



Institute for
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW



 **Columbia Law School**

SABIN CENTER FOR CLIMATE CHANGE LAW



**Initiative on
Climate Risk
& Resilience Law**

November 15, 2021

VIA ELECTRONIC SUBMISSION

Attn: Steven Seitz, Director, Federal Insurance Office

Re: Request for Information on the Insurance Sector and Climate-Related Financial Risks

The Institute for Policy Integrity (“Policy Integrity”) at New York University School of Law, Environmental Defense Fund (“EDF”), Columbia Law School’s Sabin Center for Climate Change Law (“Sabin Center”), the Initiative on Climate Risk and Resilience Law (“ICRRL”), and Professor Madison Condon¹ respectfully submit the following comments to the Federal Insurance Office (“FIO”) regarding its request for public input on FIO’s future work on the insurance sector and climate-related financial risks.² Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy. EDF is a non-partisan, non-governmental environmental organization representing over two million members and supporters nationwide. Since 1967, EDF has linked law, policy, science, and economics to create innovative and cost-effective solutions to today’s most pressing environmental problems. The Sabin Center develops and promulgates legal techniques to address climate change and trains law students and lawyers in their use. ICRRL is a joint initiative of Policy Integrity, EDF, Columbia Law School’s Sabin Center for Climate Change Law, and Vanderbilt Law School, focused on legal efforts on climate risk and resilience, particularly at the intersection of practice and scholarship.³

Professor Madison Condon joins these comments in her individual capacity. Professor Condon is an Associate Professor of Law at Boston University School of Law and an Affiliated Scholar at Policy Integrity. Her scholarship focuses on climate change and its relationship to corporate governance, market risk, and financial regulators.

In its Request for Information, FIO poses nineteen questions related to insurance supervision and regulation, insurance markets and mitigation/resilience, and insurance sector engagement. In

¹ This document does not purport to present the views, if any, of New York University School of Law, Columbia Law School, or Boston University School of Law.

² See Federal Insurance Office Request for Information on the Insurance Sector and Climate-Related Financial Risks, 86 Fed. Reg. 48,814 (Aug. 31, 2021) [hereinafter “FIO Request For Information”].

³ This document does not necessarily represent the views of each ICRRL partner organization. For more information on ICRRL, see <https://icrrl.org>.

response, Policy Integrity, EDF, and ICRRRL make the following eleven recommendations for FIO's consideration, each of which is discussed in further detail below.⁴

- FIO should consider three ways in which insurers engage with climate-related financial risk: as underwriters, investors, and risk carriers. (Question 1)
- In addition to FIO's listed priorities, FIO should also investigate the role of public insurance in providing insurance access, particularly given the challenges of insuring highly correlated risks. (Question 2)
- FIO should, in coordination with the National Association of Insurance Commissioners ("NAIC") and with its fellow members of the Financial Stability Oversight Council ("FSOC"), including the Securities and Exchange Commission ("SEC"), create model disclosure standards, with an eye towards international harmonization. (Question 4)
- FIO should use its data collection and dissemination authorities to monitor the extent of physical and transition risk in the industry; to assess changes in insurance access; to create a recommended framework for uniform disclosure; and to stress test the insurance industry. In so doing, FIO should coordinate with SEC and other agencies to ensure insurers have access to necessary information. (Question 5)
- FIO should monitor and analyze the risk that insurers will be unable to repay claims due to losses from their climate-related investment risks and consult with states to create model rules for integrating climate risk into capitalization requirements. (Question 5)
- FIO should, in coordination with other agencies, establish a verified, open-source centralized database for climate-related information, which would improve consistency among disclosures, prevent the shifting of private risk to the public, and improve information access both for investors and policyholders. (Question 6)
- FIO should take note of approaches by California, Connecticut, New York, and the International Association of Insurance Supervisors ("IAIS") in assessing current supervisory and regulatory issues and gaps in climate-related financial risk. (Question 9)
- FIO should consider the impacts of fat-tail risks and synergistic risks in assessing the potential for major disruptions of insurance coverage. FIO should investigate the viability of community-based catastrophe insurance, bundling hazard insurance, and resilience-based premium pricing as potential solutions to these disruptions. (Question 10)
- FIO should assess the availability and affordability of insurance coverage by considering the term length and predictability, the premium cost as compared to the local household income and housing costs, and the prevalence of insurance in the market. (Question 14)
- In balancing insurer solvency with availability and affordability of insurance, FIO should assess how improved resilience measures could reduce overall insurance expenditures. (Question 14)
- FIO should assess the efforts of insurers to reduce their climate impact through their underwriting activities, investment holdings, and business operations. (Question 17)

⁴ In parentheses after each recommendation, we list the FIO question to which it is most pertinent, although please note there may be overlap between questions.

A. FIO should consider three ways in which insurers engage with climate-related financial risk: as underwriters, investors, and risk carriers. (Question 1)

In addressing the action items contained in the Executive Order on Climate-Related Financial Risk,⁵ FIO should consider how insurers face and create climate-related financial risk as underwriters, as investors, and as sellers of insurance-linked securities and issuers of stocks.⁶ In analyzing each of these levels, FIO should consider both types of climate-related risk: physical risk and transition risk.⁷ Physical risks are risks arising from climate-related disasters and shocks (e.g., hurricanes, floods, droughts) and long-term persistent changes (e.g., heat stress, sea level rise).⁸ Transition risks are financial risks that arise from efforts to mitigate or adapt to climate change (e.g., policy changes or shifts in consumer behavior that reduce fossil fuel use, technological changes).⁹ Broadly speaking, insurers' underwriting risk can be managed by increasing access to information about physical climate risk, decreasing exposure to the fossil fuel sector, and improving resilience efforts. Investing risk would decrease with climate risk disclosure from invested assets. Similarly, insurers would propagate less risk into the market if they were required to disclose their own risk and if that risk were accounted for in capitalization requirements.

1. Underwriting Risk

Insurers face climate risk as underwriters. Climate change is fundamentally reshaping the underlying risk of insurance policies.¹⁰ Not only are wildfires, flooding, and other adverse events becoming more frequent and intense, but once-cyclical events are changing their patterns.¹¹ When risk changes dynamically, “the actuarial practice of averaging the past to anticipate the future is not valid.”¹² In other words, not only is there more risk, but in order to underwrite risk accurately, insurers will need to move away from existing actuarial practices to ones that can manage this variation. This discrepancy can have significant financial consequences. According to S&P Global, reinsurers may be underestimating their losses from natural catastrophes by 33%–50%, by treating a one-in-ten year loss as a one-in-twenty or one-in-thirty year loss.¹³ This underestimate would represent about 91% of the industry's capital buffer.¹⁴ If these reinsurers defaulted, either policyholders, the government, or both, could end up paying for the insurance industry's miscalculations.

