Public Statements & Remarks

Remarks of Commissioner Christy Goldsmith Romero at ISDA's ESG Forum on Promoting Market Resilience: A Thoughtful Approach to the Daunting Challenge of Climate Financial Risk

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Remarks as Prepared for Delivery

Standard Disclaimer

Thank you to the International Swaps and Derivatives Association ("ISDA") for inviting me to speak at a forum on climate risk, environmental, social, and governance ("ESG") issues, the role that derivatives play in these markets, and the market and regulatory environment.

Today, I want to talk about my priority to promote market resilience to climate risk. I will take you through the path that led me to make that a priority. I will share my thoughts on how best to promote climate risk resilience, including the actions that I have already taken and the proposals that I have made. I will announce five new proposals to promote market integrity and resilience—proposals that would also implement recommendations by the Financial Stability Oversight Council ("FSOC").

The Daunting Story of Climate Change

Climate change is a daunting story, and it can be hard to determine where each of us fits in that story. The 2015 Paris Agreement seemed at first a story about world leaders coming together to commit to slow global warming.[1] This striking show of global unity was designed to change behavior before the world reaches climate tipping points, including for example, the collapse of melting ice sheets in Antarctica and Greenland, thawing of permafrost in the Arctic, and disappearing coral reefs.[2] Like I said, daunting.

For so long, it seemed like the players in the climate story were world leaders, scientists, environmentalists, and local and state governments—not markets, investors, banks, brokers, managed funds, and financial regulators. I can recall when the Securities and Exchange Commission ("SEC") proposed its 2010 rule on climate financial risk disclosures under Chair Mary Schapiro, who I previously served as counsel. I was at Treasury when this rule came out. I observed industry backlash about the idea that there was financial risk from climate change.

Today, it is well established that climate change poses significant financial risk. From California wildfires, to floods in Kentucky and Missouri, to Hurricane Ian, to a drought that left the Mississippi River at historically low levels during a crucial time to ship crop harvests, 2022 was the third most costly year on record for climate disasters.[3] In the last three years, the U.S. suffered the highest number of billion dollar climate disasters.[4] Climate events are crippling infrastructure like electric power grids,[5] supply chains, transportation, and agricultural production.[6]

We have witnessed how climate events have significantly impacted our economy, and more specifically commodity and derivatives markets. Climate change poses a threat to financial stability—a threat that continues to emerge and evolve. And the past year of Russia's invasion of Ukraine has also made clear that it is also important to monitor transition risk as our nation continues to transition to more renewable energy.

A daunting challenge.

The players in the story of climate change have now changed. Financial markets and those participating in them have become major players in the story of climate change.

My Path to Prioritize Promoting Market Resilience to Climate Risk

Having served at both U.S. market regulators, I am someone who believes in the power of financial markets to tell us where the world is going. Financial markets are providing tools to manage climate-related financial risk. That's what markets often do well.

Markets are innovative, particularly when it comes to gaining and managing exposures. That's why derivatives were created in the first place. I agree with ISDA's 2021 research paper that, "Derivatives markets can play an essential role in facilitating the transition to a sustainable economy."[7] Market participants, including those in derivatives markets, have become players in the climate change story.

So, where do the regulators fit in? The CFTC's mission is to promote the integrity, resilience, and vibrancy of U.S. derivatives markets through sound regulation. One year ago this week, at my confirmation hearing, I laid out my priorities as a Commissioner:

> *If confirmed, my highest priority would be to work to ensure that the markets are working well – that they are open, fair, and competitive.* ***I would also prioritize identifying and mitigating risks that could threaten market integrity and resilience.*** *For example, cybersecurity will continue to require risk mitigation. Finally, I agree with Chair Behnam in prioritizing a culture of compliance coupled with strong enforcement to keep markets safe and promote market confidence. With my strong enforcement background, I have seen firsthand how enforcement contributes to a well-functioning market.* ***If confirmed, I will work to protect markets and customers against fraud and manipulation, as I have done throughout my career. As our markets evolve with emerging issues like digital assets and climate, regulators must be thoughtful and deliberate. It is important to learn the facts, listen to all sides, understand consequences of any action, and collaborate with other regulators. Being thoughtful helps keep markets resilient, transparent, and free of fraud and manipulation, while promoting responsible innovation.***[8]

