conduct proper risk mitigation; 3) get regulatory approval for their wildfire risk models used in rating or underwriting; 4) allow homeowners to appeal a rating score or other determined factor; and 5) stabilize the rating structure to ensure homeowners insurance rates and premiums are adequate, but not excessive, for the true wildfire risk.

New legislation touching on these issues was introduced on Jan. 4, 2018, to protect homeowners from losing their insurance coverage. The Wildfire Safety and Recovery Act (SB-824) by State Senator Ricardo Lara (D-Bell Gardens) would prohibit insurers from cancelling or non-renewing homeowners insurance after a wildfire disaster. The bill requires insurers to offer discounts to homeowners who take measures to reduce the risk of wildfire loss. Furthermore, in the interest of ensuring stability in the insurance market at a time of increasing uncertainty, the proposed bill would require the CDI to review and approve an insurer's decision to reduce the number of policies it has in a given geographical area.<sup>23</sup>

To address the aftermath of wildfires and in order to ease the recovery process for wildfire survivors, a number of additional bills based on CDI proposals were introduced in the California Legislature in January 2018 amending or adding sections to the Insurance Code and include: 1) SB-894 to allow insureds who have suffered losses relating to a declared state of emergency to combine policy limits for primary dwelling, other structures, contents and additional living expenses, and use the combined amount for any of the covered purposes. Also, the bill would require insurers to offer to renew the policy for at least the next two annual renewal periods or 24 months, whichever is greater;<sup>24</sup> 2) SB-897 to require insurers to cover all reasonable expenses incurred by the insured in order to maintain a comparable standard of living and would provide a list of expenses that shall be covered.

The bill also allows insureds the option to receive up to 80% of their contents claim coverage without having to list out the items they lost;<sup>25</sup> 3) AB-1797 to require insurers to conduct a Replacement Cost Estimate for new homeowners insurance policies and at each annual renewal;<sup>26</sup> 4) AB-1772 to extend the time homeowners have to rebuild, from two years to three years;<sup>27</sup> 5) AB-1875 to require insurers to offer policies with replacement cost coverage of no less than 50% above the policy limits for the primary residence;<sup>28</sup> 6) AB-1800 provides that tall building coverage on the policy is available toward the replacement costs at another location;<sup>29</sup> 7) AB-1799 provides the claimant with a full copy of the homeowners insurance after a covered loss;<sup>30</sup> and 8) AB-1923 provides for a consolidated debris removal process.<sup>31</sup>

California homeowners may also have some protection against rate spikes by an initiated state statute approved by state voters in 1988 as Proposition 103, which limits insurers' ability to use the entirety of the prior year's catastrophe losses associated with an event, such as the 2017 wildfires, to model next year's rates. (These losses go into a rate-loading formula using at least 20 years of catastrophe data.)<sup>32</sup>

While the legislative action proposed and supported by the CDI will certainly not completely resolve all WUI-related insurance issues, it provides a number of immediate solutions to alleviate the current situation and provide a modicum of protection and relief to affected homeowners. These efforts may help stabilize the insurance market and incentivize WUI homeowners to be more engaged in mitigation efforts.

*(Continued on page 20)*

◆ CONCLUSION

The lessons learned by California and the actions taken by the CDI are extremely useful for policymakers in devising risk management policies to secure the economic and social well-being of all citizens and the stability of the insurance market. As wildfire risk continues to increase, all stakeholders—including federal, state and local governments; insurance regulators; fire protection agencies; insurers; and homeowners—should work in tandem to develop solutions to remove any obstacles to the implementation of sound risk management.

California Insurance Commissioner Dave Jones has stated “it is time to revamp land use decision-making so local governments bear liability and have to incorporate the costs of their decisions to put homes and businesses into high-risk fire areas.”

Without focused action, the issues of unavailability and unaffordability of insurance in fire-prone areas will only get worse. Active engagement and action by government officials at all levels—along with forestry and resource management experts, fire-fighting professionals, builders, landowners and general citizenry—is needed to address what is truly a national issue.