⁵ See Exec. Order No. 14,030, § 3(b)(i), 86 Fed. Reg. 27,967, 27,968 (May 25, 2021).

⁶ See Ian ADAMCZYK ET AL., GENEVA ASSOC., CLIMATE CHANGE RISK ASSESSMENT FOR THE INSURANCE INDUSTRY 18 (2021), <https://perma.cc/6S4D-LC9X>; INT'L ASSOC. OF INS. SUPERVISORS (IAIS), ISSUES PAPER ON THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (Feb. 2020), <https://perma.cc/5FY7-4FBQ> (describing insurers as “risk manager[s], risk carrier[s] and investor[s]”).

⁷ See, e.g., FIN. STABILITY OVERSIGHT COUNCIL, REPORT ON CLIMATE-RELATED FINANCIAL RISK 2021 12–13 (2021), <https://perma.cc/RLD5-L7AS> [hereinafter “FSOC Climate Report”].

⁸ *Id.* at 17–18.

⁹ *Id.* at 19–20.

¹⁰ IAIS, *supra* note 6, at 14; ADAMCZYK ET AL., *supra* note 6, at 16–17.

¹¹ See Milly et al., *Stationarity Is Dead: Whither Water Management?* 319 SCI. 573, 573–74 (2008).

¹² ADAMCZYK ET AL., *supra* note 6, at 19.

¹³ See Dennis P. Sugrue et al., *Global Reinsurers Grapple with Climate Change Risks*, S&P GLOBAL RATINGS (Sept. 23, 2021), <https://perma.cc/ZQN8-9KCY>.

¹⁴ See *id.*

Conversely, insurers may increase climate risk because their underwriting reduces the risk and cost of engaging in certain climate risky activities. For example, flood insurance makes coastal homes more desirable. Similarly, for some industries, such as oil and gas, insurance availability and costs may make project investments more attractive. By underwriting oil and gas drilling risk, insurers make drilling easier.¹⁵ Oil and gas drilling, in turn, exacerbates climate change, increasing climate-related physical risk throughout the rest of an insurers' portfolio. It is unclear whether the industry's continued engagement with oil and gas underwriting is actually cost-justified. Total premiums from oil and gas projects represent only one percent of all property and casualty ("P&C") insurance premiums—new oil and gas projects represent only one tenth of one percent of the P&C market¹⁶—but increase risk on the balance of the portfolio. Interestingly, insurance companies have ceased underwriting coal projects, after determining that reducing coal exposure improves their stock valuation.¹⁷ There has not yet been a similar exodus from oil and gas and it is unclear whether this continued underwriting is driven by cost considerations or political factors.¹⁸

FIO should assess both the physical risk that insurers face throughout their underwriting portfolios, and also how insurers' role as underwriters can increase risk throughout the rest of the system.

2. Investing Risk

On the other side of the balance sheet, insurers face climate risk as investors. Insurers operate as a reverse bank, taking premium payments upfront in exchange for an uncertain future debt, as opposed to lending out money in exchange for uncertain future payment. While holding this money, insurers invest; the U.S. insurance industry holds about \$7.5 trillion in assets.¹⁹ But such investments may not be accurately priced due to issuers' failure to disclose climate risks to their own assets and operations. This mispricing may, in turn, jeopardize insurers' ability to fulfill their financial obligations to policyholders.

Insurers expose themselves to unknown financial risk when they invest in companies that face undisclosed climate risk, a well-explored concern that has been discussed at length in other

¹⁵ See, e.g., Corbin Hiar, *Coal, Oil Sands Companies Feel Growing Insurance Squeeze*, E&E NEWS (Sept. 20, 2021), <https://perma.cc/N25Z-7MMV> (describing how insurance companies pulling out of the coal industry has made production more costly).

¹⁶ See Tim Quinson, *Insurers Can Afford to Drop Oil and Gas—But Many Won't*, BLOOMBERG GREEN (Aug. 25, 2021), <https://perma.cc/G6E3-R97Y> (estimating annual oil and gas premiums at \$17 billion and new oil and gas premiums at \$1.7 billion and accounting for 0.1% of all P&C premiums).

¹⁷ See Tim Quinson, *Dumping Coal Can Be Good for Insurance Company Stock*, BLOOMBERG GREEN (Feb. 2, 2021), <https://perma.cc/4YQK-SJ7E>.

¹⁸ A recent investigation found that two-thirds of U.S. insurance company board members are tied to "climate-conflicted" industries—industries that benefit from cheap oil and gas—while 20% have direct ties to the fossil fuel industry. See Rachel Sherrington, *Investigation: Majority of Directors of Insurance Companies Tied to Polluting Industries*, DESMOG (Oct. 7, 2021), <https://perma.cc/9Z86-VQGN>.

¹⁹ Michele Wong & Jean-Baptiste Carelus, Nat'l Assoc. Ins. Comms'rs., *U.S. Insurance Industry's Cash and Invested Assets Continue to Grow Amid the Pandemic*, CAPITAL MARKETS SPECIAL RPT. (May 2021), <https://perma.cc/3N9B-WFKW>. Life insurers, alone, hold \$4.5 trillion in assets. Deep Banerjee, *A Look at U.S. Life Insurers' \$4.5 Trillion Investment Portfolios Amid COVID-19*, S&P GLOBAL RATINGS (Sept. 16, 2020), <https://www.spglobal.com/ratings/en/research/articles/200916-a-look-at-u-s-life-insurers-4-5-trillion-investment-portfolios-amid-covid-19-11640241>.

contexts.²⁰ These concerns extend beyond any single investment or entity²¹ and represent a systemic risk: the “climate bubble” created by the overvaluation of assets has been compared to the 2008 housing bubble.²² When insurers invest in public stocks, these risks transfer into the insurers’ portfolio. SEC has been working on a rule that would require public companies to disclose the extent of their climate risk.²³ This critical step would allow insurer-investors to better target investments.

For insurers, however, SEC action may be insufficient, because insurers also invest heavily in less-regulated sources, such as municipal debt. Municipal debt typically makes up between 30 and 45% of P&C and life insurers’ capital.²⁴ Municipal debt is subject to fewer disclosure requirements than other types of debt and issuers are not required to report their exposure to physical and transition risk.²⁵ The FSOC Climate Report urged Committee members to investigate how their authorities could be used to improve municipal disclosures.²⁶ FIO should stay abreast of this work.

Managing investment risk is arguably more challenging than managing underwriting risk. To manage underwriting risk, as discussed above, insurers may choose to offer shorter policies, back out of certain markets, or otherwise decrease their exposure to risk. It is not clear, however, that insurers have the necessary tools to manage their investment portfolios in ways that accurately reflect climate risk.