Over the past year, I have stayed true to that statement. I have taken time and effort to learn the facts, listen to all sides, and understand consequences of any CFTC actions related to climate risk. I have met with stakeholders to hear their thoughts, concerns and challenges about climate risk and collaborated with domestic and international regulators on climate issues. I have discussed climate issues with the agricultural sector, the energy sector, exchanges, financial institutions, asset managers, brokers (futures commissions merchants), public interest groups, carbon registries, investors, self-regulatory organizations, and standard setters, including most recently the Integrity Council for Voluntary Carbon Markets.

The common thread that emerged from all of my meetings is that climate change presents serious risk and a daunting challenge and that markets hold some power to help manage that risk. Given the direct line between climate disasters and commodity and derivatives markets, I got the feeling that we are rowing in the same boat. The differences were more about who is going to take the laboring oar in rowing the boat—the government or private sector—and how to row the boat.

All of those viewpoints and that common thread led me to announce in September my priority to promote market resilience to climate-related risk, and to see the CFTC as a critical player in the story of climate change:[9]

> *It is one of my priorities that the CFTC promote market resilience to climate-related risk. Derivatives markets serve as a tool to protect against future climate-related price uncertainty. Markets provide a means to hedge financial exposure. More generally, the forward-looking nature of derivatives markets means that they can provide key pricing information that helps to highlight potential areas of accumulating risk. Derivatives markets can also help to ensure that businesses have access to the capital they need to protect or adapt physical assets hard-hit by climate events, and invest in emerging green technologies. This is why transparent, well-functioning derivatives markets are essential. To lose these important market benefits is to lose critical risk-mitigation tools. That is why the CFTC has a critical role to play in promoting market resilience to climate-related financial risk. How we promote market resilience to climate-related risk will continue to be a topic on which I am engaged.*

So how do we promote climate risk resilience? Resilience is the ability to bounce back from setbacks. It takes planning and forward thinking. Resilience starts with a clear and detailed understanding of climate financial risk faced by markets and market participants.

I previously proposed that the Commission promote market resilience to climate-related risk by monitoring climate-related financial risk to commodities and derivatives markets and working with exchanges, clearing houses, and market intermediaries to understand how they are managing risk.[10]

Financial regulators are increasingly engaged in efforts to understand climate financial risk. In October 2021, FSOC recommended that members, including the CFTC, "expand their respective capacities to define, identify, measure, monitor, assess, and report on climate-related financial risks and their effects on financial stability."[11] Secretary Yellen's comments at the time indicate that this represents "an important first step towards making our financial system more resilient to the threat of climate change."[12] The CFTC's June 2022 Request for Information is the first step to implement FSOC's recommendation.[13] There is more that the CFTC can do right now.

With severe climate events impacting commodities and derivatives markets, it is an imperative for the CFTC to enhance its ability to identify, understand, and monitor climate risk, and to not wait any longer. I have been working with the National Futures Association ("NFA") to include climate risk for the first time in their member reviews. NFA learned that its members are taking steps to manage the physical risk of climate change, but they found inconsistencies between approaches. I have encouraged NFA to develop and share best practices, and I have encouraged them to expand their review to climate-related financial risk.

Derivatives markets role in promoting resilience to climate risk

It is critical for the CFTC to understand the actual role that derivatives markets are playing to promote climate risk resilience, specifically how market participants are using derivatives to manage climate risk. With thousands of companies making net-zero commitments in alignment with the Paris Agreement, the strategies they employ to meet these commitments will be important considerations for the market. A 2022 trend report found that climate change represented the leading ESG criterion by institutional investors and money managers.[14] Markets may separate those companies whose disclosures, targets and actions are consistent with their commitments over those with inconsistent, vague or opaque commitments. Markets may also disfavor companies who rely too heavily on carbon offsets rather than reducing emissions or who do not provide detailed disclosures on their use of offsets.