Endnotes

- <sup>1</sup> [www.washingtonpost.com/graphics/2017/national/california-wildfires-comparison/](http://www.washingtonpost.com/graphics/2017/national/california-wildfires-comparison/)
- <sup>2</sup> California Department of Insurance. 2017. “The Availability and Affordability of Coverage for Wildfire Loss in Residential Property Insurance in the Wildland-Urban Interface and Other High-Risk Areas of California,” Dec. 2017.
- <sup>3</sup> Murphy, A., J. Abrams, T. Daniel, and V. Yazzie, 2007. “Living Among Frequent-Fire Forests: Human History and Cultural Perspectives,” *Ecology and Society* 12(2): 17.
- <sup>4</sup> Haynes, H. and A. Garcia, 2017. “Wildland/Urban Interface: Fire Department Wildfire Preparedness and Readiness Capabilities – Final Report,” *National Fire Protection Association*, Jan. 2017.
- <sup>5</sup> Flynn, E.S., 2017. “Wildfire: A Changing Landscape,” A Global Resilience Institute & National Fire Protection Association Assessment, Dec. 2017.
- <sup>6</sup> [http://silvis.forest.wisc.edu/data/wui\\_change](http://silvis.forest.wisc.edu/data/wui_change)
- <sup>7</sup> Flynn, E.S., 2017. “Wildfire: A Changing Landscape,” A *Global Resilience Institute & National Fire Protection Association Assessment*, Dec. 2017.
- <sup>8</sup> Theobald, D. M., and W.H. Romme, 2007. “Expansion of the US Wildland–Urban Interface,” *Landscape and Urban Planning*, (83)4: 340–354, December 2007.
- <sup>9</sup> Martinuzzi, S., S.I. Stewart, D.P. Helmers, M.H. Mockrin, R.B. Hammer, et al, 2015. “The 2010 Wildland-Urban Interface of the Conterminous United States,” *USDA Forest Service*, June 2015.
- <sup>10</sup> Haas, J. R., D.E. Calkin, and M.P. Thompson, 2013. “A National Approach for Integrating Wildfire Simulation Modeling into Wildland Urban Interface Risk Assessments within the United States,” *Landscape and Urban Planning*, 119: 44–53.
- <sup>11</sup> Martinuzzi, S., S.I. Stewart, D.P. Helmers, M.H. Mockrin, R.B. Hammer, et al, 2015. “The 2010 Wildland-Urban Interface of the Conterminous United States,” *USDA Forest Service*, June 2015.
- <sup>12</sup> [www.insurancejournal.com/news/west/2017/12/13/473909.htm](http://www.insurancejournal.com/news/west/2017/12/13/473909.htm)

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- <sup>13</sup> [www.verisk.com/insurance/campaigns/location-fireline-state-risk-report/](http://www.verisk.com/insurance/campaigns/location-fireline-state-risk-report/)
- <sup>14</sup> These numbers are offered for comparison purposes in this exhibit as they may include some commercial structures. Estimates from the California Department of Finance put the number of housing units of four units or less as close to 11 million.
- <sup>15</sup> <http://wildfiretoday.com/tag/statistics/>
- <sup>16</sup> Headwaters Economics, 2016. “Do Insurance Policies and Rates Influence Home Development on Fire-Prone Lands,” June 2016.
- <sup>17</sup> Reilly, B., 2015. “Free Riders on the Firestorm: How Shifting the Costs of Wildfire Management to Residents of the Wildland-Urban Interface Will Benefit Our Public Forests,” *Boston College Environmental Affairs Law Review*, (42)2: 541-576, Apr. 24, 2015.
- <sup>18</sup> *Ibid.*
- <sup>19</sup> California Department of Insurance Availability and Affordability of Residential Property Insurance Task Force, 2017. “The Availability and Affordability of Coverage for Wildfire Loss in Residential Property Insurance in the Wildland-Urban Interface and Other High-Risk Areas of California: CDI Summary and Proposed Solutions,” California Department of Insurance, Dec. 2017.
- <sup>20</sup> California Department of Insurance Availability and Affordability of Residential Property Insurance Task Force, 2017. “The Availability and Affordability of Coverage for Wildfire Loss in Residential Property Insurance in the Wildland-Urban Interface and Other High-Risk Areas of California: CDI Summary and Proposed Solutions,” California Department of Insurance, Dec. 2017.
- <sup>21</sup> Difference in conditions policy is a residential property insurance policy covering all risks currently offered by the insurer except for the coverages and perils offered by a basic property insurance policy issued by the California FAIR Plan Association pursuant to Insurance Code sections 10090–10100.2
- <sup>22</sup> Premises liability policy is one that covers bodily injury and property damage suffered by others in connection with the property, including personal liability coverage and medical-payment coverage.
- <sup>23</sup> [http://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=2017201805B824](http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=2017201805B824)
- <sup>24</sup> [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=2017201805B894](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=2017201805B894)
- <sup>25</sup> [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=2017201805B897](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=2017201805B897)
- <sup>26</sup> [http://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB1797](http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB1797)
- <sup>27</sup> [http://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180AB1772](http://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1772)
- <sup>28</sup> [http://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB1875](http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB1875)
- <sup>29</sup> [http://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180AB1800](http://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1800)
- <sup>30</sup> [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201520160AB1799](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1799)
- <sup>31</sup> [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180AB1923](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1923)
- <sup>32</sup> [www.cnn.com/2018/01/18/after-wildfires-it-gets-tougher-to-insure-a-home-in-california.html](http://www.cnn.com/2018/01/18/after-wildfires-it-gets-tougher-to-insure-a-home-in-california.html)