3. *Climate Risk Propagation*

Finally, insurers may propagate climate risk through the rest of the marketplace by issuing stock and by selling insurance-linked securities and other insurance investment products that, themselves, carry undisclosed climate risk. While publicly traded insurance companies are subject to SEC disclosures, those companies represent only a quarter of insurance firms.²⁷ Mutual insurance companies and private insurance companies would not be covered. Lack of climate risk disclosure spreads the risk of default to unwitting policyholders—who might choose

²⁰ See, e.g., Madison Condon et al., *Mandating Disclosure of Climate-Related Financial Risk*, 23 N.Y.U. J. LEGIS. & PUB. POL’Y (forthcoming 2021) (manuscript at 3–5), <https://perma.cc/G3Z3-8GKY>; SEC comments; Institute for Policy Integrity at New York University School of Law and Environmental Defense Fund, Comment Letter on the Requested Public Input on Climate Change Disclosure (June 14, 2021).

²¹ Fossil fuel holdings, however, face increasingly acute risks, both due to the possibility that those investments become stranded assets, see Condon et al., *supra* note 20, as well as because those investments lead to increased physical risk on the underwriting side of the balance sheet by producing downstream greenhouse gas emissions.

²² See Madison Condon, *Market Myopia’s Climate Bubble*, UTAH L. REV. (forthcoming 2021) (manuscript at 39–40), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3782675; Rostin Behnam, Comm’r, Commodity Futures Trading Comm’n, Opening Statement of Commissioner Rostin Behnam Before the Market Risk Advisory Committee (June 12, 2019), <https://perma.cc/C37G-497S>; Kate Duguid, *Citing Climate Risk, Investors Bet Against Mortgage Market*, REUTERS (Sept. 29, 2019), <https://perma.cc/5GLU-KUCA>.

²³ FSOC Climate Report, *supra* note 7, at 70.

²⁴ Andy Polacek & Shanthi Ramnath, *How Vulnerable Are Insurance Companies to a Downturn in the Municipal Bond Market*, CHICAGO FED LETTER 451 (Feb. 2021), <https://perma.cc/QWG5-SVA9>.

²⁵ FSOC Climate Report, *supra* note 7, at 87; see also Parker Bolstad et al., *Flying Blind: What Do Investors Really Know About Climate Change Risks in the U.S. Equity and Municipal Debt Markets?* 4–5 (Hutchins Ctr. On Fiscal & Monetary Pol’y at Brookings, Working Paper No. 67, 2020), <https://perma.cc/8VZH-FWFQ>.

²⁶ FSOC Climate Report, *supra* note 7, at 8.

²⁷ *Id.* at 74.

to purchase insurance from a different firm if they believed there was a risk of default—and to the broader financial system.

B. In addition to FIO’s listed priorities, FIO should also investigate the role of public insurance in providing insurance access, particularly given the challenges of insuring highly correlated risks. (*Question 2*)

Although the Executive Order specifically calls on FIO to assess “the potential for major disruptions of *private* insurance coverage,”²⁸ FIO should also examine the role of public insurance offerings in improving insurance access and resilience. Public insurance is a critical piece of this puzzle because many climate-related risks are challenging to insure due to their correlated nature, while other risks are not currently covered by existing private insurance offerings.

Insurers prefer to underwrite uncorrelated risks.²⁹ As an illustrative example, consider that while car accidents happen frequently, these accidents occur with a degree of randomness. This pattern allows an insurer to estimate how often car crashes will occur and charge premiums such that it can pay out in a predictable manner. In contrast, climate change-related risks tend to be heavily correlated. For example, droughts, floods, and wildfires all tend to affect large geographic areas at the same time. These spikes in risk can be challenging for insurers to manage.³⁰ Similarly, climate risk threatens whole industries at a time. For example, physical risks could starkly reduce tourism in a given region, while transition risks could lead to shifts in automobile manufacturing, air travel, and energy production.

Where the private market does not provide insurance, costs are borne either by those afflicted by the harm, or by governments, whether through public insurance programs or post-disaster relief efforts. The National Flood Insurance Program (“NFIP”), for example, was created in part because Congress found “many factors have made it uneconomic for the private industry alone to make flood insurance available to those in need,” leading to reduced private coverage.³¹ Similarly, California’s Fair Access to Insurance Requirements (“FAIR”) plan—a state wildfire insurance program—exists to provide an option for homeowners who cannot qualify for private wildfire insurance.³²

Better understanding public coverage—including who is benefitting from public insurance and who is bearing risk—is necessary to accurately account for how climate risk is being distributed throughout the economy and society, and to understand the role the insurance system plays in that risk. For example, a moral hazard theory of insurance hypothesizes that governmental

²⁸ See Exec. Order No. 14,030, *supra* note 5, § 3(b)(i).

²⁹ See Kenneth Abraham, “*Incomplete*” Insurance Coverage, 26 CONN. INS. L.J. 115, 124 (2020); Jay Feinman, *What Is a Protection Gap? Homeowners Insurance as a Case Study*, 27 CONN. INS. L.J. 82, 95–96 (2020)

³⁰ See Feinman, *supra* note 29 at 96 (discussing how insurers are ceasing to offer wildfire coverage in California).

³¹ 42 USC § 4001(b); see also Feinman, *supra* note 29, at 107 (explaining the lack of private flood coverage and how NFIP fills that gap); Christopher C. French, *Insuring Floods: The Most Common and Devastating Natural Catastrophes in America*, 60 VILL. L. REV. 53, 71 (2015) (describing how private insurance pulled out of flood insurance in the 1960s).

³² See CAL. DEP’T OF INS., PROTECTING COMMUNITIES, PRESERVING NATURE AND BUILDING RESILIENCY 5, 33 (2021), <https://perma.cc/5C7Y-425Y> (describing the purpose of the FAIR plan and explaining that it plays a similar role as NFIP).

subsidies through public insurance increase the likelihood that individuals purchase homes in at-risk areas because the individual is able to off-load a portion of that risk onto the public.³³ In line with a moral hazard theory, the NFIP, for example, has been criticized for subsidizing wealthy coastal homeowners at the expense of poorer inland communities.³⁴ At the same time, while the moral hazard criticism of public insurance makes sense in the context of wealthy policyholders seeking an ocean view, it does not account for the fact that, even with public insurance offerings, many homeowners do not have insurance. Nationwide, only one-in-six households have flood insurance (in high risk areas, this increases to 30%).³⁵ According to an analysis of FEMA data, “only 17% of homeowners in the eight counties most directly affected by Hurricane Harvey had flood insurance.”³⁶ Beyond this, homes theoretically covered by government insurance may not actually receive the protection they are paying for. A number of empirical studies have suggested that Black and low-income NFIP claimants are more likely to be denied grants under the program and, if accepted, collect a lower average payout.³⁷ Although FEMA is currently working to restructure the NFIP to be more equitable and to better reflect risk in the face of climate change,³⁸ the historical gaps in the program suggest that NFIP and other public insurance programs could benefit from research by FIO to investigate whether risk is being equitably distributed and, if not, how that distribution could be improved.