With a growing number of companies making net zero pledges, there could be increased global market demand for derivatives products that could serve as a hedge against climate risk. Traditional derivatives markets and strategies also can dovetail neatly with the introduction of such products. For example, ISDA's website has two examples about an energy company that wants to fund solar panels using an interest rate swap to lock in a fixed rate on its debt and a European wind farm issuing debt in U.S. dollars and using foreign exchange derivatives to mitigate the risk of exchange rate fluctuations.[15]

Additionally, there are ESG-related products trading on CFTC-registered exchanges. This leads me to my first proposal that I am releasing for the first time today:

Proposal 1: The Commission should enhance its understanding of the use of derivatives markets to manage climate-related financial risk by creating a new category that identifies Environmental/Climate-Related products that are trading in derivatives markets.

The CFTC does not have a method for determining what is an environmental/climate-related product. Establishing such a category would implement FSOC's recommendation. My office's review of products listed by CFTC-registered exchanges revealed approximately 200 environmental/climate-related products. Additionally, there are environmental-related swaps. There is not currently any identification of any product as environmental/climate related, making data aggregation and any assessment of particular markets or the overall markets for such products challenging.

In order to expand its understanding of how market participants are using derivatives markets to manage climate-related financial risk, the CFTC should first create a category to identify environmental/climate-related products. This could include renewable energy or fuel products, ESG index products, compliance and voluntary carbon credits, weather, battery metals, and any other sustainable, climate or environmental-related product. Exchanges, market participants, the public and the CFTC could use this category to understand and monitor how derivatives markets are promoting resilience to climate risk. Using this category , the Commission could publish periodic reports with descriptive statistics on market characteristics.

Proposal 2: The Commission should follow a similar oversight and approach to Environmental/Climate-Related products as those adopted for digital assets.

The CFTC can do more within our existing authority to conduct oversight over environmental/climate related products by following a similar approach to the one we take for digital assets, another emerging asset class. The CFTC's Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets states,[16]

"CFTC Approach to Responsible Regulation of Virtual Currencies: The CFTC seeks to promote responsible innovation and development that is consistent with its statutory mission to foster open, transparent, competitive and financially sound derivative trading markets and to prohibit fraud, manipulation and abusive practices in connection with derivatives and other products subject to the CEA. The CFTC believes that the responsible regulatory response to virtual currencies involves the following:

1. **Consumer Education.** Amidst the wild assertions, bold headlines, and shocking hyperbole, there is a need for greater public understanding.
2. **Asserting Legal Authority.** Asserting legal authority over virtual currency derivatives in support of the CFTC's anti-fraud and manipulation efforts, including in underlying spot markets, is a key component in the CFTC's ability to effectively regulate these markets.
3. **Market Intelligence.** Gaining the ability to monitor markets for virtual currency derivatives and underlying settlement reference rates through the gathering of trade and counterparty data will provide

regulatory and enforcement insights into those markets.

4. **Robust Enforcement.** In addition to its general regulatory and enforcement jurisdiction over the virtual currency derivatives markets, the CFTC has jurisdiction to police fraud and manipulation in cash or spot markets. The CFTC intends to continue to exercise this jurisdiction to enforce the law and prosecute fraud, abuse, manipulation or false solicitation in markets for virtual currency derivatives and underlying spot trading.
5. **Government-wide Coordination**. The CFTC actively coordinates its approach to Bitcoin and other virtual currencies with other Federal regulators, including the Securities and Exchange Commission (SEC), Federal Bureau of Investigation (FBI), Justice Department and Financial Stability Oversight Council (FSOC). The CFTC also coordinates with state entities, including state Attorneys General, in addition to working with the White House, Congress and other policy-makers.

There is no reason to reinvent the wheel. I propose that the Commission follow a similar approach for environmental/climate-related products, practically verbatim as follows.

1. **Consumer Education.** Amidst the wild assertions, bold headlines, and shocking hyperbole, there is a need for greater public understanding.

Proposal 3: The Commission should conduct consumer education of Environmental/Climate-Related products.

There is a need for greater public understanding of environmental/climate-related products, particularly because there are no standard definitions about what is “sustainable,” “green,” or “environmental.” This could make the public and market participants vulnerable to wild assertions, bold headlines, and hyperbole.

