

NAIC



CENTER FOR INSURANCE  
POLICY AND RESEARCH

# CIPR Annual Report

## 2022

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“No research without action, no action without research”

— KURT LEWIN

## Letter from the Director

Welcome to the inaugural issue of our Center for Insurance Policy and Research (CIPR) annual report. Since its inception in 2009, the CIPR has become known not only as a tremendous knowledge base for understanding regulatory issues but also for providing in-depth, value-added research on a select set of key and emerging issues and topics relevant to the insurance industry and insurance regulation. Critical to continuing to bring the value of objective research to regulatory operations is increasing awareness of and connections to the work. Our goal for this report is to highlight the CIPR's variety of activities to raise further awareness of these activities, and ultimately engagement with the research and research team, leading to more informed regulatory decision-making.

The past year has also marked a number of CIPR significant firsts, including the establishment of the CIPR Catastrophe Modeling Center of Excellence (COE), and its Robert Wood Johnson Foundation (RWJF)-funded research focused on insurance industry investments in social infrastructure. Both are important long-term research-based efforts focused on critical issues affecting the liability and asset sides of the industry. Additionally, we continued to make further progress around existing initiatives, such as our Journal of Insurance Regulation (JIR) call for papers, our research Fellows program, and our *Back to Basics* educational series. These initiatives highlight our broad and essential collaboration efforts with academia and industry. Of course, the core work of developing various research topics, maintaining and developing Research Library holdings and fielding research requests, hosting educational forums such as at the NAIC/National Insurance Producer Registry (NIPR) Insurance Summit, and engaging with various NAIC committees continues in earnest. Importantly, we continued to enhance and expand our core research agenda, which is described in the following pages.

There is no shortage of critical and emerging issues within the insurance sector, highlighting the need for dynamic and objective research. We are excited about the many new directions the CIPR is pursuing with key partners. We hope that raising awareness of these activities will lead to more fruitful engagement and further knowledge development, enabling better informed regulatory policy action.



**Jeffrey Czajkowski, Ph.D.**

Director

Center for Insurance Policy and Research (CIPR)



CIPR Director, Jeffrey Czajkowski



Jennifer Gardner with Brandon Katz of KatRisk

**PERIL MODELING**

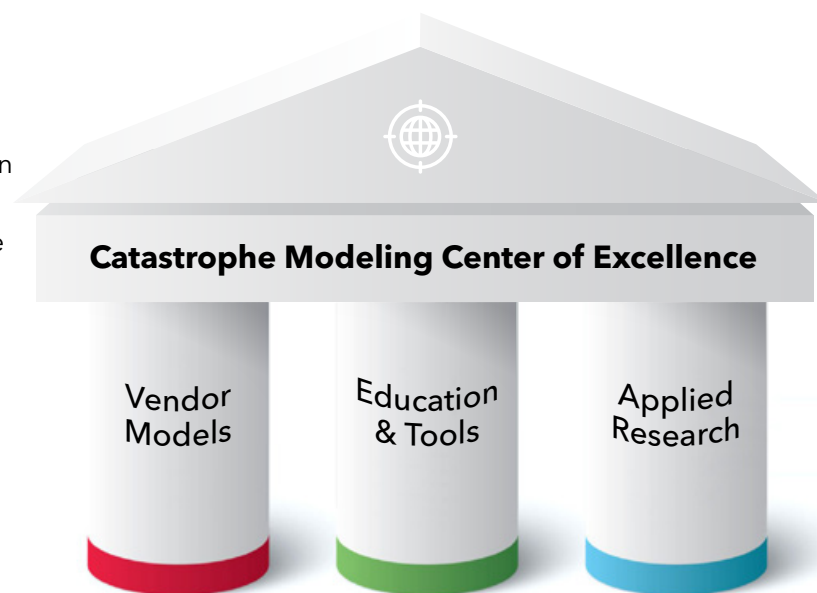
Casualty/Liability	Climate Risk	Cyber	Earthquake
Flood	Hurricane	Severe Convective Storms	Wildfires
Winter Storms			

# Initiatives

## Catastrophe Modeling Center of Excellence

The Catastrophe Modeling Center of Excellence (COE) was established in July 2022 after more than a year of discussion that began in the Technology Workstream of the Executive Committee's Climate and Resiliency Task Force. The idea grew from the need for state insurance regulators to have access to the tools and resources necessary to understand and evaluate catastrophe and climate risk exposures. Insurers have been using catastrophe models for more than three decades to identify and quantify their risks in order to properly set capital reserves, monitor exposures, and increasingly, to set insurance pricing for catastrophic risks. The purpose of the COE is to provide state insurance regulators with the necessary technical expertise, tools and information to effectively regulate their markets. Its positioning within the CIPR provides a neutral perspective to derive insights from applied research.

The COE has developed a regulator-only Share Point site providing state insurance departments with access to resources from catastrophe model vendors. Data use agreements have been signed with five catastrophe model vendors with four additional agreements in progress. Resources are relevant to all areas of regulation, including solvency oversight, rate and form review, market conduct and regulatory policy. The COE is now fully staffed and working to expand the education and training opportunities available to insurance regulators, including model basics, as well as peril-specific training live and on demand. In 2022, the COE funded six state insurance regulators to attend the Reinsurance Association of America's annual CAT Risk Management Conference to learn



about the tools insurers are using to manage their catastrophe risks across the country.

In addition to providing access to resources and training, the COE is conducting research to support state departments in their efforts to incentivize mitigation and resiliency. This effort is accomplished through applied research utilizing catastrophe models and insurance exposure and loss data. Research can help states develop a deeper understanding of their property insurance markets, exposure to catastrophic risk, and where there are vulnerabilities that could be better supported through insurance and mitigation regulatory and legislative priorities.

Through partnerships with organizations like the Insurance Institute for Building & Home Safety, the International Code Council, Smart Home America and the Federal Alliance for Safe Homes, the COE is connecting states with organizations to share existing resources and develop new ones to support their shared goal of consumer protection.



Jeffrey Czajkowski and Kimberlee Cornett RWJF Director, Impact Investments at the NAIC Summer National Meeting



## Insurance Industry Investment in Social Infrastructure

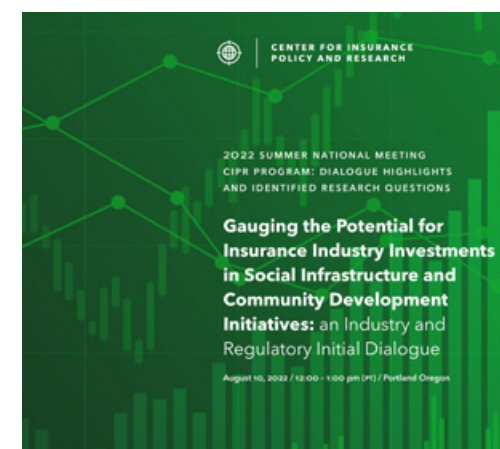
The Robert Wood Johnson Foundation (RWJF) is the nation's largest philanthropy dedicated solely to health equity, having \$15 billion in assets and rated Aaa/AAA by Moody's and S&P. Using grants, impact investments and advocacy, RWJF's Impact Investing Team invests in research and activities to improve community conditions, housing affordability, strengthening public health systems and ensuring families have adequate resources to thrive. They have identified a need to infuse more capital into the community development finance system (CDFFS) geared toward affordable housing, climate resiliency, and infrastructure in low-income communities and believe that insurance companies are a potential source for this additional funding provided that financial performance and regulatory solvency requirements are met.