FIO has the authority to research state and federal public insurance in this manner. In addition to granting FIO the authority to “monitor all aspects of the insurance industry,” Dodd-Frank specifically gave FIO the ability to “monitor the extent to which traditionally underserved communities and consumers, minorities . . . and low- and moderate-income persons have access to affordable insurance products regarding all lines of insurance, except health insurance.”³⁹ Public programs fill gaps in private insurance and, therefore, in evaluating insurance access, it is proper and necessary for FIO to consider public programs.⁴⁰ Thus, FIO clearly has authority to research public state and federal insurance programs.

³³ See SADIE FRANK ET AL., BROOKINGS, INVITING DANGER: HOW FEDERAL DISASTER, INSURANCE AND INFRASTRUCTURE POLICIES ARE MAGNIFYING THE HARM OF CLIMATE CHANGE 7 (2021), <https://perma.cc/TCT7-8AVQ> (“These federal backstops can create what economists call moral hazard because they incentivize people take on risks they otherwise would not because they do not bear the full cost of those risks. It is a kind of subsidy.”); Christopher French, *America on Fire: Climate Change, Wildfires & Insuring Natural Catastrophes*, 54 U.C. DAVIS L.R. 817, 861 (2020).

³⁴ See Christopher Flavelle, *The Cost of Insuring Expensive Waterfront Homes Is About to Skyrocket*, N.Y. TIMES (Sept. 24, 2021), <https://perma.cc/DJ7R-UV3V>.

³⁵ JEFF DUNSAVAGE, INS. INFO. INST., BEYOND RISK TRANSFER, 6, 7 (Apr. 2021), <https://perma.cc/US2Q-MYMU>.

³⁶ Heather Long, *Where Harvey is Hitting Hardest, 80 Percent Lack Flood Insurance*, WASH. POST (Aug. 29, 2017), <https://perma.cc/32AG-43GQ>; see also Eleanor Krause & Richard V. Reeves, *Hurricanes Hit the Poor the Hardest*, BROOKINGS (Sept. 18, 2017), <https://perma.cc/938B-N8SN> (describing some of the structural barriers to flood insurance for poor communities).

³⁷ For a summary of relevant literature, please refer to Christopher Flavelle, *Why Does Disaster Aid Often Favor White People?*, N.Y. TIMES (updated Oct. 27, 2021), <https://perma.cc/R4UV-336L>.

³⁸ *Risk Rating 2.0: Equity in Action*, FED. EMER. MGMT. AGENCY (last visited Nov. 5, 2021), <https://perma.cc/TR2J-98NP>.

³⁹ 31 U.S.C. § 313(c), (n).

⁴⁰ Monitoring public insurance is not atypical for FIO; FIO currently provides FEMA with information and expertise in administering the National Flood Insurance Program. See FIO Request for Information, *supra* note 2, at 48,816. In addition, FIO’s annual report for 2020 focused largely on the effect of the COVID-19 pandemic on insurers and examined state action in the face of the pandemic, so there is precedent for monitoring state action. See FED’L INS. OFFICE, ANNUAL REPORT ON THE INSURANCE INDUSTRY (Sept. 2020), <https://perma.cc/XHW4-VEE2>.

C. FIO should, in coordination with NAIC and with its fellow members of FSOC, including SEC, create model disclosure standards, with an eye towards international harmonization. (Question 4)

As discussed in Part A, insurers face climate risk on both sides of the balance sheet, as both underwriters and as investors.⁴¹ This risk can also propagate through the financial sector, as other market participants purchase securities issued by insurance companies. Although a forthcoming SEC disclosure rule will likely ameliorate some concerns in this area by requiring publicly-traded insurance companies to assess and report their climate risk, privately held or mutually-held insurance companies will not be subject to those disclosure requirements. FIO should consider options for filling any gaps left by the SEC disclosure regime. For example, FIO, in consultation with state regulators and NAIC, could consider creating model disclosure standards for mutual and private insurance companies. To ensure comparability with public disclosure rules, FIO should also coordinate with SEC.

Model disclosures would benefit policyholders, investors, regulators, and insurers. Policyholders need adequate information in order to understand the insurer’s investment and credit risks and the resultant risks associated with the policy. For example, a policyholder needs to know that an insurer will be able to cover claims made under the policy. Similarly, investors need to know whether to invest in insurance companies and regulators need to understand whether insurance companies are adequately capitalized. Finally, given that approximately one-third of insurers surveyed under NAIC’s Insurer Climate Risk Disclosure Data Survey said that they had not considered how climate change could impact their investment portfolio,⁴² insurers themselves may benefit from the disclosure process because the process would encourage the insurer to grapple with its internal climate risk. In other words, a well-functioning market requires that the insurance sector makes disclosures regarding its climate-related financial risk.

Working with states to create a model disclosure rule is within FIO’s authority. FIO is empowered to “consult with the States . . . regarding insurance matters of national importance”⁴³ and to “advise the Secretary on major domestic . . . insurance policy issues.”⁴⁴ Climate-related financial risk is clearly a major domestic policy issue and a matter of national importance, as evidenced both by the potential scope of the issue—a climate bubble could echo through the economy with a shock the magnitude of the Great Recession⁴⁵—and the attention given to the issue by the Biden administration, FSOC, and state regulators.⁴⁶ In its recent report, FSOC recognized climate change as an “emerging threat to the financial stability of the United States.”⁴⁷ As such, FIO has the authority to consult state regulators and to advise the Secretary of the Treasury on matters related to climate-related financial risk. Developing model disclosures for climate risk, in coordination with state regulators, would be such a consultation; FIO would

⁴¹ See ADAMCZYK ET AL., *supra* note 6, at 18.

⁴² NAIC Climate Risk Disclosure Survey Results – Home, CAL. DEPT. OF INS. (last visited Nov. 10, 2021), <https://perma.cc/AAF4-WBA8>.

⁴³ 31 U.S.C. § 313(c)(1).

⁴⁴ *Id.* § 313(c)(2).

⁴⁵ See sources cited *supra* note 22.

⁴⁶ See Executive Order 14,030, *supra* note 5; FSOC Climate Report, *supra* note 7, at 1, 40, *see infra* Part G (discussing state actions on climate change and insurance).

⁴⁷ FSOC Climate Report, *supra* note 7, at 1.

merely be acting as an information aggregator to assist in offering a path forward for state regulators. This is well within the bounds of FIO’s information-gathering and disseminating functions.