There is also a need for greater understanding about carbon credits that can play a complementary role to emissions reductions in getting to net zero. Voluntary carbon credits should represent one ton of greenhouse gases reduced or removed. However, there are concerns about reliability, about the incentives created, and whether and how carbon credits can be used to meet net zero commitments.

The hallmarks of high quality carbon credits are not well known. The Integrity Council for the Voluntary Carbon Markets ("ICVCM) developed draft core carbon principles and an assessment framework to identify those credits "that create real, additional and verifiable climate impact with high environmental and social integrity."[17] However, those principles and framework are not yet final.

Under the concept of "additionality"—credits are only supposed to be issued by registries where the emissions reduction or removal is additional—that is, where it would not have happened but for the credit. Therefore, a forest that is not likely to have trees cut down should not qualify for a carbon credit on the basis that the trees will not be cut down. High-quality carbon credits should not be double counted, and the carbon reduction or removal should be permanent and not reversible (for example when a forest later burns from wildfires). Education is also important to understand concerns over "leakage"—when reduced emissions in one location such as a forest triggers deforestation in an adjacent area.

Concerns in the voluntary carbon credit markets abound, even though credits are issued by carbon credit registries—registries that are not subject to our oversight. For example, the Wall Street Journal recently reported that less than a quarter of 137 global companies plan to use carbon credits, with half of the companies responding that they are not buying carbon credits because of a complex web of standards, varying definitions of carbon credit quality or a lack of market transparency, and about 40% citing the risk of reputational damage.[18]

Pricing on carbon will continue to be a challenge as will ensuring that the credits legitimately reduce or avoid carbon as claimed. For those who choose to participate in voluntary carbon credit markets, due diligence will be paramount.

1. **Asserting Legal Authority.** Asserting legal authority over ~~virtual currency derivatives~~ environmental/climate-related products (including derivatives on carbon credits) in support of the CFTC's anti-fraud and manipulation efforts, including in underlying spot markets, is a key component in the CFTC's ability to effectively regulate these markets.

Creating a category for environmental/climate-related products and identifying those products will also support the CFTC's anti-fraud and manipulation efforts, including in underlying spot markets, such as spot carbon credit markets. I previously proposed that the CFTC increase its enforcement resources and expertise to combat greenwashing and other forms of fraud in this space in order to protect market integrity.[19] That would also implement FSOC's recommendation.

Additionally, the CFTC should increase its supervisory role for environmental/climate-related products.

Proposal 4: The Commission should develop a "Heightened Review" framework for any self-certified environmental/climate-related products (including those relating to carbon credits), just as it did with derivatives on digital assets.

I previously proposed that the Commission work with exchanges and market participants to ensure the integrity of derivatives markets and promote responsible innovation in climate/sustainability products.[20] Today, I propose that the Commission develop a "Heightened Review" framework for self-certified environmental/climate-related products, including those involving carbon credits, planned to be listed by exchanges.[21] This would mirror the approach the Commission takes for derivatives on digital assets, ensure market integrity and deter fraud, manipulation and abuse.

Heightened review would be particularly critical in derivatives relating to the voluntary carbon credit markets. Just as it did with digital assets, Commission (or its staff) should provide guidance on the steps that an exchange should take before self-certifying that products comply with the Commodity Exchange Act.

Similar to the CFTC's digital asset heightened review, this Heightened Review would include consideration of whether a contract is readily susceptible to manipulation. And it could include consideration of margin levels, monitoring of spot markets, the exchange agreeing to CFTC inquiries or special calls for data, regular coordination with CFTC staff on trade activities (including providing the CFTC surveillance team with trade settlement data upon request), and coordinating product launches so that CFTC surveillance staff can carefully monitor developments.

The Heightened Review could also include steps more targeted at concerns in the carbon credit markets. For example, the Commission could require that exchanges take certain actions to increase confidence that underlier voluntary carbon credits reliably remove or avoid the amount of carbon claimed (one ton of greenhouse gases per credit). That could include an information sharing agreement with the carbon registry. It could also include baseline standards for carbon credits. The Heightened Review could reference either the ICVCM core carbon principles (once they are final) or the basic principles on which they are based (*i.e.,* no double counting, independent verification, etc.).