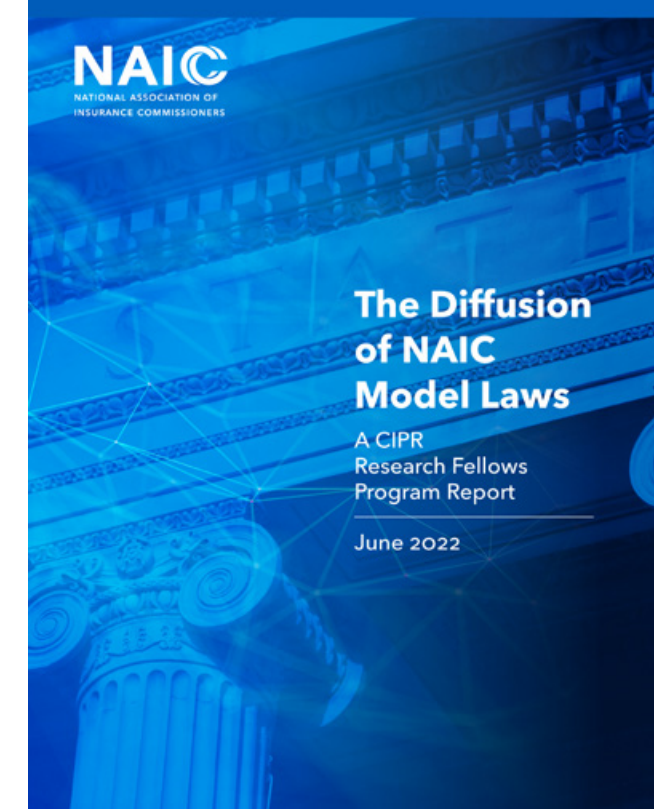
In 2022, the CIPR received a grant from the Robert Wood Johnson Foundation (RWJF) to fund an initial exploration of the potential for insurers to make additional balance sheet investments (as opposed to foundation grants and investments) in social infrastructure, particularly in the community development space. This discovery phase grant allowed us to "map" our existing economic infrastructure research framework to this exploration phase to identify where new work is needed and key research questions to be addressed. We employed primarily qualitative methodologies to gain insights into the CDFFS. We accomplished this objective through stakeholder convening activities and semi-structured

interviews with insurers, insurance regulators, investment advisors, and other financial institution stakeholders.

Key research activities completed included: (1) hosting two dialogue forums with insurance industry investment professionals and insurance regulators to identify their demand for and concerns about investing in social infrastructure and understanding any considerations necessary to make additional financial investments in social infrastructure by the insurance industry; (2) the identification and preliminary engagement with banking sector key informants in an effort to evaluate the risk-return profile and credit performance of financial investments backed by social infrastructure; (3) identification and preliminary engagement with community development financial institutions (CDFIs) to identify which CDFIs have investment characteristics most palatable to insurers and insurance regulators and those which specialize in resiliency related to affordable housing and other community development investments and social infrastructure; and (4) engagement with the NAIC's Securities Valuation Office (SVO) to identify informational requirements to assess the investment risk for various types of social infrastructure and community development investments.

With the successful completion of the discovery phase in 2022 highlighting key research questions and regulatory educational needs to be addressed, we expect to leverage our established baseline understanding to continue this effort in 2023.





## Journal of Insurance Regulation

The Journal of Insurance Regulation (JIR) is a forum for discussing significant regulatory and public policy issues in insurance. It strives to connect state insurance departments with high-quality research occurring in the regulatory arena. In 2022, the JIR celebrated its 40th anniversary. The JIR was championed by former Virginia Insurance Commissioner James W. Newman, who recognized the need for rigorous, high-quality research on regulatory issues and a channel for distributing this work to the regulatory community and interested stakeholders. Since the JIR's launch in 1982, more than 1,000 articles have been published on dozens of regulatory topics.

In 2022, two calls for papers were issued to encourage research efforts in areas of particular interest to the NAIC community. The first was on consumer protection issues, and the second related to innovations in data use by industry and regulators. These calls yielded several papers featured in the 2022 edition.

The Kimball Award, established in 1996 and named for an insurance scholar and long-time JIR board member, is given each year to the author(s) of one paper to acknowledge an outstanding contribution to the JIR. This year's Kimball Award

was given to Elizabeth Plummer (Texas Christian University–TCU) and William Wempe (TCU). Their paper, *Do Health Insurers Manage Their Medical Loss Ratios? At What Cost?*, analyzed data from medical loss ratio (MLR) reports to examine how health insurers exercise discretion in year-end estimates of outstanding claims.

To commemorate the 40th anniversary of the JIR, the Research Library produced a report reflecting on its history and impact on the regulatory and academic communities. At the 2022 Fall National Meeting, the CIPR hosted a special event featuring the Kimball Award authors and a recap of the year from editors Kathleen McCullough (Florida State University–FSU) and Cassandra Cole (FSU). A panel moderated by CIPR Director Jeff Czajkowski and featuring former JIR editors Lars Powell and Terri Vaughan looked back at the journal's accomplishments and considered future possibilities for insurance regulatory research.

In 2023, the JIR's initial call for papers is on insurer capitalization and structure issues, such as private equity funding, changes in investment options and strategy, and the impact of online distribution systems. The CIPR team and JIR editorial board will continue to partner to provide an outlet for high-impact research for the insurance regulatory community and its stakeholders.

## Research Fellows

The CIPR Research Fellows Program launched in 2021 as part of the CIPR's work to better align the research goals of the academic and regulatory communities. The program fosters new and innovative research in insurance regulation by providing resources, information, and input to researchers. Fellows apply to the program and, based on their project proposals, are named for a one-year period and given a stipend and access to relevant NAIC data and materials. The CIPR serves as a guide, matching Fellows with appropriate resources, subject matter experts (SMEs), and venues to receive feedback on their work. Fellows are invited to present their work at varying stages of the project at webinars, the NAIC/NIPR Insurance Summit, or other NAIC events. At the end of the one-year period, the Fellows' completed research is shared with the CIPR audience of regulators, academics, and thought leaders.

The first Fellow, Jingshu Luo (University of Mississippi Business School), completed her project in the spring of 2022. Luo, who has a Ph.D. in risk management and insurance, focuses on the policy diffusion process (i.e., the factors that affect a policy's adoption) of NAIC model laws. This first-of-its-kind research seeks to identify any patterns

in the diffusion process and what, if any, factors lead to more adoption of a model law. Luo's analysis finds several model law characteristics that improve the adoption process. These include low complexity, unique subject matter, a risk of federal preemption, a neighbor effect, and participation of states in the drafting process.

Two Fellows were selected in 2022: Kyeonghee Kim (FSU) and Abed Rabbani (University of Missouri). Kim's research focuses on the underwriting of sea level rise risks. She presented her work on the characteristics of commercial mortgages financed by life insurers at the 2022 NAIC/NIPR Insurance Summit. Rabbani seeks to develop a tool to measure consumer life insurance literacy. He also presented his preliminary findings at the 2022 NAIC/NIPR Insurance Summit.

Both Kim's and Rabbani's Insurance Summit presentations are available to regulators via the Research Library. Their final Fellows research projects will be completed in early 2023.

More information about the Research Fellows Program can be found on the CIPR website.

# CIPR Research Focus Areas

## Health

The CIPR has responded with a significant number of projects—completed and ongoing—in 2022 that analyze critical and emerging issues in the health space.