Recognizing that SEC has been carefully studying climate change risk disclosure, FIO should avoid duplicating efforts by coordinating closely with SEC to create comparable frameworks. At the same time, FIO should maintain an eye towards international harmonization with other reporting frameworks, such as those developed by the Task Force on Climate-Related Financial Disclosures (“TCFD”) and the Sustainability Accounting Standards Board (“SASB”) , as consistency in disclosure across international jurisdictions would be valuable from both the underwriting and investment perspectives, improving comparability of disclosures for investors, attracting foreign investment, and minimizing compliance costs for multinational firms. Second, in developing model disclosure standards, FIO should also heed that sector-specific guidance is likely necessary, as insurance policies vary greatly in duration and risk. Different lifespans (e.g., a 1-year vs 10-year policy) and different risk exposures (e.g., correlated risks from wildfires vs. statistical impacts from excess heat exposure) could lead to different needs. Third, FIO should also consider, in particular, how information might impact policyholders. For example, perhaps a model disclosure should include an estimate of the trajectory for how premiums may increase over time. This would allow policyholders to be aware of how their future coverage may change.

D. FIO should use its data collection and dissemination authorities to monitor the extent of physical and transition risk in the industry; to assess changes in insurance access; to create a recommended framework for uniform disclosure; and to stress test the insurance industry. In so doing, FIO should coordinate with SEC and other agencies to ensure insurers have access to necessary information. (Question 5)

FIO has broad authority to collect and disseminate climate risk data from insurers, provided the purpose is related to FIO’s monitoring and consulting functions. FIO should use this power to gather information on the industry’s exposure to climate-related risk, aggregate that data, and report on broad patterns within the industry in terms of climate exposure. This power could also be used to assess how access to insurance is changing and who is bearing the risk of those changes, to create a recommended framework for uniform disclosure and risk-accounting practices, and to monitor how the insurance industry would manage in certain climate risk scenarios.

FIO has the authority to collect and disseminate information from insurance companies, up to and including the ability to subpoena. FIO may require an insurer or its affiliates to submit such data or information “as [FIO] may reasonably require in carrying out [its] functions.” Although FIO is required to coordinate with relevant federal agencies and state insurance regulators, as well as to consult publicly available sources, before requesting data or information directly from insurers, the Director is *not* required to collect data from the other regulators if the information is unavailable or unable “to be obtained in a timely manner.”⁴⁸ In such a case, FIO may collect the information directly.⁴⁹ In other words, FIO is not required to go to extreme lengths to gather information from state regulators or other federal agencies, but only to coordinate to the extent

⁴⁸ 31 U.S.C. § 313(e).

⁴⁹ *Id.*

that the data could be obtained in a “timely manner.”⁵⁰ Finally, FIO may also subpoena information from insurance companies, upon a written finding by the Director that the data or information is required to carry out the Office’s functions—which include monitoring all aspects of the insurance industry—and that the Office has properly coordinated with state agencies and other federal regulators.⁵¹ The nonpublic data collected by FIO retains any privileges it would otherwise have, and continues to be subject to any confidentiality agreements under which the data was furnished to the insurer.⁵² The data may be shared with state regulators and is subject to Freedom of Information Act requests.⁵³

E. FIO should monitor and analyze the risk that insurers will be unable to repay claims due to losses from their climate-related investment risks and consult with states to create model rules for integrating climate risk into capitalization requirements. (*Question 5*)

Creating model disclosures will protect the economy from systemic risk of insurer default. That said, given the heightened risk that some insurers’ policies face from climate change, and the potential risk of an insurers’ investment portfolio in light of undisclosed climate-related risk, FIO should monitor and assess the risk that insurers may be unable to repay claims due to losses from their climate-related investment risks. Further, FIO should work with states to develop recommendations on how to consider capitalization in the context of climate risk. In so doing, FIO should also coordinate with the Federal Reserve and the Office of the Comptroller of the Currency, which are currently working on supervisory guidance to include climate risk as an element in the appropriate capitalization in banks.

Although much focus has been given to transition risks of climate change and, in particular, the risk that a company loses value due to “stranded assets,”⁵⁴ stranded assets are only a part of a larger problem: the rest of an insurer’s portfolio may also face climate-related transition risks from technological change, reputational risk, or other liability or policy risks.⁵⁵ As discussed in Part A, insurers are large holders of fixed-income assets, such as municipal debt, which are subject to fewer reporting requirements.⁵⁶ This means insurers will not necessarily have a firm grasp on the physical and transition risks embedded in the debt.

Defaults or widespread devaluations of these investments could threaten insurers’ ability to meet policyholder claims. This is especially salient because the types of physical risks that might lead to increased insurance claims—consider, for example, widespread wildfires—could be

⁵⁰ *Id.* (noting, in addition, that such data collection is still subject to the Paperwork Reduction Act).

⁵¹ *Id.* § 313(c), (e).

⁵² *Id.* § 313(e)(5).

⁵³ *Id.* § 313(e)(5).

⁵⁴ *See, e.g.,* Hyeyoon Jung et al., *Climate Stress Testing*, 977 FED. RSRV. BANK OF N.Y. STAFF RPTS. (Sept. 2021), <https://perma.cc/8TBK-G33W> (creating a metric to estimate systemic risk from stranded assets); N.Y. DEP’T OF FIN. SERVS., AN ANALYSIS OF NEW YORK DOMESTIC INSURERS’ EXPOSURE TO TRANSITION RISKS AND OPPORTUNITIES FROM CLIMATE CHANGE 9, 15–16 (June 2021), https://www.dfs.ny.gov/system/files/documents/2021/06/dfs_2dii_report_ny_insurers_transition_risks_20210610.pdf (finding the insurance sector has high exposure to transition risks in part due to high investments in oil and gas).

⁵⁵ *See* Condon et al., *supra* note 20, at 6–9.

⁵⁶ *See* Polacek & Ramnath, *supra* note 24; FSOC Climate Report, *supra* note 7, at 87; Bolstad et al., *supra* note 25, at 4–5.

associated with a decline in investment values or defaults. In order to reduce the risk of default, FIO should coordinate with state regulators to assess how climate risk could be considered in the capitalization context to ensure insurers remain adequately capitalized to manage claims, even in the face of known (and unknown) climate risk.