1. **Market Intelligence.** Gaining the ability to monitor markets for ~~virtual currency~~ environmental/climate-related derivatives and underlying settlement reference rates through the gathering of trade and counterparty data will provide regulatory and enforcement insights into those markets.

Proposal 5: The Commission should increase market intelligence to monitor and surveil markets to promote integrity and resilience to climate risk.

Once the Commission creates a category of environmental/climate-related products, CFTC staff could begin gathering market intelligence for those products and markets. Additionally, under Heightened Review, CFTC staff could monitor product launches and conduct continued surveillance. Increased market intelligence would also implement FSOC's recommendation.

Increased market intelligence would also help ensure that derivatives markets are providing appropriate price discovery. A lack of transparency through consistent, comparable data can present challenges to proper market function, including price discovery. I have met with stakeholders involved in ESG investing that remain concerned about a lack of transparency, data and standardization in ESG products, all of which could impact pricing. These concerns have been amplified as there has been more bespoke, customized ESG products.

2. **Robust Enforcement.** In addition to its general regulatory and enforcement jurisdiction over the ~~virtual currency~~ environmental/climate-related derivatives markets, the CFTC has jurisdiction to police fraud and manipulation in cash or spot markets. The CFTC intends to continue to

exercise this jurisdiction to enforce the law and prosecute fraud, abuse, manipulation or false solicitation in markets for ~~virtual currency~~ environmental/climate-related derivatives and underlying spot trading (including carbon credits)

I previously proposed that the Commission increase law enforcement resources and expertise to combat greenwashing and other forms of fraud.[22] In order to promote resilience to climate risk, there must be integrity in our markets and in the products used to manage climate risk.

You will note that I just called greenwashing fraud. There is no standard definition of greenwashing. As a 20 year federal law enforcement official, I take the position that greenwashing is one type of fraud. Greenwashing could include false or misleading representations about the sustainability of a product and the amount of greenhouse gas emissions removed or reduced.

The Commission should conduct targeted enforcement in this area. To do this, the Commission should develop a specialized group of enforcement staff with expertise. The Commission should bring individual cases of greenwashing and other fraud in derivatives markets as well as targeted spot market cases, including related to carbon credits.

Voluntary carbon credit markets are particularly vulnerable to greenwashing, fraud and manipulation. IOSCO, Interpol, and the Environmental Defense Fund have all raised concerns about fraud in voluntary carbon credit markets.[23] Given that carbon credit markets are fragmented, opaque, and have inconsistent methodologies, carbon credits may be vulnerable to both fraud and manipulation.

Whatever the label used—greenwashing, fraud, or misrepresentation—these can all lead to serious harm, distort market pricing, seriously damage a company's reputation, and undermine the integrity of the markets. One indication of greenwashing is that there is no evidence to support the claim. Market participants can protect themselves by asking for, and validating, information to backup claims. Exchanges also have a role to play to prevent and catch greenwashing. And of course, the Commission also has an important enforcement role.

3. **Government-wide Coordination**. The CFTC actively coordinates its approach to environmental/climate-related products ~~Bitcoin and other virtual currencies~~ with other Federal regulators, including the Securities and Exchange Commission (SEC), prudential regulators, Federal Bureau of Investigation (FBI), Justice Department, the U.S. Department of Agriculture ("USDA"), the National Oceanic and Atmospheric Administration ("NOAA"), the Environmental Protection Agency ("EPA"), the Federal Energy Regulatory Commission ("FERC"), and Financial Stability Oversight Council (FSOC). The CFTC also coordinates with state entities, including state Attorneys General, in addition to working with the White House, Congress and other policy-makers.

As expressed in President Biden's Executive Order on Climate-Related Financial Risk, a whole-of-government approach will lead to greater understanding of the financial risks that climate change poses and to the development of effective strategies to mitigate those risks. The CFTC is already engaged with FSOC. It is critical for the CFTC to coordinate with the prudential banking regulators. Banking regulators have focused on identifying climate risk, which is an important consideration given that more than half of CFTC-registered swap dealers are prudentially regulated for margin or capital purposes, and many of the remaining are bank affiliates. The Federal Reserve recently announced a pilot program for scenario testing related to climate risk for the largest six banks.