## Cybersecurity

Building upon its initial data analysis in 2021, the CIPR continued exploring the relationships between cybersecurity events in the insurance industry and other industry sectors.

## Model Laws

Model laws are one of the NAIC's most important outputs. Currently, there are nearly 200 active model laws or regulations covering topics such as consumer privacy, insurer solvency, unfair trade practices, and dozens more.

## Infrastructure Investments

In 2021, CIPR staff collaborated with staff from the NAIC's Capital Markets Bureau to produce a report that analyzes the question: Can Insurance Company Investments Help Fill the Infrastructure Gap? The infrastructure research work was extended in 2022 to begin to analyze social infrastructure investments as well.

## Natural Catastrophe and Climate Risk and Resilience

Impacts from natural catastrophes continue to place significant stress on insurance markets and policyholders. As such, this is a key priority area of focus for insurance regulators as well as a key area of research for CIPR.

## Macroprudential Monitoring

Macroprudential risk assessment is the analysis of systemic risks within the financial sector—that is, the risk of disruptions to financial services caused by impairments of all or parts of the financial system.

# Health

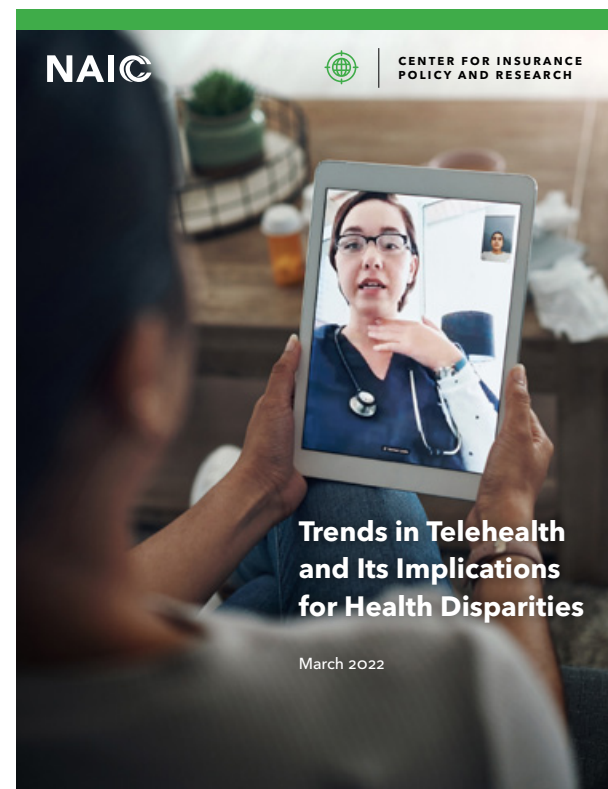
The world of health care, health insurance, and associated regulations continues to change rapidly, particularly in the shadow of the COVID-19 pandemic. The CIPR has responded with a significant number of projects—completed and ongoing—in 2022 that analyze critical and emerging issues in the health space.

Much of the CIPR's health-oriented projects in 2022 related to the NAIC's key initiative on race and insurance—specifically, Workstream Five of the Special (EX) Committee on Race and Insurance, which is focused on identifying, researching, and developing policy responses to issues of race in the health insurance sector. The Research Library, which is housed in the CIPR, continues to build and refresh its resource collection, Race & Insurance - Health. This effort began with the initiative's commencement in 2020. The Research Library also maintains a resource collection for health insurance.

The CIPR issued two substantial reports to help inform the efforts of the Health Innovations (B) Working Group in its charges from the Special (EX) Committee on Race and Insurance: *Trends*

*in Telehealth and Its Implications for Health Disparities* and *Alternative Payment Models, Value-Based Payments, and Health Disparities*. Kelly Edmiston, NAIC Policy Research Manager, highlighted this work at the 2021 Fall National Meeting, 2022 Spring National Meeting, and 2022 Summer National Meeting. He also worked with NAIC support staff and the Health Innovations (B) Working Group to deliver a memorandum resolving the charges to Workstream Five of the Special (EX) Committee on Race and Insurance.

Finally, CIPR staff engaged in a research effort to understand racial and ethnic barriers to insurance in the health and life insurance lines of business. CIPR Director Jeff Czajkowski presented some of this work at the Spring Commissioners'



Conference. Research on racial and ethnic barriers to health and life insurance is ongoing.

The CIPR embarked on a potentially extensive network adequacy project in 2022. CIPR researchers collected data on physicians and other health care practitioners, including specialties and subspecialties, exact geographic location, and, importantly, network associations over several years. Other data collected for this project include detailed information on every individual market health plan and extensive information on all U.S. acute care hospitals. Health plan data can be linked to physicians and their networks through network and plan identification numbers. Current work is focused on preliminary analyses of these data and background research. Several projects are expected to arise from this project. Edmiston presented findings from this preliminary network adequacy research at the 2022 NAIC/NIPR Insurance Summit.

Several projects in various stages are ongoing in the area of rural health, including the determinants of and implications of rural hospital closures and the potential for telehealth to ameliorate access to health care issues in rural areas. Edmiston presented information on these topics at the 2022 NAIC/NIPR Insurance Summit.

Finally, the CIPR is investigating issues related to pharmacy benefit managers (PBMs), particularly

Kelly Edmiston preparing to speak to the Health Innovations (B) Working Group at the NAIC Summer National Meeting

the effects of regulations on consumer prices, payers, and the PBMs themselves.

The CIPR's Journal of Insurance Regulation (JIR) regularly publishes health-focused articles, including one on surprise billing in 2022. In 2021, it published several articles related to COVID-19, the management of medical loss ratios (MLRs), and guaranteed renewability of health insurance.

Into 2023, the CIPR will continue seeking to inform NAIC policymaking with quality research on critical and emerging issues.



# Cybersecurity

Media reports on the impact of past ransomware events, the potential of future events, and their impact on the cyber insurance marketplace are regular occurrences. The CIPR's ongoing research into the area of cybersecurity provides context to related media sound bites with thoughtful research asking questions concerning the nature and development of cybersecurity incidents, specifically those focused on the insurance sector.

Building upon its initial data analysis in 2021, the CIPR continued exploring the relationships between cybersecurity events in the insurance industry and other industry sectors, as well as the frequency and severity of insurance industry events over time. The foundation for this research is a remarkable, third-party data set encompassing hundreds of thousands of cyber events, amassed over many decades using public sources, including domestic and international venues. New research initiatives for this year included creating a methodology to connect the data in this set with the NAIC's financial database. Linking these two information sources allows the networking of cyber event activity to premium, claims, and investment risk levels. It also provides the basis to answer

questions like: Are cyberattacks related to an insurer's market position or the types of insurance business written? The CIPR presented updated results during the 2022 NAIC/NIPR Insurance Summit, and research in this field is continuing.

The CIPR also takes an active role in the NAIC's cybersecurity tabletop exercises, supplying research focused on a state's historical cyber event patterns juxtaposed with survey results on current cybersecurity perspectives from domestic insurance companies. The coupling of this information provides a contextual framework for the scenario-driven simulation, as well as insights for future regulatory guidance. Anonymized research results prepared for the 2021 Connecticut tabletop exercise were presented at the Northeast Hybrid Financial Zone meeting. A tabletop exercise for Maryland was held in November 2022, while an exercise for Ohio is planned for May 2023.