# SWIPE RIGHT FOR ON-DEMAND INSURANCE

By Shanique (Nikki) Hall, CIPR Manager

## ◆ INTRODUCTION

The ever growing on-demand economy—where consumers get immediate fulfillment of orders for goods and services by means of technology<sup>1</sup>—is revolutionizing the way people transact business and manage their daily lives. It has also substantially raised consumer expectations across industries. Equipped with smartphones, apps and 24/7 access to the web, consumers (particularly millennials) now expect to be able to order almost any good or service and have it delivered instantly—and they are getting it. Companies like Uber, Airbnb and even Amazon Prime are leading the way, with business models conveniently matching supply and demand of livery, temporary housing, groceries, consumer goods and more.

As our culture continues to evolve into one of instant gratification, entrepreneurs and fast-paced technology startups have now targeted the next business frontier—insurance—by offering new, innovative products such as on-demand insurance. With on-demand insurance, consumers can use their smartphone to activate, amend or pause insurance coverage for very specific items or needs, such as: electronics, home sharing, renters, personal auto, and flying a drone.

The rate of innovation and technological change is accelerating so quickly our ability to understand the implications has never been so important, and also so challenging. Previous articles in the *CIPR Newsletter* have explored emerging innovation and technology in the insurance sector with artificial intelligence, blockchain and wearable devices. This article will explore another innovative approach to insurance—on-demand insurance—and discuss how it's reshaping the traditional insurance business model.

## ◆ THE BOOMING ON-DEMAND ECONOMY

I'll admit I'm a habitual Starbucks "mobile order" abuser. I can't remember the last time I waited in line at Starbucks—I typically pre-order with the mobile app whenever I need a coffee fix. I now buy a lot of my household needs online (e.g., Amazon Prime) and typically make reservations and appointments with an app. While I'm not technically a "millennial," I am completely addicted.

And I'm not alone. The past several years have seen the rise of what has been variously referred to as the on-demand, collaborative, sharing or peer-to-peer economy. Companies

**FIGURE 1: PERCENTAGE OF ADULTS WHO HAVE USED SOME TYPE OF ON-DEMAND SERVICE**



Source: Pew Research.

like Uber and Airbnb have led the charge, allowing everyday people to share and monetize their under-utilized assets in search of additional sources of income. Last year, Uber became the world's most valuable privately owned company, with a valuation of over \$60 billion,<sup>2</sup> making it clear the on-demand economy is no passing fad.

The on-demand economy has changed the way people order food, summon a ride or find a place to stay while on vacation. For example, when we need groceries, Instacart allows us to order groceries with same-day delivery from the comfort of our couch. When we need to get somewhere, we pull out our smartphone and send a request to Uber or Lyft. A recent survey by the Pew Research Center found 72% of American adults have used some type of shared or on-demand online service<sup>3</sup>—and this number will continue to grow (Figure 1).