F. FIO should, in coordination with other agencies, establish a verified, open-source centralized database for climate-related information on the insurance sector, which would improve consistency among disclosures, prevent the shifting of private risk to the public, and improve information access both for investors and policyholders.
(Question 6)

When data on climate harms is kept private, it causes damage to the financial system by leading to inconsistency among disclosures, making it hard for investors to accurately target investment. This leads to inefficiency in capital investment. In contrast, publicly available information can prevent the shifting of private risk to the public. FIO should, in coordination with other federal agencies, establish a verified, open-source, centralized database for climate-related information on the insurance sector. Such a database could benefit the insurance sector by creating consistency between climate-related risk disclosures, improving access to information for investors in insurance (both in terms of policyholders and institutional investors), and assisting policyholders in better understanding their risk, prior to purchasing a policy.⁵⁷ Such a database would also be in line with FSOC’s recent report on Climate-Related Financial Risk, which recommends that, “FSOC members make climate-related data for which they are the custodians freely available to the public, as appropriate and subject to any applicable data confidentiality requirements.”⁵⁸

In making such a database, FIO should coordinate with other federal agencies, where possible. In addition, FIO should also consider strategies for disseminating more (and more reliable) data to individual policyholders. Insurers are better able to see aggregated and regional level information, as compared to individual market participant. As homeowners and small businesses may not have the information necessary to reduce their climate risk exposure, making reliable information available to putative policyholders could improve resilience to climate change and reduce the prevalence of gaps in insurance coverage. For example, reliable data on climate risk could serve as a warning to consumers looking to purchase a home in an at-risk area. This would allow a potential homeowner to understand the risk they would face prior to committing to a purchase. Access to this information could nudge consumers to purchase elsewhere. While the question posed in the RFI contemplates an insurer-facing database, we recommend simply that the database be designed in a way that is interpretable to policyholders, as well.

A climate risk database of this sort is squarely within FIO’s existing authority. At the direction of the Secretary of the Treasury, FIO has the authority to “monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers” and, in so doing, FIO may “analyze and disseminate data and information” and “issue reports regarding all lines of insurance except health insurance.”⁵⁹ A database of physical risk would allow FIO to monitor the

⁵⁷ See *infra* Part C for a discussion of risk that policyholders face.

⁵⁸ FSOC Climate Report, *supra* note 7, at 120.

⁵⁹ See 31 U.S.C. § 313(e).

insurance sector for systemic climate change risk. Making the database public would not undermine the critical role the database would play in assisting FIO in monitoring the insurance market. Under these authorities, the RFI properly contemplates creating an open-source database that would provide information on climate risk to insurers.⁶⁰

G. FIO should take note of approaches by California, Connecticut, New York, and the IAIS in assessing current supervisory and regulatory issues and gaps in climate-related financial risk. (*Question 9*)

FIO need not write on a blank slate in assessing the current supervisory and regulatory issues and gaps in climate-related financial risk. Approaches by California, Connecticut, New York, and the IAIS are instructive.

In assessing the supervisory and regulatory gaps in insurance that are exacerbated by climate change, California focused largely on how improving resilience can reduce the insurance gap burden and made several recommendations.⁶¹ First, the state stressed the importance of improved *accurate* hazard mapping and disclosure.⁶² Second, the state noted that recovery money is often used to build homes in the same spot but, instead, the money should be used to build more resilient homes, thereby decreasing the likelihood another insurance payout would be needed down the line.⁶³ Along the same vein, California argued that decisionmakers should focus on closing the protection gap in insurance by retrofitting homes, reducing landscape-scale threats, and implementing basic disaster insurance for lower-income residents.⁶⁴ Investing in “natural infrastructure,”—for example, by protecting wetlands, improving forestry management, and increasing urban greening—could also encourage resilience.⁶⁵ In terms of mitigation, engaging in innovative solutions such as community-level insurance and parametric insurance could reduce the protection gap.⁶⁶

Connecticut recently became the first state to pass climate-related insurance legislation in the United States. This legislation requires that, in regulating insurers, the state incorporates a required 45% reduction in the states’ emissions, including by addressing thermal coal, tar sands, and gas.⁶⁷ Connecticut is home to some of the world’s largest oil, gas, and coal insurers, so this legislation could have a substantial impact.⁶⁸ The legislation will require biennial reporting, beginning April 2022.⁶⁹ The areas of interest for the report include: “risk based capital

⁶⁰ See FIO Request for Information, *supra* note 2, at 48,818.

⁶¹ See CAL. DEP’T OF INS., *supra* note 32, at 7–13.

⁶² *Id.* at 7–8.

⁶³ *Id.* at 8.

⁶⁴ *Id.*

⁶⁵ *Id.* at 9–10.

⁶⁶ *Id.* at 39, 43.

⁶⁷ See State of Connecticut General Assembly Bill No. 1292 § 346; see also *In Global First, Connecticut Passes Bill Addressing Insurers’ Participation in Risk Fossil Fuel Finance*, PUBLIC CITIZEN (June 17, 2021), <https://perma.cc/TS5F-U3EP>.

⁶⁸ See *In Global First*, *supra* note 67.

⁶⁹ State of Connecticut General Assembly Bill No. 1292 § 346.

requirements, regular supervisory examinations, and risk and solvency assessments” among others.⁷⁰

In March 2021, New York Department of Financial Services (NYDFS) issued proposed guidance on how insurers should integrate climate risk into their self-assessments, scenario planning, and public disclosures.⁷¹ This guidance was finalized on November 15, 2021.⁷² The guidance urges insurers to consider how climate risk might impact their investments and sets the expectation that insurers integrate climate risks into their Own Risk and Solvency Assessment.⁷³ If an insurer determines climate risk is immaterial, it is nonetheless expected to provide an explanation for that determination.⁷⁴ NYDFS also sets an expectation that insurers integrate climate risk into their scenario planning, particularly in evaluating how extreme weather might impact their business model.⁷⁵ In addition to required SEC disclosures and the NAIC survey—which, in New York, is required for all insurers with annual premiums above \$100 million—NYDFS’ guidance requires all insurers to “publicly disclose how climate risks are integrated into their corporate governance and risk management” including how risks are determined to be material or not, operational issues posed by climate change, physical and transition risks, and how those risks might impact the insurer on both sides of the balance sheet.⁷⁶ In particular, NYDFS “expects insurers to engage with the TCFD framework.”⁷⁷

Finally, IAIS has analyzed outcomes from the TCFD survey to assess the current field. IAIS found that 73% of insurers think their business will be affected by climate change and that 76% of insurers already disclose some climate-relevant information, although, this varies widely by jurisdiction.⁷⁸ Despite these numbers, only 20% of insurers have taken (or plan to take) steps to implement TCFD Recommendations, although this 20% represents 60% of the total premium volume of respondents.⁷⁹

H. FIO should consider the impacts of fat-tail risks and synergistic risks in assessing the potential for major disruptions of insurance coverage. FIO should investigate the viability of community-based catastrophe insurance, bundling hazard insurance, and resilience-based premium pricing as potential solutions to these disruptions. (Question 10)

In assessing the potential for major disruptions of insurance coverage, FIO should first research existing disruptions and gaps in insurance, especially in low-income communities and communities of color. FIO should then consider how fat tail and synergistic risks might lead to

⁷⁰ See *id.*; Alan Levin & Brittany Batts, *Connecticut Passes the First Climate-Related Risk Legislation in the United States*, INSUREREINSURE (Jun. 21, 2021), <https://perma.cc/RJ6Z-N2Z5>.