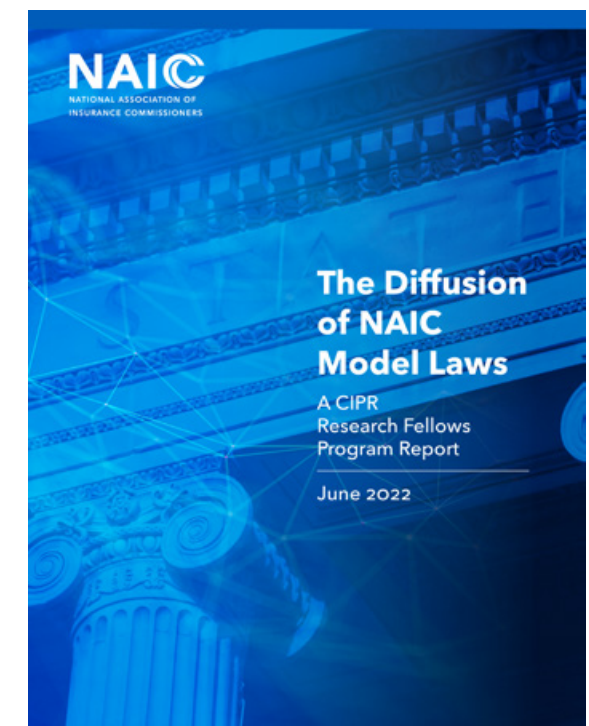
# Model Laws

Model laws are one of the NAIC's most important outputs. Currently, there are nearly 200 active model laws or regulations covering topics such as consumer privacy, insurer solvency, unfair trade practices, and dozens more. While model laws are a key work product of the NAIC, they have not been the focus of much research attention.

In 2022, the CIPR continued its partnership with the NAIC's Legal Division on the model law comparison tool. The tool launched in 2021 to assist state insurance regulators in implementing the Insurance Data Security Model Law (#668). The tool provides a visual way to compare how specific sections of the model were enacted in each state and is available to state insurance regulators via StateNet. The implementation goal for Model #668, as with all NAIC model laws, is uniformity, and the tool serves as another resource in working toward that goal. A few additional states passed Model #668 in 2022 and were added to the tool, while several additional states expect to take up data security legislation in upcoming legislative sessions. A research report detailing insights from the tool and lessons learned from the implementation process is forthcoming. In 2023,

the team plans to expand the tool to an additional model law, as well as continue to update the existing model data as more states adopt Model #668.

CIPR Research Fellow Jingshu Luo focused on NAIC model laws for her research project. Her report, completed in June 2022, studies the policy diffusion process of NAIC model laws since 1871, when the first model was adopted. This process refers to the external factors that affect a state's adoption of a model law. Luo developed a unique dataset to measure the impact of several factors, including geography, complexity and readability of a model law, market factors, federal preemption risk, and more. Her work identifies key factors that state insurance regulators and other policymakers may want to consider. Specifically, well-accepted model laws have relatively low complexity, have subject matter unique from existing state laws, have recently been amended, and/or have an underlying federal motivation. She also finds that states are more likely to adopt an NAIC model law if their geographic neighbors have adopted it. Luo's full report is available via the CIPR Research Fellows Program website.







# Infrastructure Investments

In 2021, CIPR staff collaborated with staff from the NAIC's Capital Markets Bureau to produce a report that analyzes the question: Can Insurance Company Investments Help Fill the Infrastructure Gap? The CIPR has continued to promote this work to inform industry stakeholders of the potential benefits and limitations of these investments and the insurance industry's capacity to move the needle on U.S. infrastructure adequacy. Staff presented material from this research at the annual conference of the American Risk and Insurance Association (ARIA) and at the Valuation of Securities (E) Task Force seminar at the NAIC's New York office. The CIPR substantially extended this work in 2022.

One research effort is a deeper investigation of insurance industry investments in infrastructure through private equity. Specifically, this research: 1) further explores the performance of infrastructure investments relative to other private equity investments; 2) examines the



Jeffrey Czajkowski with Social Infrastructure panelists Carrie Mears (IA), Doug Wheeler (NY Life) and Patrick Reeder (ACLI)

performance of insurance industry private equity infrastructure investments compared with the performance of private equity infrastructure investments by other institutional investors; and 3) analyzes potential reasons for differential performance across investment and investor types. The research is targeted for publication in a peer-reviewed journal.

More prominently, the CIPR is extending its infrastructure research work to social infrastructure, which is excluded from the definition of economic infrastructure used in the 2021 CIPR infrastructure report. Social infrastructure comprises assets intended to accommodate social services and civic life, including tangible community development activities such as affordable housing.

The CIPR received a grant from the Robert Wood Johnson Foundation (RWJF) to fund an initial exploration of the potential for insurers to make additional balance sheet investments (as opposed to foundation grants and investments) in social infrastructure, particularly in the community

development space. CIPR staff engaged in significant background research, participated in meetings with numerous stakeholders from all points between the initial investment and realized project, and held two large-scale convenings. The first convening was held at the 2022 Summer National Meeting and brought industry stakeholders and regulators together for an initial dialogue. A second convening was held virtually in October. Oriented more to the process of investment, this convening provided perspectives from a community development financial institution (CDFI), state housing finance agencies, and industry investment professionals. In addition, the Reinsurance Association of America (RAA) discussed mechanisms for identifying communities in need.

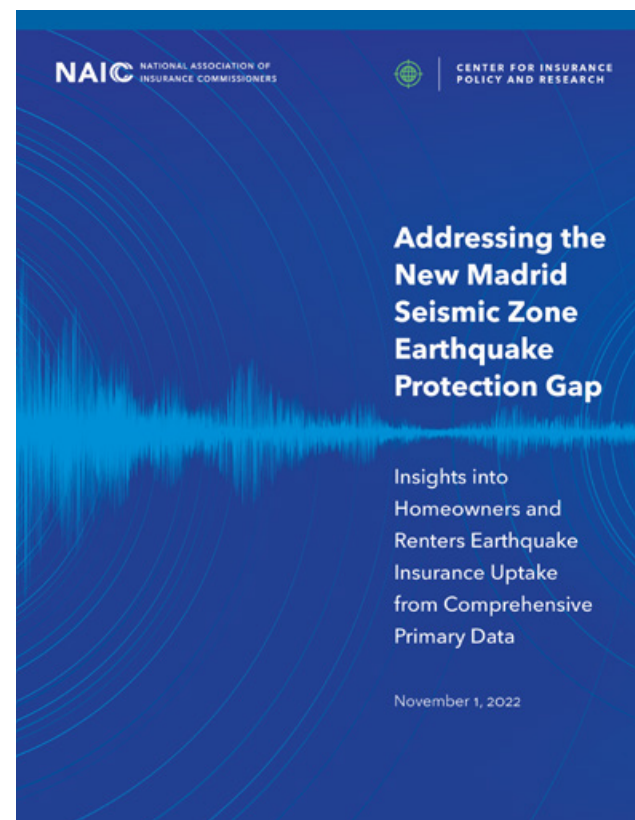
The CIPR expects to continue working with the RWJF, industry stakeholders, regulators, investors, and community stakeholders to broaden and deepen this work in 2023.

# Natural Catastrophe and Climate Risk and Resilience

Impacts from natural catastrophes continue to place significant stress on insurance markets and policyholders. As such, this is a key priority area of focus for insurance regulators and the CIPR has been active in research and applied research engagement along several fronts in this space.