Climate-related risk may likely occur at an enterprise level for banks. Therefore, CFTC coordination with the banking regulators is critical.

Coordination across the government is also important because climate-related financial risk presents a unique set of risk management challenges, including difficulty and uncertainty in forecasting based on historical events that may not predict future events. The cumulative nature of climate change means that each event produces a shock, that can layer onto the past shock, that over time could disrupt weather systems, rise sea levels, sink land, and change ecosystems. That challenge can be daunting, and government-wide coordination can help, including coordination with the USDA, NOAA, the EPA, and FERC.

Finally, as a long-term federal law enforcement official, I can attest that coordination of law enforcement offices brings enormous leveraging of experience, expertise, and resources. Given that this would be a new area for the CFTC in terms of enforcement, we could greatly benefit from our partner agencies, particularly those already bringing actions in this space.

Conclusion

We are rowing in the same boat, facing the daunting challenge of climate change. We can make markets more resilient to climate risk. Given you are attending this conference, you already know about the opportunity for derivatives markets to play an important role as companies seek to meet net-zero commitments. However, this remains an emerging and evolving market with concerns about credibility and integrity.

A thoughtful approach is to have the Commission increase its oversight by first categorizing products as environmental/climate-related, and then conducting oversight similar to our approach for overseeing digital assets. Heightened review, targeted law enforcement, and increased market surveillance can ensure the integrity of these markets, so that they are resilient to set backs and contribute to a sustainable future.

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[1] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref1) The 2015 Paris Agreement brought together 196 governments to commit to pursuing efforts to hold the increase of global average temperature to 1.5° Celsius over pre-industrial levels.

[2] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref2) *See* R. Hersher and L. Sommer, *Here are Three Dangerous Climate Tipping Points the World is on Track for*, NPR (Nov. 22, 2022) https://www.npr.org/2022/11/10/1133090748/here-are-3-dangerous-climate-tipping-points-the-world-is-on-track-for (https://www.cftc.gov/Exit/index.htm?https://www.npr.org/2022/11/10/1133090748/here-are-3-dangerous-climate-tipping-points-the-world-is-on-track-for).

[3] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref3) *See* NOAA National Centers for Environmental Information (NCEI), *U.S. Billion-Dollar Weather and Climate Disasters* (2023), Billion-Dollar Weather and Climate Disasters | National Centers for Environmental Information (NCEI) (noaa.gov) (https://www.ncei.noaa.gov/access/billions/) (In 2022, there was $165 billion in damage and the death of 474 people. "During 2022, there were 18 separate billion-dollar weather and climate disaster events. These events included: eleven severe storm events (tornado outbreaks, high wind, hailstorms and a derecho), three tropical cyclones (Ian, Fiona, Nicole), the Kentucky/Missouri flooding, the late-December Central and Eastern winter storm/cold wave, the Western and Central drought/heat wave and Western wildfires.").

[4] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref4) *See Id.* There were 22 of these costly climate disasters in 2020, 20 in 2021, and 18 in 2022.

[5] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref5) Between 2000 and 2021, about 83% of U.S. major outages were attributed to weather-related events, which appear to be "increasing in frequency and intensity" due to climate change. *See* Climate Central, *Surging Weather-related Power Outages* (Sept. 14, 2022), https://www.climatecentral.org/report/surging-power-outages-and-climate-change (https://www.cftc.gov/Exit/index.htm?https://www.climatecentral.org/report/surging-power-outages-and-climate-change).

Major electrical grid failures increased in the United States by more than 60% from 2015 to 2019. *See* Brian Stone, Jr., Evan Mallen, Mayuri Rajput, M., Carina J. Gronlund, Ashley M. Broadbent, E. Scott Krayenhoff, Godfried Augenbroe, Marie S. O'Neill & Matei Georgescu, *Compound Climate and Infrastructure Events: How Electrical Grid Failure Alters Heat Wave Risk,* 55 Environ. Sci. Technol. 6957 (2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9882910/ (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9882910/).