⁷¹ See N.Y. State Dep’t of Fin. Servs., Proposed Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change (March 25, 2021), <https://perma.cc/RCA4-X7RH>.

⁷² See N.Y. State Dep’t of Fin. Servs., Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change (Nov. 15, 2021), <https://perma.cc/2KUF-9TUQ>.

⁷³ *Id.* at 16, 18.

⁷⁴ *Id.* at 18.

⁷⁵ *Id.* at 19.

⁷⁶ *Id.* at 21.

⁷⁷ *Id.* at 22.

⁷⁸ IAIS, *supra* note 6, at 14–15.

⁷⁹ *Id.* at 16.

further future disruptions and how novel solutions, such as community-based insurance, insurance bundling, and resilience-based premium planning might decrease coverage gaps.

Low-income communities and communities of color are more likely to suffer from climate harms than wealthier or whiter communities, and yet recover less from public insurance programs.⁸⁰ After Hurricane Harvey, Black residents were less likely to receive assistance from FEMA than were white residents, even though Black residents faced greater property damage.⁸¹ Today, climate gentrification risks pushing low-income communities away from the previously cheap inland in cities like Miami, as wealthy residents move inland from the coast in response to climate change.⁸² Before looking at how disruptions in insurance coverage will evolve, FIO should first account for existing disruptions and gaps in coverage.

In looking to future disruptions, FIO should consider fat tail and synergistic risks. Fat tail risks are risks that carry a low likelihood but are nonetheless worth preparing for because of the very high damage that would occur if the risk were realized.⁸³ For example, the Intergovernmental Panel on Climate Change (“IPCC”) provides central estimates of average increased temperatures, however, there is a chance that warming could be much greater than anticipated.⁸⁴ Such fat tail risks could cause major disruptions; FIO should research how the insurance system could be made robust to less likely, but higher risk, climate scenarios.

Synergistic or correlated risks are risks that tend to affect a large geographic area all at once. Consider, for example, wildfires, floods, droughts, or heat stress. As discussed in Part B, these types of risks are often insured by the government—the insurer of last resort—because it is not profitable for private companies to insure such correlated risks.⁸⁵ Insurers that offer short policies—such as property and casualty insurers that often have an annual policy cycle—may respond to correlated risks by pulling out of the market.⁸⁶ There is already evidence of this happening in California, where property insurers are no longer willing to cover wildfire damage.⁸⁷ When an insurer pulls out of a market, it creates a gap in coverage and accessibility.

There are many potential solutions on the underwriting side, which FIO should research and assess. These include Community-Based Catastrophe Insurance, under which an entire

⁸⁰ See ANNA CASH ET AL., CLIMATE CHANGE DISPLACEMENT IN THE U.S. – A REVIEW OF THE LITERATURE 5–7, 16–18 (2020), <https://perma.cc/S923-2YNL>; see also Brad Plumer and Nadja Popovich, *How Decades of Racist Housing Policy Left Neighborhood Sweltering*, N.Y. TIMES (Aug. 24, 2020), <https://perma.cc/CZ4B-6QAS> (explaining how formerly redlined neighborhoods are more likely to suffer from heightened heat stress today).

⁸¹ See CASH *supra* note 80, at 19 (citing HAMEL ET AL., AN EARLY ASSESSMENT OF HURRICANE HARVEY’S IMPACT ON VULNERABLE TEXANS IN THE GULF COAST REGION: THEIR VOICES AND PRIORITIES TO INFORM REBUILDING EFFORTS, HENRY J. KAISER FAMILY FOUNDATION (Dec. 5, 2017), <https://perma.cc/3QXM-CCGC>).

⁸² Keenan et al., *Climate Gentrification: From Theory to Empiricism in Miami-Dade County, Florida*, 13 ENV’T RES. LETTERS 054001 (Apr. 2018).

⁸³ See Martin L. Weitzman, *Fat-Tailed Uncertainty in the Economics of Catastrophic Climate Change*, 5 REV. ENV’T ECON. & POL’Y 275 (2011)

⁸⁴ *Id.* at 280; see also Gernot Wagner, *We’re Right to Worry About Nightmare Climate Scenarios*, BLOOMBERG GREEN (July 9, 2021), <https://perma.cc/5HZC-TCTU>.

⁸⁵ See French, *supra* note 33, at 831–34.

⁸⁶ See Antonio Grimaldi et al., *Climate Change and P&C Insurance: The Threat and the Opportunity*, MCKINSEY & CO. (Nov. 19, 2020), <https://perma.cc/D6Z4-CHK4>.

⁸⁷ See French, *supra* note 33, at 831–34.

community is insured together.⁸⁸ A similar idea is to bundle hazard insurance in order to create a more evenly geographically-distributed risk profile.⁸⁹ For example, an insurer might bundle wildfire risk and flood risk.⁹⁰ A potential downside of bundling hazards in this way is that it may dampen economic incentives that would otherwise drive people to live in less risky areas. Another option, on the underwriting side, is to consider resilience strategies in insurance premium pricing.⁹¹ Under such a scheme, a home made from fireproof materials would have a lower wildfire premium than one that does not. Such a policy could encourage adaptive behavior and resilience-based home improvements. As noted in Part B, FIO should also consider the role of public insurance.

I. FIO should assess the availability and affordability of insurance coverage by considering the term length and predictability, the premium cost as compared to the local household income and housing costs, and the prevalence of insurance in the market. (Question 14).

In assessing the availability and affordability of insurance coverage, FIO should consider the following factors:

Term-length and predictability: P&C insurance policies often have annual terms, or terms of only a few years.⁹² This is a short span, particularly when compared to a thirty-year mortgage, which sometimes is conditioned on insurance on the property.⁹³ As such, the presence of longer-term or price-consistent insurance products may be a useful indicator of affordability. Shorter-duration policies could create a gap in coverage if an insurer increases premiums from year to year, or chooses to stop offering coverage altogether.

Insurance costs as related to median household income: Another useful metric of affordability may be the cost of insurance as compared to the area median income.⁹⁴ Looking at insurance costs alone could obscure gaps in affordability, as what is affordable to residents of one neighborhood may not be affordable in another.

Insurance costs as related to median housing cost: In addition to considering median household income, when considering P&C insurance, it could be particularly useful to compare insurance costs as a percent of median housing costs (e.g., median rent, median mortgage). Combined, these metrics would give a fuller picture of how large of an insurance burden is being faced by residents.

⁸⁸ ALEX BERNHARDT ET AL., COMMUNITY-BASED CATASTROPHE INSURANCE: A MODEL FOR CLOSING THE DISASTER PROTECTION GAP (2021), <https://perma.cc/H4V8-EGT4>.

⁸⁹ See French et al., *supra* note 33, at 854–57.

