November 7, 2022

Christopher Kirkpatrick, Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre, 1155 21st Street NW,
Washington, DC 20581

Re: Climate-Related Financial Risk RFI [87 FR 34856]

Dear Mr. Kirkpatrick,

We appreciate the opportunity to comment on the above referenced request for information ("RFI") by the Commodity Futures Trading Commission ("CFTC") to inform its understanding and oversight of climate-related financial risk as pertinent to the derivatives market and underlying commodities markets. In particular we write to highlight the market and credit risks to the financial performance and integrity of contracts, as well as the potential systemic risks associated with the availability, use, and misuse of particular derivative products, and urge aggressive oversight.

Recommendations

To incorporate climate-related financial risk into its oversight of the derivatives markets, the CFTC should:

- **Join the Network for Greening the Financial System (NGFS), as a member**, to facilitate knowledge transfer and allow the progress of the CFTC to be measured against that of its international counterparts. Other US regulators have already joined NGFS, including the US Federal Insurance Office at the Treasury, OCC, FDIC, FHFA, and the Federal Reserve, and derivatives market regulators from other jurisdictions have joined including the European Securities and Market Authority, the Financial Regulatory Authority of Egypt, the Japan Financial Services Agency, and the Dubai Financial Services Authority.[1]

- **Incorporate climate risk into supervisory stress tests and scenario analyses**, to ensure capital and margin requirements are adequate. The CFTC regularly conducts supervisory

[1] "Membership," *Network for Greening the Financial System*. https://www.ngfs.net/en/about-us/membership

stress tests of clearinghouses and other jurisdictional entities to ensure they can handle a range of extreme scenarios, but the tests do not incorporate climate-related considerations. Exchanges need to be able to withstand the unique risks climate change presents to their operations. The CFTC should supplement stress tests with longer-term scenario analyses as appropriate.

- **Investigate the integrity of the primary carbon offsets markets**, and if issues cannot be resolved, disallow carbon offset derivatives trading. There are well-founded concerns about the transparency and credibility of carbon offsets markets. Protecting the integrity of the derivatives markets in the case of newer products related to climate, such as offsets, requires a precautionary approach.

- **Bar the buying and selling of water index futures contracts**, given that these products may have negative effects on the real economy, discourage water efficiency activities, and drive up prices for water—an essential natural resource and public need.

- **Provide guidance on incorporating climate risk into margin requirements**, to safeguard the stability of exchanges and markets most exposed to climate risk by keeping sufficient cash on the table, keeping trading platforms solvent, and preventing contagion. Increasing margin requirements to reflect riskier products helps protect counterparties, exchanges, and the integrity of the market; derivative products based on riskier underlying assets in the climate context should be treated similarly.

- **Compel market participants to report and disclose climate risk-related data**, to better inform their counterparties and the CFTC of the degree of risk at play. A challenge facing regulators seeking to account for climate risk is the dearth of high-quality climate-related disclosures by key market participants. This absence of uniform reporting obscures climate risk.

Introduction

Properly regulated derivatives can serve a valuable prudential role by allowing market participants to hedge against risks in durable spot markets that are free of manipulation or systematic bias. Market participants are increasingly turning to the derivative markets to hedge and speculate on various aspects of climate-related physical and transition risk.[2] However, climate-related financial risks challenge historical risk management assumptions and practices. These risks will not only affect CFTC-registered entities, registrants, and other market

[2]"Derivatives Market Trends Insights 2022-2027," Industry Research at *Yahoo*! April 6, 2022. https://www.yahoo.com/now/derivatives-market-trends-insights-2022-173300702.html; Dominic Sutton-Vermeulen, "Managing Climate Risk with CME Group Weather Futures and Options," *CME Group*. January 20, 2021. https://www.cmegroup.com/education/articles-and-reports/managing-climate-risk-with-cme-group-weather-futures-and-options.html

participants directly and through counterparty risk, but may also come from, and spill over into, underlying commodity markets and the broader financial system, as well as the real economy.

Hedging against climate risks becomes less feasible when the science tells us that "acute" high impact low frequency events (i.e. hurricanes or wildfires) will only become more frequent with time, and chronic weather events (i.e. persistent flooding or drought) will also continue to become more prolonged and severe. While the frequency of extreme weather events is sure to increase, the exact timing and severity of events will remain unpredictable, making it hard to manage exposure to these risks and efficiently hedge. Transition risks, from shifts in policy, regulations, customer and business preferences, technology, credit or insurance availability, or other market or social forces that can affect business operations, are also substantial, and it is difficult to predict their timing.