[6] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref6) *See* California State Assembly, Impact of Wildfire on Agriculture Background.pdf (ca.gov) (https://agri.assembly.ca.gov/sites/agri.assembly.ca.gov/files/Impact%20of%20Wildfire%20on%20Agriculture%20Background.pd Nov. 18, 2020 (California wildfires have impacted farms and ranches —displacing animals, and burning grazing land, barns, irrigation systems, equipment and machinery); *See* USDA, USDA Offers Disaster Assistance and Program Flexibilities to Farmers and Livestock Producers in Florida Impacted by Hurricane Ian (https://www.fsa.usda.gov/state-offices/Florida/news-releases/2022/usda-offers-disaster-assistance-and-program-flexibilities-to-farmers-and-livestock-producers-in-florida-impacted-by-hurricane-ian), (Oct. 14, 2022) (Hurricane Ian significantly impacted farmers and livestock producers); *See* University of Florida-Institute of Food and Agricultural Science, Preliminary Assessment of Agricultural Losses Resulting from Hurricane Ian (ufl.edu) (https://www.cftc.gov/Exit/index.htm?https://fred.ifas.ufl.edu/media/fredifasufledu/economic-impact-analysis/reports/FRE-Hurricane-Ian-Report.pdf) (Oct. 17, 2022) (Destructive winds, heavy rains, and flooding impacted nearly five million acres of agricultural lands that produce over $8.12 billion dollars of agricultural products); *See* USDA, Water & Climate Update (usda.gov) (https://www.wcc.nrcs.usda.gov/ftpref/support/drought/dmrpt-20221027.pdf), (Oct. 27, 2022) (Severe drought dropped Mississippi River water levels to historical lows in October 2022, during shipping crop harvests. The Mississippi is the major route for most of the nation's soybeans and corn. Barges became stranded as the river became too shallow for passage. Some barges could only move with reduced cargo.).

[7] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref7) ISDA, *Overview of ESG-related Derivatives Products and Transactions*," (Jan. 2021), https://www.isda.org/2021/01/11/overview-of-esg-related-derivatives-products-and-transactions/ (https://www.cftc.gov/Exit/index.htm?https://www.isda.org/2021/01/11/overview-of-esg-related-derivatives-products-and-transactions/).

[8] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref8) Statement of Christy Goldsmith Romero Confirmation Hearing U.S. Senate Committee on Agriculture, Nutrition, and Forestry (March 2, 2022), Testimony Goldsmith Romero.pdf (senate.gov) (https://www.agriculture.senate.gov/imo/media/doc/Testimony_Goldsmith%20Romero.pdf) (emphasis added). I emphasize the importance of the word "responsible" in the statutory phrase "responsible innovation." In addition, I do not mean innovation for the sake of innovation, nor do I mean "innovation" as a code word for a particular policy outcome.

[9] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref9) *See* Commissioner Christy Goldsmith Romero, *Promoting Market Resilience*, (Sept. 28, 2022), https://www.cftc.gov/PressRoom/SpeechesTestimony/romerostatement092822 (https://www.cftc.gov/PressRoom/SpeechesTestimony/romerostatement092822).

[10] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref10) *See* Commissioner Christy Goldsmith Romero, *Adjusting the Sails for Cyber and Climate Resilience*, (Feb. 10, 2023), https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero6 (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero6).

[11] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref11) *See* U.S. Dept. of Treasury, *Financial Stability Oversight Council Identifies Climate Change as an Emerging and Increasing Threat to Financial Stability* (Oct. 21, 2021), https://home.treasury.gov/news/press-releases/jy0426 (https://home.treasury.gov/news/press-releases/jy0426).

[12] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref12) *See Id.*

[13] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref13) *See* CFTC, *CFTC Release Request for Information on Climate-Related Financial Risk*, (June 2, 2022), https://www.cftc.gov/PressRoom/PressReleases/8541-22 (https://www.cftc.gov/PressRoom/PressReleases/8541-22).