One particular area of focus for regulators is the growing disaster insurance coverage protection gap. The CIPR, working with its research partners at the University of Missouri and the Missouri Department of Commerce and Insurance (MO DCI), issued a report in November 2022 addressing the earthquake coverage protection gap in the eight-state region of the central part of the U.S. - **Addressing the New Madrid Seismic Zone Earthquake Protection Gap: Insights into Homeowners and Renters Earthquake Insurance Uptake from Comprehensive Primary Data.**

The report utilized a mixed-methods research approach including a 1,200-person on-line survey to assess homeowner and renters perceptions of earthquake risk and their earthquake insurance coverage decision making. We found that the top three predictors of earthquake insurance uptake were: using agents to help



CIPR team with NAIC regulators at RAA Cat Risk Management 2022 in Orlando

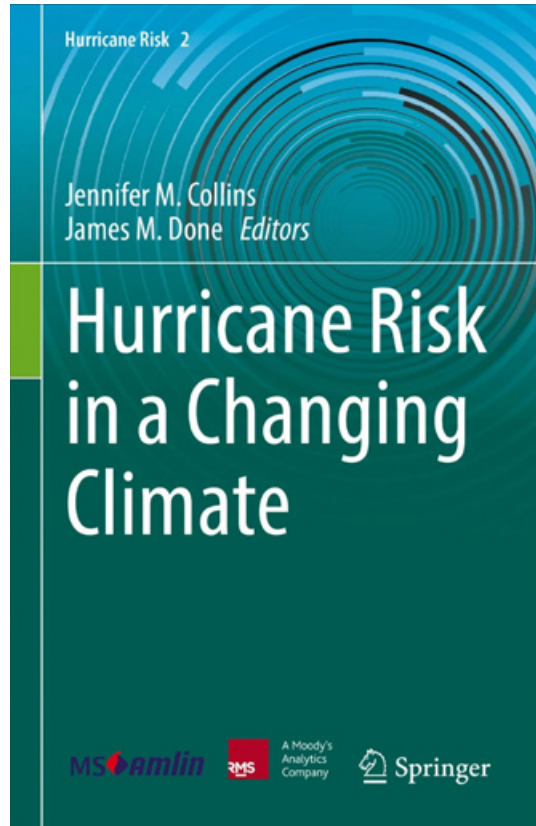
make insurance decisions; talking to friends and family about earthquakes; and confidence in having sufficient information about earthquakes. Significantly, the findings from this research were directly applied by the MO DCI in their ongoing earthquake outreach campaign.

In the same spirit of primary data collection direct from policyholders, in 2020 and 2021 the CIPR, working with its research partners at VU University in the Netherlands, implemented a longitudinally based series of household on-line surveys in Florida while respondents were at the beginning of the hurricane season, under the imminent threat of landfalling hurricanes, and during the non-hurricane threatening part of the year. As losses can be limited by improving individual preparedness for hurricane disasters including having appropriate levels of insurance coverage, it is imperative to understand the factors that enable individual actions to reduce hurricane risks and how these change over time as is the goal of the surveys and their corresponding analyses. The research led to the publication of a peer-reviewed book chapter in 2022 entitled "Assessing the drivers of intrinsically complex hurricane insurance

purchases: Lessons learned from survey data in Florida", with two other research manuscripts in production.

Another area of regulatory focus is the further development of the private flood insurance market. The proper assessment of flood risk is a critical underpinning for this private market development. The CIPR produced three peer-reviewed publications in 2022 related to this: "How the U.S. can benefit from risk-based premiums combined with flood protection"; "Evaluating the Risk and Complexity of Pluvial Flood Damage in the U.S."; and "US Tropical Cyclone Flood Risk: Storm Surge vs. Freshwater".

As mentioned above, the COE was established in July 2022 to provide state insurance departments with resources used by the industry to monitor and measure their exposure to catastrophic risk. Insurers use catastrophe models for capital reserve calculations, in underwriting, rating and to monitor exposure during major loss events. For years, state insurance departments have sought more transparency into these tools. The COE was established to help provide that information to regulators. While part of that is providing



regulators with access to the catastrophe model vendor documentation and training on how models are developed, regulators also need access to information about how insurers use the models and other tools to monitor their exposure to certain risks. Part of the COE budget in 2022 went toward funding six regulators to attend the RAA CAT Risk Management Conference and engage with the catastrophe modeling community, as well as CAT risk managers within companies and brokerages to understand best practices and methodologies around the use of catastrophe models and risk scoring systems available in their markets. This will be an annual event whereby state insurance regulators can develop an understanding of the use of the models and hear about current issues within CAT risk management. This will also facilitate communication and collaboration on the topic to begin to address regulatory concerns and work toward a common goal, of ensuring solvent



Jeffrey Czajkowski and Elisabetta Russo in front of IBHS main test chamber wind tunnel fans

markets while also facilitating access to affordable property insurance coverage in the states. In addition to connecting regulators to the CAT risk management and catastrophe modeling community, the COE also serves to connect regulators to the resilience community. As such, earlier this year, the COE coordinated a day and a half research meeting for 25 plus regulators from 20 individual states to the Insurance Institute for Building & Home Safety (IBHS) research center in Richburg South Carolina. The IBHS conducts research regarding building materials and characteristics that are resilient to weather perils, including hurricane, wind, hail, wind driven rain and wildfire. Through the IBHS research, funded by the insurance industry, insurers can identify building qualities that impact risk exposure. By working with IBHS and the resilience community,



CIPR team with NAIC regulators at IBHS research facility in Richburg SC



state insurance regulators can identify ways to incentivize mitigation and resilience. The agenda for the day and a half event was focused on regulatory market conduct issues surrounding severe convective storms including consumer complaints, fraud, and coverage issues, as well as the latest wildfire home hardening science including a full-scale burn demonstration.

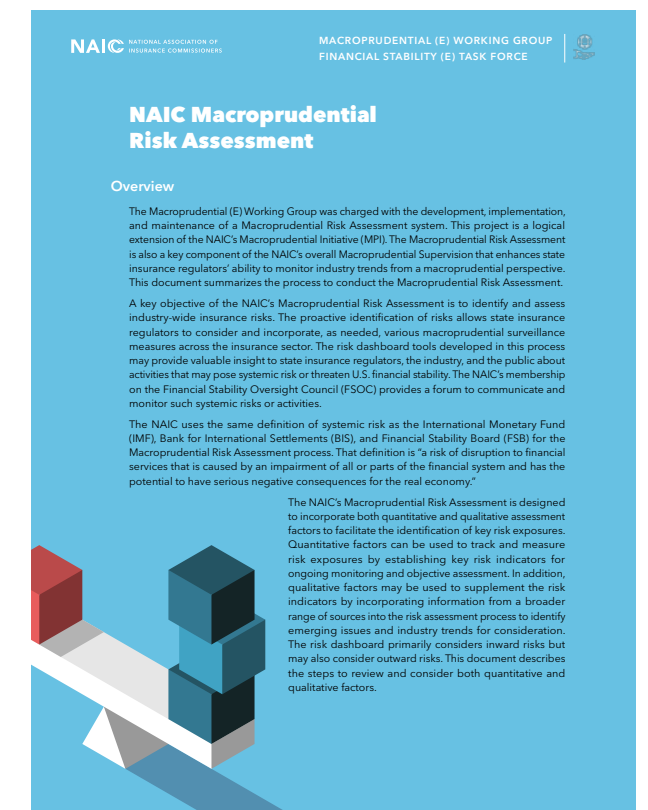


## Macroprudential Monitoring

CIPR staff collaborated with NAIC staff from Financial Regulatory Services (FRS) and the Capital Markets Bureau to develop an inaugural macroprudential risk assessment of the U.S. insurance industry. Macroprudential risk assessment is the analysis of systemic risks within the financial sector—that is, the risk of disruptions to financial services caused by impairments of all or parts of the financial system. Regulator-only and public-facing documents are drafted and reviewed and are expected to be released year-end 2022 or early 2023.