The evolution in the way business is now being conducted is driven by years of technological innovation and a resulting change in consumer expectations. Immediate access to

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email, messaging and other online functionality through smartphones has generated a sense of entitlement to fast, simple and efficient experiences.

For example, Google reported mobile searches related to “same-day shipping” have grown 120% since 2015,<sup>4</sup> as people are no longer willing to wait even a few days for their order to arrive. Moreover, Amazon Prime subscribers, where members receive same-day delivery at an annual cost, have grown steadily in the U.S., from 25 million at the end of 2013 to 90 million in September 2017, according to Statista.<sup>5</sup> In order to keep up with changing consumer trends, Amazon recently launched a new service called “Prime Now” where orders are delivered within one hour in certain geographical locations.

These trends have not gone unnoticed. According to CB Insights, more than \$9 billion has been invested in on-demand startups since 2010.<sup>6</sup> The number of companies, the categories represented, and the growth of the industry is expanding at an accelerating pace. There are now hundreds of on-demand solutions popping up all over the world, including babysitting, pet sitting, dog walking, dry cleaning and laundry delivery, parking services and even insurance.<sup>7</sup>

◆ ON-DEMAND INSURANCE

Insurance is a 300-year-old industry and has historically been slow to innovate. Meanwhile, consumer needs are rapidly changing as technology enables new interfaces for traditional services. As consumers become more accustomed to on-demand services, it’s not surprising on-demand insurance is on the horizon.

On-demand insurance is a new business model specializing in covering only those risks faced at a certain moment. The idea is you can get insurance coverage whenever you want, wherever you want and only when you think you need it. In other words, consumers only pay for insurance when the asset is actually in use and “at risk.”<sup>7</sup>

There are no long-term contracts, no need to fill our insurance forms and no need to speak to a representative over the phone. It is an innovation making insurance coverage literally a simple swipe on a smartphone. For example, if you want to insure your phone after you’ve bought it, you would enter the required details, see the prices and then “swipe right” on your smartphone to insure it. Premiums

for these micro-duration policies are paid in-app, and claims are typically filed using a mobile chat interface.

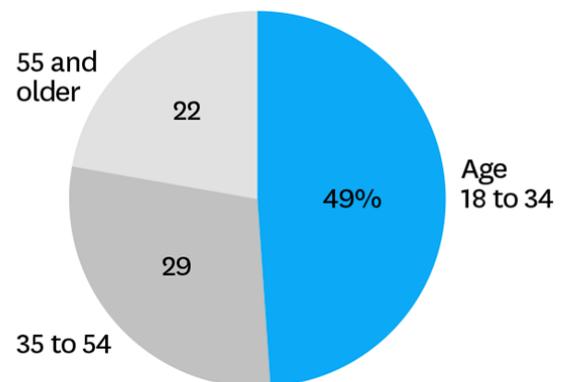
On-demand insurance is appealing to consumers because it provides the ease of one-click purchasing through an attractive customer interface and flexible/customized coverage to meet their needs. Moreover, unlike one-size fits all policies covering everything at once, on-demand insurance enables coverage at a more granular level.

On-demand insurance is still in its infancy, representing less than 1% of the global insurance market, according to KPMG.<sup>7</sup> However, the market is poised for growth and starting to take shape. Some of the insurance technology startups (or “InsurTechs”) succeeding in the business of on-demand insurance are those targeting millennials.

Millennials make up nearly half of on-demand consumers (Figure 2). They are also more than twice as likely as all other generations to purchase their policies online rather than through an agent, according the Gallup Business Journal.<sup>8</sup> The process of getting insurance is entirely foreign for a generation that orders their cars and food from an app. Simple transactions with no paperwork done from a smartphone

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**FIGURE 2: ON-DEMAND ECONOMY CONSUMERS BY AGE GROUP**  
*Millennials Make Up Nearly Half of On-Demand Consumers*



Source: National Technology Readiness Survey 2015.

are commonplace for millennials and younger generations, and they are coming to expect the same for insurance.