Integration of climate-related financial risk is essential to sound regulation under the CFTC's mission to promote the integrity, resilience, and vibrancy of the US derivatives markets. The landscape of derivative products has greatly expanded since the CFTC's creation in 1974, and the CFTC must attend to whether emerging products or asset classes available on exchanges or over-the-counter (OTC) markets are actually useful for hedging climate risks, as well as whether their availability and use will be durable or drive further climate systemic risk.[3] At a minimum, the CFTC should ensure that derivatives markets are not supporting the growth of climate-related physical and transition risk (see carbon markets and water futures examples below).

Climate Change and Risks to Derivatives from Underlying Commodities Markets

Derivatives are financial contracts in which prices are derived from an underlying asset, often commodities. Climate change has current and future impacts on commodities and commodity price volatility, and when commodities are affected by significant and unpredictable risks like climate change, this creates volatility in derivatives as well.[4] Commodity and derivative markets are perceived to maximize efficiencies for price discovery, allowing producers and end-users alike to hedge against price risk. But reliance on these markets during climate change-induced storms and war-related upheaval is testing the limits of effective price formation. It is difficult for markets to work efficiently when extreme events render markets fundamentally dysfunctional.[5]

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[3] "About the Commission," *Commodity Futures Trading Commission*. https://www.cftc.gov/About/AboutTheCommission

[4] Phillips, Todd. "A Climate and Competition Agenda for the Commodity Futures Trading Commission," *Center for American Progress*. February 1, 2022. https://www.americanprogress.org/article/a-climate-and-competition-agenda-for-the-commodity-futures-trading-commission/; "Climate Change Rocks Agricultural Commodity Market," *Voice of America*. November 13, 2021. https://www.voanews.com/a/climate-change-rocks-agricultural-commodity-market/6310895.html

[5] Tyson Slocum. "Commodity Futures Trading Commission Letter on Speculation," *Public Citizen*, March 2022. https://www.citizen.org/commodity-futures-trading-commission-letter-on-speculation/

As has been evident from the Covid-19 pandemic and climate change already, shocks to the supply chain have rippling effects on markets. The commodities underlying the markets within the CFTC's purview have experienced these shocks in the agriculture, energy, metal, and other spaces. These shocks are driving significant volatility in the derivative markets, and if not carefully monitored and addressed, it is possible for those derivative markets to transmit volatility back to the underlying markets and to the broader financial system.

Along with physical risks and climate shocks, the energy transition may introduce new sources of volatility into commodity markets that the CFTC must monitor, and help exchanges and market participants prepare for. The adoption of the Inflation Reduction Act (IRA) is likely to accelerate growth in demand for minerals like copper and lithium, which are critical for the clean energy and battery technologies needed at scale for the transition. One example of a related risk is what happened with the nickel market collapse in early 2022: One speculator, a major Chinese producer, anticipated that the price of nickel would fall, only to have the unexpected invasion of Ukraine by Russia (a major nickel exporter) occur, resulting in economic sanctions on Russia and the price of nickel soaring. This led to the London Market Exchange (LME) needing to suspend its contracts and cancel all trades on March 8, 2022.[6] The collapse could have been avoided with effective position limits by the LME. Instead, as of autumn 2022, the nickel market has yet to recover from the falling volumes and price volatility.[7]

Such risks are particularly exacerbated in energy markets, which have been subject to numerous sources of volatility over the last decade. Energy market volatility is especially high at present due to the invasion of Ukraine and climate-related weather risk. Energy traders have pushed the European Central Bank to loosen margin requirements or inject liquidity into markets to allow them to continue taking speculative profits. Meanwhile, the United Kingdom has extended $40 billion in liquidity to energy market participants struggling to make margin calls.[8] In the U.S., the IRA's provisions mean that high energy prices are likely to trend downward thanks to massive incentives for investment in domestic energy supply and green investment incentives in particular driving down demand for oil and gas. All of these rapid changes reinforce the importance of careful oversight by the CFTC of Commission-registered entities and registrants to ensure that they are accurately accounting for transition risk along with other sources of energy volatility.

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[6] Julia Horowitz, "The broken nickel market is a warning to Wall Street," *Before the Bell at CNN Business*, March 17, 2022. https://www.cnn.com/2022/03/17/investing/premarket-stocks-trading

[7] Pratima Desai, "Analysis: Industrial users flee LME nickel, deepening market fissures," *Reuters*, September 15, 2022. https://www.reuters.com/markets/commodities/industrial-users-flee-lme-nickel-deepening-market-fissures-2022-09-14/

[8] "The UK's Cryptic £40 Billion Bailout for Energy Traders," Analysis by Javier Blas of Bloomberg for the *Washington Post*. September 26, 2022. https://www.washingtonpost.com/business/energy/the-uks-cryptic-40-billion-bailout-for-energy-traders/2022/09/26/f174be74-3d58-11ed-8c6e-9386bd7cd826_story.html

Systemic Risk

The CFTC's purpose includes avoiding systemic risk.[9] And in dealing with climate risk—which poses a broad and deep emerging threat to financial stability and the financial health of communities and households across the country—risk transfer cannot be a substitute for true systemic risk mitigation.[10] Although derivatives may help individual institutions hedge climate-related risks in the short-term, climate change is not a short-term challenge and risk transfer products allow institutions to support lending which exacerbates climate change and generates new systemic physical risk.