Primary CIPR contributions to the macroprudential risk assessment and associated documents were introductory material on the notion of systemic risk and the necessity of macroprudential surveillance, as well as an analysis of current macroeconomic conditions and the near-term macroeconomic outlook. The macroeconomic situation is one of seven key risk categories assessed in the overall macroprudential risk assessment. The macroprudential risk assessment documents include a macroeconomic risk section and a more detailed macroeconomic appendix.

The macroprudential risk assessment, which is ongoing, is a team effort. Macroprudential risk assessment team members engage jointly in all aspects of the analysis and documentation. They conducted participatory reviews of the analysis and documents with members of the Macroprudential (E) Working Group and Financial Stability (E) Task Force. Team members incorporated considerable feedback into the assessment process and drafted documents. CIPR participation in the macroprudential risk assessment will continue in 2023. Additional CIPR efforts in 2022 and 2023 include a detailed assessment of climate risk and an evaluation of various qualitative and quantitative measures of systemic risk. This evaluation aims to enhance the quality and authority of the risk assessments.



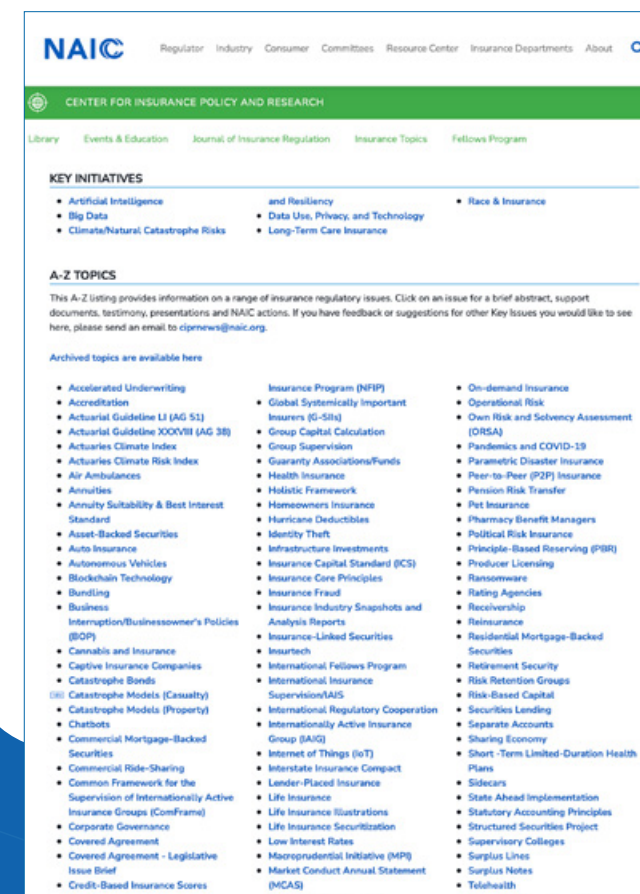
# Outreach



## Regulator Engagement

### Insurance Topics

In 2022, the Research Library and CIPR teams focused on outreach opportunities to ensure the regulatory community was aware of available resources concerning insurance topics that were top of mind. The CIPR A-Z topic pages were one area of focus and marketing efforts. With 135 topics currently available, and more added yearly, these pages average approximately 43,000 web hits a month. They were also frequently cited by many popular media outlets as authoritative sources for insurance topics. The most popular topics accessed throughout the year included risk-based capital (RBC), insurance fraud, NAIC model laws, and surplus lines.

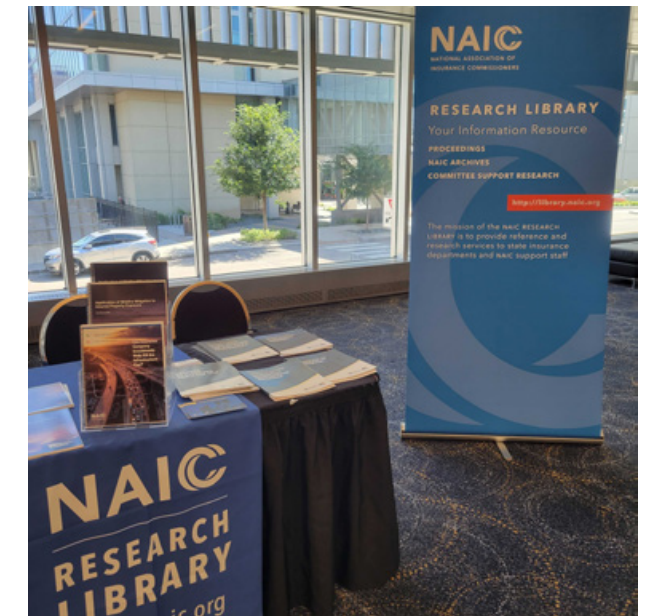


Connie Roland managing the CIPR booth

### Research Requests

The Research Library continued to reach regulators through training sessions on its resources and services. The Research Library team hosted virtual training sessions with groups from five state insurance departments and presented to nearly 200 regulators at the 2022 NAIC/NIPR Insurance Summit. States interested in setting up a library training session are invited to reach out to Library Manager Eryn Campbell (eecampbell@naic.org) to schedule.

As a result of the campaign to raise awareness of services and resources, the Research Library team is on track to exceed the number of requests received from regulators the previous year (108). On average, the team receives about 50 requests for information a month from NAIC staff, members, and the public. Some of the research request topics submitted by regulators this year included dog breed underwriting in homeowners insurance, ridesharing and auto insurance, the use of DNA and genetics in life insurance underwriting, and emerging topics such as the impact of alternative energies on the insurance sector. Other popular general requests include pulling historical information from the NAIC Proceedings, providing previous versions of model laws, and researching state regulations and statutes on various insurance issues for comparison. Research Library staff provide free access to the results of these extensive research requests to benefit the insurance regulatory community.



Kelly Edmiston with Eric Kolchinsky at NAIC Spring National Meeting infrastructure presentation

### NAIC National Meetings

The CIPR team also engages with NAIC members and regulators at each national meeting. At the 2022 Spring National Meeting, the CIPR partnered with the NAIC’s Capital Markets Bureau to host a session on research on insurance industry investments in economic infrastructure. This event was a follow-up to a report issued in the fall of 2021 by the CIPR and the Capital Markets Bureau team entitled *Can Insurance Company Investments Help Fill the Infrastructure Gap?*

At the 2022 Summer National Meeting, the CIPR continued to build upon this by hosting a session on social infrastructure. The session, “Gauging the Potential for Insurance Industry Investments in Social Infrastructure and Community Development Initiatives,” featured representatives from the life insurance industry and regulatory community, and it marked the beginning of the CIPR’s partnership with the Robert Wood Johnson Foundation (RWJF). At the 2022 Fall National Meeting, an “Infrastructure Investment State of Play” provided an update on further developments in the evolving social and economic infrastructure investment landscape relevant to regulators and industry.