These startups are also addressing new kinds of risks emerging from the sharing economy. With the rise of home based businesses (i.e., AirBnB, Uber, Lyft) new coverage issues are arising under the typical homeowners and/or auto policies. For example, one risk associated with home sharing arises from having guests. A guest may be more prone to accidents or intentionally mischievous. As a result, hosts sharing their homes are subject to increased first-party and/or third-party losses.

In addition, these startups are using cutting-edge innovations such as artificial intelligence (AI), the internet of things (IoT), big data and predictive modeling to reinvent the way insurance products are created, underwritten, priced and distributed. Here's an example of what a few startups are doing with on-demand insurance:

*Slice Labs, Inc.*

Slice Labs, Inc. offers on-demand home share insurance to hosts using home share platforms such as AirBnB and HomeAway. It allows its customers to insure their homes for the time they are acting as a business, so users can pick and choose the dates for which they receive coverage, whether it's minutes, hours or days. According to Slice, "You tap a button you become a business, you tap a button again you become a person again. We are insuring and protecting that period of time where they are acting as a business."

Slice aims to protect hosts "from all the things you don't really want to think about but you'll be glad you did: Theft and vandalism, excess utility usage, insect infestations, lost income, and more," the company says on its website.<sup>9</sup> A customized commercial insurance policy includes commercial liability coverage limits of \$2 million, full replacement cost value of the home, as well as the above-mentioned issues you "don't really want to think about." Slice is also currently testing ride-sharing insurance for transportation network companies (TNCs) such as Uber and Lyft.<sup>11</sup>

Slice is a great example of a startup identifying newly formed risks and addressing a market gap. Slice seeks to fill the gap between the demands of these on-demand services and traditional insurance contracts, which may not cover home rental or car-sharing. While the industry and lawmakers have attempted to close the potential for insurance cov-

erage gaps associated with the home-sharing sector and TNCs, some issues still exist.

Homeowners' insurance policies traditionally do not include coverage of homes if rental operations are being carried out on the premises. Instead, insurance companies recommend hosts purchase commercial coverage, which is generally more expensive. Airbnb introduced Host Protection Insurance in January 2015, which provides coverage of up to \$1 million for property damage; however, the coverage has limits. With TNCs, Uber and Lyft do not provide collision coverage for Period 1 (when the driver has turned on the app and is looking to pick up a fare).

Slice is a Managing General Agent (MGA) and is licensed in all 50 states and the District of Columbia. It provides home-share coverage in all states (accept Kentucky).<sup>12</sup>

*Tröv*

Tröv allows consumers to insure "the things they love"—such as smartphones, laptops, headphones, cameras and wearables—for just the time they want coverage (hours, days, months or longer). Tröv provides micro-duration policies (down to the second), charges micro-premiums (down to the cent) and uses "chatbots"—an artificially intelligent chat system—to manage claims. After registering items in the Tröv app, which pulls live valuation data from its database, a consumer can "swipe right" to activate coverage, let's say for their camera while traveling abroad. A "swipe left" ends the coverage.

Tröv's business model is built around "insurable moments" rather than long-term contracts. According to Tröv, "If you only care about your camera, laptop or bicycle, you can use Tröv to protect just those items, rather than buying a blanket policy that encompasses all your possessions."<sup>13</sup>

Tröv insurance covers accidental damage, theft or loss. While many standard homeowners and renter's insurance policies cover personal property, depending on the deductible policyholders choose, they might not be able to file a claim for something lost or damaged. Many smartphones and laptops, for example, aren't valued at more than \$500 or \$1,000, which is the lowest deductibles homeowners and renter's insurance policyholders can choose.

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Founded in 2012, Trōv originally launched as a personal inventory service in the cloud. The personal inventory service is still available in the U.S. while Trov prepares for its insurance launch this year (it is currently approved for property insurance in 38 states).<sup>14</sup> Trōv is a MGA and partners with established insurers to provide the underwriting and capital. Trov launched in Australia in May 2016, where it is underwritten by Suncorp, and the UK in December 2016, where AXA is its underwriting partner.