The Climate-Related Market Risk Subcommittee of MRAC recommended in 2020 that the "CFTC should coordinate with other regulators to support the development of a robust ecosystem of climate-related risk management products."[11] Some climate-related derivatives products may be effective for risk transfer and hedging for individual parties, but can ultimately contribute to, rather than ameliorate, systemic climate risk that harms the financial system, consumers, and the broader economy.[12] At the international level, the Financial Stability Board (FSB) recommends that in addition to microprudential measures, regulators should "account for the potential widespread impact of climate-related risks across the financial system."[13]

The CFTC should research the use and impacts across all supposed climate-related risk hedging products alongside the Financial Stability Oversight Council (FSOC) to better understand the potential macroprudential implications. The role for the CFTC in systemic risk mitigation includes but is not limited to the work of the Division of Clearing and Risk (DCR), whose job is to enable the CFTC to meet its statutory responsibility to ensure the financial integrity of all transactions subject to the Commodity Exchange Act (CEA) and the avoidance of systemic risk in the derivatives markets.[14]

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[9] "Request for Information on ClimateRelated Financial Risk," *CFTC*. June 2022. https://www.cftc.gov/sites/default/files/2022/06/2022-12302a.pdf

[10] "Report on Climate-Related Financial Risk," *Financial Stability Oversight Council*. 2021. https://home.treasury.gov/system/files/261/FSOC-Climate-Report.pdf

[11] "Managing Climate Risk in the U.S. Financial System," Report of the *Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission*, Pg. 113. September 2020. https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf

[12] See E.g., "Wall Street's Favorite Climate Solution is Mired in Disagreements," *Bloomberg*, June 2021. https://www.bloomberg.com/news/features/2021-06-02/carbon-offsets-new-100-billion-market-faces-disputes-over-trading-rules?sref=f7rH2jWS

[13] *"Interim Report: Supervisory and Regulatory Approaches to Climate-related Risks," FSB. April 29, 2022. https://www.fsb.org/wp-content/uploads/P290422.pdf*

[14] "Division of Clearing and Risk," *CFTC*. https://www.cftc.gov/About/CFTCOrganization/DCR

Climate-Related Derivative Products for CFTC Oversight (Questions 18, 19)

Water Futures (Question 27)

The CFTC should bar financial products that could affect water's price or availability, if for no other reason than because access to water is a human right.[15] Given that water is essential for life, a public resource with no economic substitute and therefore an inelastic good, and because water is an essential input across commodities and manufactured goods, the CFTC should bar financial products that could affect water's price or availability. Climate change and water access is increasing the aggregate risk within many commodity markets, and efficient risk transfer cannot be used as a substitute for systemic risk mitigation.

In 2020, a water futures market emerged on the Chicago Mercantile Exchange based on the availability of water rights in California, where droughts have become common and are expected to worsen as climate change unfolds.[16] The availability and use of water futures during climate-induced droughts disincentivizes water conservation, and could create an aggregation of systemic risk. If an organization or individual purchases a futures contract on water, they have no need to conserve. Therefore they may use the same if not more water, which can exacerbate drought and drive the price of water higher. Drought and higher water prices are then likely to have outsized impacts on those not participating in the futures market, many of whom may be smaller farmers or other financially vulnerable communities and consumers.

With markets where prices fluctuate around a long-term stable mean, futures contracts can efficiently hedge risk and smooth price fluctuations; however, with climate change, the future trends in one direction—in this case toward continued drought in the areas that would need to hedge that risk. Water is an unacceptable target for financial speculation, and in December 2021, 139 organizations petitioned the CFTC to bar the buying and selling of water index futures contracts.[17]

Weather Derivatives

Weather derivatives (sometimes referred to as climate derivatives) have been used for a few decades by agricultural, energy, and financial-based entities to manage risks from weather impacts. Given the increase in frequency and severity of physical risks due to climate change across the globe, and growing market opportunities, new market participants are entering the weather derivatives space, including hedge funds and asset managers.[18] Weather derivatives

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[15] "Human Rights to Water and Sanitation," *United Nations*. https://www.unwater.org/water-facts/human-rights-water-and-sanitation