The CIPR hosted two other events at the 2022 Fall National Meeting. One centered on the 40th anniversary of the *Journal of Insurance Regulation* (JIR). It featured a presentation from this year’s Kimball Award winning authors and a panel discussion with current and former editors on how the JIR can continue to support the research interests of the regulatory community in the future. The second was a natural disaster mitigation funding workshop in conjunction with the Robert Woods Johnson Foundation (RWJF). This workshop was hosted by the CIPR Catastrophe Modeling COE to assist the five departments of insurance in their resilience planning and coordination as part of their ongoing resilience grants that have been funded by RWJF.

Other national meeting presentations made by the CIPR team, or where CIPR work was highlighted in the presented national meeting reports, included to the following various NAIC committees and groups in 2022:

- Climate and Resiliency (EX) Task Force
- Commissioners’ Roundtable
- Health Innovations (B) Working Group
- Joint Meeting of the Catastrophe Insurance (C) Working Group and NAIC/FEMA (C) Advisory Group

- Joint Meeting of the Executive (EX) Committee and the Internal Administration (EX1) Subcommittee
- Long Term Care Insurance EX Task Force
- Property and Casualty Insurance (C) Committee
- State Insurance Department Legislative Liaison

### Research Library

The Research Library serves as the official historical archive for the NAIC, including the complete print and digitized collection of NAIC Proceedings since the association’s inception in 1871. Established in 1969, the Research Library has a long history of serving NAIC members and staff. Its primary mission is to provide business and insurance reference and research services to NAIC members and staff. Aside from fielding reference queries, the Research Library team provides referrals to NAIC subject matter experts (SMEs), offers document delivery services, and conducts training focusing on library resources and content. The Research Library collection consists of recorded presentations and other multimedia, books, reports, and electronic files of current topics and items of NAIC historical value. The Research Library team maintains an online catalog of approximately 9,000 records, with new items added monthly. Visit [library.naic.org](http://library.naic.org) to learn more.



Eryn Campbell talking with NAIC consumer representatives



## Educational Events

A key part of the CIPR’s mission is to provide education to drive discussion and advance understanding of insurance issues among the regulatory community. In 2022, the CIPR hosted a wide variety of events in line with this mission. In partnership with the Institutes Griffith Insurance Education Foundation, the CIPR presented two installments of its *Back to Basics* webinar series: one on captives and the other on insurance fraud. This series draws on the knowledge of academics and subject matter experts (SMEs) to provide foundational knowledge to inform critical policy conversations. This series will continue in 2023.

The CIPR again organized a track at the 2022 NAIC/NIPR Insurance Summit. This featured more than a dozen sessions on topics ranging from climate risk and resilience, life insurance literacy, cybersecurity risk, and rural health. Session recordings are available to regulators via the Research Library catalog. Nearly 1,800 attendees – in-person and virtual – participated in the CIPR sessions with continuing education credits earned.



Jennifer Gardner with Commissioner Mulready

A main pillar of activity for the CAT modeling COE is providing education and training to regulators on the various aspects of CAT models. In 2022, CAT model training by peril for hurricane, flood, severe convective storm as well as a session on CAT model governance were all undertaken. Over 300 (+) regulators from 30 (+) state participated in these initial training sessions. Work is underway for further peril training in early 2023 regarding casualty CAT models as well as a training session on FEMA’s Risk Rating 2.0 flood modeling.

The CIPR also worked with NAIC C committee staff to develop a natural disaster resilience workshop with the five state departments of insurance (DOI) from FEMA Region 6 (AR, LA, NM, OK, and TX) in conjunction with FEMA Headquarters and FEMA Region 6 colleagues in a hybrid event hosted by the Oklahoma DOI. In addition to hearing an overview of recent catastrophic events in the region, the following items were discussed: 1) information regarding FEMA Region 6 stakeholder roundtables; 2) how states are organized and plan for disaster; 3) NAIC capabilities to assist states; 4) FEMA Headquarter operations, including the flood response playbook; 5) claims information; 6) communication and messaging; and 7) how states interact with FEMA at DRCs. The group also visited the severe convective storm facility in Norman, OK, and it heard from Harold Brooks (National Oceanic and Atmospheric Administration–NOAA), a leading expert at the NOAA regarding warning systems and communications at the weather center. The educational event helped the states in FEMA Region 6 build relationships with their FEMA colleagues and improving communication with FEMA that will continue to grow in the future.

## Other Industry Stakeholder Educational Engagement

The CIPR also participated jointly with NAIC regulators on a number of educational sessions throughout the year to help better inform key industry stakeholders on ongoing CIPR research and engagement activities. This included hosting a panel session at the **National Disaster Resilience Conference** in November 2022 involving the DOIs from FL and MS with a focus on the development of a resilience playbook for NAIC regulators; hosting a regulator panel involving Superintendent Dwyer from RI, Commissioner Lara from CA and Commissioner White from VA at the **annual conference of the American Risk and Insurance Association (ARIA)** in August 2022 focused on understanding regulatory priorities and bridging to academic research; participating on a panel session in conjunction with regulators from AZ, CT, and OR that was focused on **Natural Catastrophes and Resilience** was undertaken at the **IRES Foundation - Market Regulation: The Changing Landscape** in April 2022; and presentations and panel discussions with the MO DCI were undertaken at the **Mind the Gap: Earthquake Insurance & Post-Disaster Recovery Forum** in March 2022.



*Strong Homes and Safe Families Happen Here*



# CIPR produced research output

## CIPR Issue Briefs

2022 Summer National Meeting CIPR Program: Dialogue Highlights and Identified Research Questions - **Gauging the Potential for Insurance Industry Investments in Social Infrastructure and Community Development Initiatives** - an Industry and Regulatory Initial Dialogue

October 2022 Virtual CIPR Program: Dialogue Highlights and Identified Research Questions - **Social Infrastructure Investments: Bridging to Capital for the Most at Need and Most at Risk** - Part II of an Industry and Regulator Dialogue

## CIPR Reports

Houston, J. Brian, Lori Croy, Jeffrey Czajkowski, and Lisa Groshong (2022). **"Addressing the New Madrid Seismic Zone Earthquake Protection Gap: Insights into Homeowners and Renters Earthquake Insurance Uptake from Comprehensive Primary Data."** Center for Insurance Policy and Research, National Association of Insurance Commissioners. November.



Cude, Brenda, Lisa Groshong and Bonnie Burns (2022). **"Long-Term Care Insurance Rate Increases and Reduced Benefit Options: Insights from Interviews with Financial Planners"**. Center for Insurance Policy and Research, National Association of Insurance Commissioners. November.

Edmiston, Kelly D. (2022). **"Alternative Payment Models, Value-Based Payments, and Health Disparities."** Center for Insurance Policy and Research, National Association of Insurance Commissioners. August.



Edmiston, Kelly D., and Jordan AlZuBi (2022). **"Trends in Telehealth and Its Implications for Health Disparities."** Center for Insurance Policy and Research, National Association of Insurance Commissioners. March.