#### Metromile

Another emerging form of on-demand insurance is usage-based or pay-as-you-go coverage. In other words, auto insurance by the mile. Metromile sells car insurance on a pay-per-mile basis. Standard auto insurance policies aren't always tailored to people who drive very little. A common grievance some have with car insurance is paying to insure cars that spend most of the time sitting in parking garages or driveways.

Metromile installs a device in users' vehicles that records mileage. Metromile then charges rates based on the total mileage driven—benefiting low-mileage drivers. The device only tracks mileage and reports it back to the Metromile to help determine the insurance premium. It does not track other driving factors such as driving speed or hard-breaking incidents. Customers pay a monthly base rate, plus a per-mile charge, normally a few cents per mile. A claim can be filed directly from a smartphone. Metromile is currently available in California, Illinois, New Jersey, Oregon, Pennsylvania, Virginia and Washington, with plans to expand into other states.<sup>15</sup>

#### ◆ OPPORTUNITIES AND CHALLENGES

The on-demand economy has brought about a cultural shift in the traditional insurance sector. New, technology savvy start-ups are entering the insurance sector, creating more flexible insurance solutions and changing the way insurance is experienced by customers.

However, insurance is much more complex than most other industries with unique elements to it, such as the regulatory environment. As such, the scale and speed of the on-demand economy's growth means regulators, insurers and on-demand startups should work together to understand the regulated nature of the industry and the statutes and regulations that must be followed to ensure consumers are not harmed.

One such example is Metromile. Their original concept was to sell blocks of coverage for a specified number of miles. If a consumer bought 500 miles worth of coverage, a start and end point for determination of whether coverage was in effect were needed. State insurance regulators, motor vehicle administrators and law enforcement balked at coverage vanishing as a person drove the 501st mile. It placed the consumer in a position of noncompliance with mandatory auto insurance laws.

Metromile solved the dilemma by changing its contract to charge a monthly base rate and a per-mile rate. Instead of coverage vanishing during a trip, Metromile tracks the usage and bills the consumer in arrears. Thus Metromile, regulators and insurers worked to develop a creative solution to assure compliance with mandatory coverage laws yet provide consumers the benefits of controlling a portion of premiums through conscious decisions to drive fewer miles.

Moreover, a Feb. 2018 report by Insurance Business Magazine found insurers either investing in or working alongside InsurTechs tend to perform better than insurers that do not. The report notes, "In the end, it may not matter whether specific InsurTechs survive in the long term or themselves become victims of disruption—the ideas they bring into the world of insurance are here to stay."<sup>16</sup>

Many insurers and InsurTechs are partnering together to reach new markets. For insurers, collaborating with InsurTechs could lower the cost of entry into this increasingly digitized and competitive space. It would also provide expertise in emerging technologies such as AI and blockchain. On the other hand, established insurers have capital and regulatory expertise as well as greater access to resources to help scale and expand across countries.

However, while the idea of on-demand insurance sounds novel, the model may have some challenges. First, according to KPMG, there is increased risk exposure. With the ability to turn insurance coverage on and off so easily, some consumers may be incentivized to exploit the on-demand-model, only switching on their insurance when they want to make a claim, creating fraud risks. For example, how do you determine whether the camera really did disappear? Or, how do you determine whether the laptop is actually owned by the person using the app and how do you know enough about him or her to determine the risk and the premium?<sup>17</sup>

*(Continued on page 25)*

In addition, consumers may be more likely to purchase insurance when they are engaged in higher risk activities and not turn on coverage when they believe they are engaging in lower risk activities. This could increase the cost per unit of exposure above what is normal for traditional insurers.<sup>18</sup>

Secondly, premiums for coverage used only occasionally mean the customer is paying less overall. As such, the insurer may need to reserve more capital than it would require for an incumbent product to cover the additional risk factors, which could reduce profit further. In order for on-demand insurance to go mainstream, the economics of the model have to work for the insurer; i.e., where the per-use rate is higher than it would be in case of an annual policy, thereby giving the insurer a higher profit margin, according to KPMG. On the other hand, if not frequently used, the overall price would be substantially lower than for an annual policy.<sup>19</sup>

◆ SUMMARY

The changes brought about by the on-demand economy have led to an emerging breed of on-demand platforms. InsurTech startups like Tröv, Slice and Metromile are helping consumers insure everything from their apartment to their laptop. However, as with any new industry, new issues and risks are expected. Startups, regulators and insurers should work to identify and address risk issues and provide appropriate consumer protection.