[14] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref14) *See* US SIF Foundation, The Forum for Sustainable and Responsible Investing, "2022 Report on US Sustainable and Impact Investing Trends," Dec. 2022, Trends 2022 Executive Summary.pdf (ussif.org) (https://www.cftc.gov/Exit/index.htm? https://www.ussif.org/Files/Trends/2022/Trends%202022%20Executive%20Summary.pdf).

[15] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref15) *See* ISDA, (May 11, 2021), What Role will Derivatives Play in Tackling Global Climate Change? - YouTube (https://www.cftc.gov/Exit/index.htm? https://www.youtube.com/watch?v=bPaGk3GvIho).

[16] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref17) *See* CFTC, *CFTC Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets*, (Jan. 4, 2018), https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/backgrounder_virtualcurrency01.pdf (https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/backgrounder_virtualcurrency01.pdf).

[17] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref18) The ICVCM, an independent governance body for the voluntary carbon market, is working" to set and enforce a definitive global threshold standard for high quality carbon credits." *See* The Integrity Council for the Voluntary Carbon Market, *Core Carbon Principles, Assessment Framework and Assessment Procedure*, Draft for public consultation (July 2022), https://icvcm.org/the-core-carbon-principles/ (https://www.cftc.gov/Exit/index.htm?https://icvcm.org/the-core-carbon-principles/) (The Core Carbon Principles include Additionality, Mitigation activity information, No double counting, Permanence, Program governance, Registry, Robust independent third-party validation and verification, Robust quantification of emissions reductions and removals, Sustainable development impacts and safeguards, and Transition towards net-zero emissions).

[18] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref19) *See* D. Holger, *Many Companies are Shying Away from Carbon Credits* (Jan. 26, 2023),https://www.wsj.com/articles/many-companies-are-shying-away-from-carbon-credits-11673900838 (https://www.cftc.gov/Exit/index.htm?https://www.wsj.com/articles/many-companies-are-shying-away-from-carbon-credits-11673900838).

[19] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref20) *See* Commissioner Christy Goldsmith Romero, *Adjusting the Sails for Cyber and Climate Resilience* (Feb. 10, 2023), https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero6 (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero6) ("Proposal 1: The Commission should promote market integrity by increasing enforcement resources and expertise to combat greenwashing and other forms of fraud. The CFTC, through its enforcement program, should combat greenwashing, other fraud, and other illegality in derivatives markets and spot markets under our jurisdiction. This exercise of authority is no different than what we do with digital assets. This starts with increasing enforcement resources and expertise.").

[20] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref21) *See Id.*

[21] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref22) *See* CFTC, *CFTC Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets*, (Jan. 4, 2018),https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/backgrounder_virtualcurrency01.pdf (https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/backgrounder_virtualcurrency01.pdf).

[22] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref23) *See* Commissioner Christy Goldsmith Romero, *Adjusting the Sails for Cyber and Climate Resilience*, (Feb. 10, 2023) https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero6 (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero6).

[23] (https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero7#_ftnref24) *See* Interpol, Guide to Carbon Trading Crime.pdf (https://www.cftc.gov/Exit/index.htm?https://www.interpol.int/content/download/5172/file/Guide%20to%20Carbon%20Trading%20Crime.pdf), June 2013; *see also* IOSCO Voluntary Carbon Markets Discussion Paper, November 2022, CR06/2022 Voluntary Carbon Markets (iosco.org) (https://www.cftc.gov/Exit/index.htm?https://www.iosco.org/library/pubdocs/pdf/IOSCOPD718.pdf); *see also* Environmental Defense Fund, Letter to Secretary Christopher Kirkpatrick on Request for Information on Climate-Related Financial Risk, October 7, 2022, 70849HollyPearen.pdf (https://comments.cftc.gov/PublicComments/ViewComment.aspx?id=70849&SearchText), Risks include: 1) Fraud or misleading claims with respect to the environmental benefits of purchased carbon credits; 2) Fraudulent misrepresentation of measurements to claim more carbon credits from a project than were actually generated; 3) Exploitation of the lack of regulations on the carbon market to commit financial crimes, such as money laundering, securities fraud or tax fraud; and 4) Computer hacking/phishing to steal carbon credits and the theft of personal information.

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