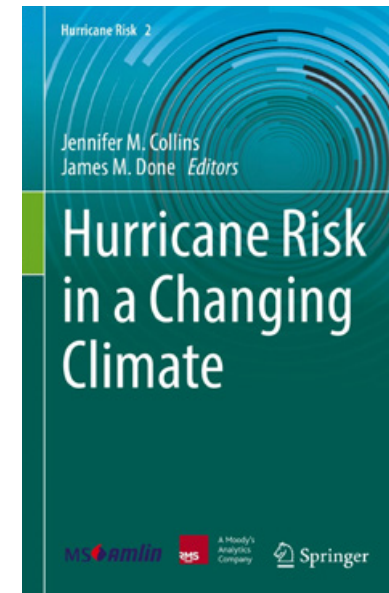
## Peer-Reviewed Publications

de Ruig, Lars T., Toon Haer, Hans de Moel, Samuel D. Brody, W. J. Wouter Botzen, Jeffrey Czajkowski, and Jeroen C. J. H. Aerts (2022). **"Climate-Proofing the National Flood Insurance Program,"** *Nature Climate Change*. doi:10.1038/s41558-022-01502-6.

de Ruig, Lars T., Toon Haer, Hans de Moel, Samuel D. Brody, W. J. Wouter Botzen, Jeffrey Czajkowski, and Jeroen C. J. H. Aerts (2022). **"How the USA Can Benefit from Risk-Based Premiums Combined with Flood Protection,"** *Nature Climate Change*. doi:10.1038/s41558-022-01501-7.

Tonn, G., and Jeffrey Czajkowski (2022) **"Evaluating the Risk and Complexity of Pluvial Flood Damage in the U.S.,"** *Water Economics and Policy special issue on Disaster Impacts and Adaptation: The Economics of Flooding*, DOI: 10.1142/S2382624X22400021

Tonn, G., and Jeffrey Czajkowski (2022) **"US Tropical Cyclone Flood Risk: Storm Surge vs. Freshwater"** *Risk Analysis*. 2022; 1- 17. <https://doi.org/10.1111/risa.13890>



Zhang, J., Czajkowski, J., Botzen, W.J.W., Robinson, P.J., Tesselaar, M. (2022). **Assessing the Drivers of Intrinsically Complex Hurricane Insurance Purchases: Lessons Learned from Survey Data in Florida.** In: Collins, J.M., Done, J.M. (eds) *Hurricane Risk in a Changing Climate*. *Hurricane Risk*, vol 2. Springer, Cham. [https://doi.org/10.1007/978-3-031-08568-0\\_12](https://doi.org/10.1007/978-3-031-08568-0_12)

Zhang, Hanchun., Brenda Cude, Lisa Groshong, Katie Keith (2022). **"The Impact of State Surprise Medical Billing Protections on Consumers with Employer-Sponsored Health Insurance"**. *Journal of Insurance Regulation*

# CIPR in the news

## Insurance Topic pages referenced in the media

### TRAVEL INSURANCE

#### Your Vacation Budget is Still at Risk - Here's How to Protect It

Nasdaq, June 29, 2022.

"With CFAR coverage, you can usually expect a partial refund of 50% to 75% of upfront payments, according to the National Association of Insurance Commissioners."

#### 3 Ways to Get Money Back When COVID Ruins Your Vacation

FOX56 News, April 3, 2022.

"The best bet, in some cases, is to pay to add on 'Cancel For Any Reason' coverage, which provides a partial reimbursement regardless of the reason for skipping your trip. With this type of coverage, it's typical to get a partial refund of 50% to 75% of upfront payments, according to the National Association of Insurance Commissioners."

### BUSINESS INTERRUPTION

#### How Covid-19 Put a Magnifying Glass on Business Interruption Insurance

Entrepreneur, May 18, 2022.

"Many businesses have business interruption insurance that is meant to serve as a safety net when disaster strikes that covers a loss of income and fixed expenses. In fact, the NAIC Center for Insurance Policy and Research estimates that 30% to 40% of small businesses have this type of insurance."



**PHARMACY BENEFIT MANAGERS**

**Cutting Out the Middleman, How Mark Cuban’s Online Pharmacy Saves You Money**

CBS DFW, Sept. 28, 2022.

“These days in many cases PBMs, insurance providers and pharmacies are all owned by the same company. According to the Center for Insurance Policy and Research the three largest PBMs in the country manage prescriptions for 89% of the market.”

**CANNABIS INSURANCE**

**Dutchie Launches New Insurance Program for Marijuana Businesses**

Forbes, Oct. 12, 2022.

“Cannabis-related businesses (CRBs) face many risks and obstacles. CRBs share the same general liability and other risks agricultural and manufacturing businesses face,’ the NAIC’s Center for Insurance Policy and Research wrote in a report updated in February. ‘This includes workplace accidents, damage to property and crop failure. CRBs are especially prone to fires from both wild and internal sources. Some of the biggest risks involve theft, general liability and product liability.’”

**CIPR Research/Research Mentioned in the News**

**2.2 quake east of Bonne Terre Sunday night**

Daily Journal Online, November 7, 2022 -

“Monday, the Missouri Department of Commerce and Insurance (DCI), the National Association of Insurance Commissioners’ (NAIC) Center for Insurance Policy and Research (CIPR), and the University of Missouri’s Disaster and Community Crisis Center announced a new report addressing the New Madrid Seismic Zone (NMSZ) earthquake protection gap. The report is said to provide insights into homeowners and renters insurance uptake. The study explores other reasons beyond cost and availability that might impact a consumer’s decision to purchase earthquake insurance coverage.”

**Climate-Proofing the National Flood Insurance Program**

Nature Climate Change, Oct. 24, 2022.

“Researchers, including Jeffrey Czajkowski from the Center for Insurance Policy and Research at the National Association of Insurance Commissioners (NAIC), indicate that climate change will likely increase the severity of flooding. ‘We observe that offering premium discounts to incentivize building-level risk reduction measures decreases total residential flood risk across the United States by approximately US\$1 billion per year (-7.3%) by 2050,’ said the authors.”

**Earthquake Insurance Coverage in Missouri’s Highest Risk Areas Drops to a Historic Low**

Standard Democrat, May 3, 2022. “Recent consumer research conducted by the Missouri Department of Commerce and Insurance, the Center for Insurance Policy and Research at the National Association of Insurance Commissioners (NAIC), and the University of Missouri’s Disaster and Community Crisis Center has shown that many homeowners in the highest risk areas of the New Madrid Seismic Zone don’t realize their current standard homeowners insurance policies don’t cover damage caused by earthquakes.”

**Regulators Should Identify and Mitigate Climate Risks in the Insurance Industry**

Center for American Progress, June 13, 2022.

“A 2020 NAIC study based on disclosures from roughly 70 percent of the U.S. insurance sector (in terms of premiums written) found that only a few firms had changed their investment strategies to account for potential climate risks to their asset portfolios” (from: Assessment of and Insights from NAIC Climate Risk Disclosure Data).

# CIPR Team and Partners

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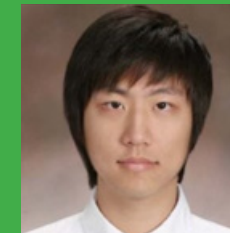
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## About the Center for Insurance Policy and Research

This National Association of Insurance Commissioners' (NAIC) Center for Insurance Policy and Research (CIPR) presents in-depth, independent research, the purpose of which is to facilitate discussion and advance thinking on insurance topics, as well as to promote action on current and emerging insurance issues and inform and disseminate ideas among regulators, consumers, academics, and financial services professionals.

The above purposes are accomplished through CIPR's events, research publications, newsletter and website, the *Journal of Insurance Regulation*, and its extensive research library holdings.

**CIPR studies are available at no cost on the CIPR website.** Link at [www.naic.org](http://www.naic.org)

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