The NAIC appointed the Innovation and Technology (EX) Task Force in 2017 to provide a forum for the discussion of innovation and technology developments in the insurance sector. The Task Force is charged to discuss emerging issues related to insurers or licensees leveraging new technologies to develop products for on-demand insurance purposes—in addition to potential implications on the state-based insurance regulatory structure—including, but not limited to, reviewing new products, cancellations, non-renewals, coverage issues, notice provisions and policy-delivery requirements.

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Endnotes

- <sup>1</sup> "The 'On-Demand Economy' Is Revolutionizing Consumer Behavior—Here's How." *Business Insider*. Jul. 13, 2014.
- <sup>2</sup> Hartmans, Avery and McAlone, Nathan. "The story of how Travis Kalanick built Uber into the most feared and valuable startup in the world." *Business Insider*. Aug. 1, 2016.
- <sup>3</sup> "Shared, Collaborative and On Demand: The New Digital Economy." Pew Research Center. May 19, 2016.
- <sup>4</sup> Think With Google: Mobile Searches For 'Same Day Shipping' Are Up 120%. Retrieved from [www.qeomarketing.com/think-with-google-mobile-searches-for-same-day-shipping-are-up-120-percent](http://www.qeomarketing.com/think-with-google-mobile-searches-for-same-day-shipping-are-up-120-percent)
- <sup>5</sup> <https://www.statista.com/statistics/546894/number-of-amazon-prime-paying-members/>
- <sup>6</sup> "The On-Demand Mobile Industry in 9 Charts." CB Insights. Retrieved from: [www.cbinsights.com/research/on-demand-mobile-trend-charts/](http://www.cbinsights.com/research/on-demand-mobile-trend-charts/)
- <sup>7</sup> Lamparelli, Nick. "On-Demand Insurance: Ultimately a Bust?" *Insurance Thought Leadership*. Dec. 12, 2016.
- <sup>8</sup> "Will on-demand insurance become mainstream?" KMPG. Sept. 1, 2017. Retrieved from: <https://home.kpmg.com/xx/en/home/insights/2017/09/will-on-demand-insurance-become-mainstream.html>
- <sup>9</sup> "Insurance Companies have a Big Problem with Millennials." *Business Journal*. Mar. 5, 2015. Retrieved from: <http://news.gallup.com/businessjournal/181829/insurance-companies-big-problem-millennials.aspx>
- <sup>10</sup> [www.digitaltrends.com/home/slice-insurance-airbnb/](http://www.digitaltrends.com/home/slice-insurance-airbnb/)
- <sup>11</sup> <https://www.slice.is/homeshare/>
- <sup>12</sup> <https://www.slice.is/faqs/>
- <sup>13</sup> "In Conversation with Scott Walchek, CEO of Trov." Medium. Retrieved from: <https://medium.com/@oakhcft/in-conversation-with-scott-walchek-ceo-of-trov-71e6650d2398>
- <sup>14</sup> [www.trov.com/blog/kicking-off-2018-with-our-38th-state-colorado](http://www.trov.com/blog/kicking-off-2018-with-our-38th-state-colorado)
- <sup>15</sup> [www.metromile.com/blog/qna/in-which-states-does-metromile-offer-per-mile-insurance/](http://www.metromile.com/blog/qna/in-which-states-does-metromile-offer-per-mile-insurance/)
- <sup>16</sup> Adriano, Lyle. "Insurance companies should embrace insurtechs." *Insurance Business America*. Feb. 15, 2018.
- <sup>17</sup> "Will on-demand insurance become mainstream?" KMPG. Sept. 1, 2017. Retrieved from: <https://home.kpmg.com/xx/en/home/insights/2017/09/will-on-demand-insurance-become-mainstream.html>
- <sup>18</sup> Ibid.
- <sup>19</sup> Ibid.

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