⁹⁰ *Id.*

⁹¹ See CAL. DEP'T OF INS., *supra* note 32, at 8.

⁹² See Grimaldi et al., *supra* note 86.

⁹³ *Selling Guide*, FANNIE MAE (last visited Nov. 15, 2021), <https://selling-guide.fanniemae.com/Selling-Guide/Origination-thru-Closing/> (listing insurance requirements for a bank to be able to sell a mortgage to Fannie Mae, including section B7-3-02 which outlines when flood insurance is required.).

⁹⁴ FIO used a similar metric to gauge the affordability of auto-insurance in 2017, which it relied upon in a request for information made earlier this year. Request for Information: Monitoring Availability and Affordability of Auto Insurance; Assessing Potential Evolution of the Auto Insurance Market, 86 Fed. Reg. 28,681 (May 27, 2021).

Percent of homeowners with an insurance policy: Another way to assess affordability and availability of coverage would be to measure how many homeowners actually possess an insurance policy in a given area. P&C insurers often note that their climate risk is low because of the short-term length of their policies, allowing insurers to pull-out of high risk areas. This could lead to large gaps in insurance coverage. Estimating how many homeowners are insured may give insight into accessibility.

The metrics discussed in this section are potential options for evaluating whether insurance is affordable, but are not an exhaustive list.

J. In balancing insurer solvency with availability and affordability of insurance, FIO should assess how improved resilience measures could reduce overall insurance expenditures. (Question 14)

As discussed in Part B, insurers may increase premiums or pull out of markets when faced with high risks. In researching how to balance insurer solvency with availability and affordability of insurance, FIO should investigate how improved resilience measures could reduce insurance expenditures and narrow gaps in coverage. Using the metrics identified in Part I, FIO should research how improved spending on resilience could diminish gaps in insurance while also reducing federal insurance payouts.⁹⁵ Resilience measures are estimated to return six dollars in savings for every dollar spent.⁹⁶ FIO should also examine how shifts in coverage—for example, due to P&C insurers declining to extend policies—could especially harm low-income communities and communities of color. And, finally, FIO should monitor and assess where the funding from “last resort” federal and state insurers ultimately lands. Is public funding reaching those in most need or feeding a moral hazard problem among wealthy homeowners?⁹⁷ By investigating these areas, FIO will be able to generate actionable recommendations for state insurers and other federal agencies.

K. FIO should assess the efforts of insurers to reduce their climate impact through their underwriting activities, investment holdings, and business operations. (Question 17)

FIO should research whether and how insurers are working to reduce the greenhouse gas emissions and subsequent climate damages associated with their operations. In undertaking this assessment, FIO should consider emissions associated with insurers’ underwriting activities, investment holdings, and business operations, including downstream emissions enabled by these activities.

⁹⁵ See FRANK ET AL., *supra* note 33, at 4 (noting that federal funding towards disaster relief is at least seven times that spent on resiliency measures—and possibly up to forty times higher—each year).

⁹⁶ See Benjamin Schneider, *Society Saves \$6 for Every \$1 Spent on Climate Change Resilience*, GRIST (Jan. 19, 2018), <https://perma.cc/Z2CW-7BEG>.

⁹⁷ See Christopher Flavelle, *The Cost of Insuring Expensive Waterfront Homes Is About to Skyrocket*, N.Y. TIMES (Sept. 24, 2021) <https://perma.cc/422P-NEEN> (explaining the challenges for low- or middle-income coastal homeowners, while also recognizing that the National Flood Insurance Program has “been a program that subsidizes wealthier coastal residents at the expense of homeowners further inland, who are more often people of color or low-income.”).

With regard to underwriting activities, FIO could assess the degree to which insurers are underwriting the oil and gas industry and the collective downstream emissions supported by that underwriting activity. As noted above, insurance is a required precursor to oil, gas, and coal development, yet the insurance industry actually derives comparatively few profits from this line of work—new projects represent about a tenth of one percent of premiums. Reducing insurer activity in this area could result in decreased oil and gas development with small impacts to the insurers’ bottom line.⁹⁸

With regard to investment holdings, FIO could also consider examining the mix of investments of insurers: are the investments over-reliant on fossil fuels and other carbon intensive industries? Or is the insurer investing in funds that meet environmental, social, and governance (“ESG”) criteria? An analysis by S&P Global showed that carbon exposure varied widely by insurer, with some insurers having little, if any, holdings in the fossil fuel industry, while others have exposure of up to 30% of their total assets—a startling number when one considers the possibility that fossil fuel assets could become stranded.⁹⁹ On the other hand, some insurers are shifting to ESG investing because of its capacity to deliver better long-term risk-adjusted returns, while providing protection against high volatility.¹⁰⁰ FIO could use a tool, such as the New York Fed’s CRISK metric, to estimate an insurer’s exposure to transition risk from stranded assets,¹⁰¹ although again, it is important to note that stranded assets represent only a fraction of an insurer’s transition risk. As a general matter, assessing whether an insurer is investing in funds that will increase climate risk or funds that will mitigate climate risk is a reasonable metric to track industry progress towards sustainability.

Finally, FIO could examine how insurers are reducing their emissions directly produced by their business operations—their “Scope 1” emissions—by considering the carbon footprints of insurers’ offices and other direct activities.

⁹⁸ See Tim Quinson, *Insurers Can Afford to Drop Oil and Gas—But Many Won’t*, BLOOMBERG GREEN (Aug. 25, 2021), <https://www.bloomberg.com/news/articles/2021-08-25/insurers-risk-financial-harm-by-covering-oil-and-gas-firms-green-insight>.

⁹⁹ See Hailey Ross, *Climate Risks for Insurers: Why the Industry Needs to Act Now to Address Climate Risk on Both Sides of the Balance Sheet*, S&P GLOBAL (Aug. 27, 2021), <https://perma.cc/5GZT-DDUQ>.

¹⁰⁰ INSURERS SEE THE FUTURE, 2020 GLOBAL INSURANCE REPORT 23–26, BLACKROCK (2020), <https://perma.cc/52WG-82XM>.

¹⁰¹ Jung et al., *supra* note 54.

Respectfully,

/s/ Jack Lienke

Jack Lienke

Bridget Pals

Alexander Song

Institute for Policy Integrity

NYU School of Law

jack.lienke@nyu.edu

bridget.pals@nyu.edu

alex.song@nyu.edu

/s/ Michael Panfil

Michael Panfil

Stephanie Jones

Environmental Defense Fund

mpanfil@edf.org

sjones@edf.org

/s/ Madison Condon

Professor Madison Condon

Associate Professor of Law

Boston University School of Law

mecondon@bu.edu

/s/ Romany Webb

Romany Webb

Sabin Center for Climate Change Law

Columbia Law School

rmw2149@columbia.edu