[16] "Wall Street Begins Trading Water Futures as a Commodity," *Yale Environment 360*. December 2020. https://e360.yale.edu/digest/wall-street-begins-trading-water-futures-as-a-commodity

[17] Petition on water futures to the CFTC, Food & Water Watch https://www.foodandwaterwatch.org/wp-content/uploads/2021/12/Final-Petition-on-Water-Futures-submitted.pdf

[18] Dominic Sutton-Vermeulen, "Managing Climate Risk with CME Group Weather Futures and Options," *CME Group*. January 20, 2021. https://www.cmegroup.com/education/articles-and-reports/managing-climate-risk-with-cme-group-weather-futures-and-options.html

work similarly to insurance, in that the seller of the derivative agrees to pay a certain amount to the buyer if the weather-related event occurs before the contract expires. If the weather event in question does not occur, then the seller keeps the premium, or the price of the derivative at the initiation of the contract.[19] There may be a place for these derivatives as a market-based strategy that can be used in conjunction with direct government intervention such as guaranteed prices, or traditional insurance, so long as risks are actually being mitigated rather than exacerbated or foisted on non market participants (see catastrophe bonds below).

Weather futures are designed to cover lower risk higher probability events, with the most common types based on temperature.[20] Market participants are attempting to create their contracts in anticipation of continued climate change, in a forward-looking way rather than basing futures on historical weather. The weather futures market is pricing in climate change, by incorporating climate model projections, because as Wolfram Schlenker and Charles A. Taylor of Columbia University put it, "When money is on the line, it is hard to find parties willing to bet against the scientific consensus."[21] Weather futures can continue to be a derivatives product that can help market participants hedge against climate-related risks, but only if the financial markets continue to follow the science and adjust climate expectations with time, and only to the extent that climate projections are accurate and predictable.

Weather or climate options contracts can also be used by market participants wishing to increase the climate resilience of business operations or fund their transition while still offering opportunities for the investor in the contract to receive payouts depending on the conditions at the maturity date of the contract. For example, an aquaculture company wishing to sustain its business into a warmer climate future could raise capital from contracts to invest in efforts to selectively breed more thermally tolerant fish or relocate its facilities to open ocean where conditions are cooler for the fish. These contracts could be based on the sea surface temperature, where if the temperature remains below a threshold at the maturity date, then the aquaculture company would make a payout to its counterparty. If the temperature rises above the threshold at the maturity date then the company would not need to make a payout to its counterparty, but it had the upfront capital to make its fish more resilient to the higher temperatures. The market participant wishing to build resilience to their business, in this case the aquaculture company, benefits by receiving upfront capital for its investments without incurring the risks and costs of even higher temperatures as it builds resilience.[22]

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[19] "Hedging against climate risks using weather derivatives," *The Canadian Derivatives Institute writing for Investment Executive*. September 10, 2021. https://www.investmentexecutive.com/inside-track_/the-canadian-derivatives-institute/hedging-against-climate-risks-using-weather-derivatives/

[20] Scarrow, James, "Weather Derivatives as a Financing Tool," April 2004. https://www.projectfinance.law/publications/2004/april/weather-derivatives-as-a-financing-tool/

[21] Wolfram Schlenker and Charles A Taylor, "Market Expectations About Climate Change," *National Bureau of Economic Research*. February 2019. https://www.nber.org/system/files/working_papers/w25554/w25554.pdf

[22] L. Richard Little, Alistair J. Hobday, John Parslow, Campbell R. Davies, R. Quentin Grafton, Funding climate adaptation strategies with climate derivatives, Climate Risk Management, Volume 8,

Catastrophe Bonds (Question 27)

It is possible for weather futures to reduce incentives for climate-related mitigation, though the risk is greater with catastrophe bonds. Catastrophe (Cat) bonds are a form of insurance-linked securities (ILS), which transfers risk from a climate-related disaster or catastrophe to investors. This risk hedging strategy can work if disasters occur randomly in a non-systematic way and are not correlated to other economic risk.[23] With climate change however, neither of these is the case. Even worse, insurers regularly use catastrophe bonds and reinsurance contracts to transfer physical climate risk to investors or other institutions, all the while investing and insuring fossil fuel expansion projects or other carbon-intensive industries that create carbon emissions, worsen climate impacts, and raise the chances of payouts due to climate-driven disasters.[24]

Cat bonds can disincentivize climate resilience by allowing market participants to continue building in climate-vulnerable areas, rather than adapting their approaches to planning, building, and infrastructure to anticipated future climate impacts.[25] The CFTC should recognize the latest understanding of increasing climate-related risks and consider greater oversight of weather derivatives and especially catastrophe bonds. One way for the CFTC to do that is to require issuers of cat bonds to register as commodity pool operators, from which the CFTC exempted them in 2014 through a no-action relief letter.[26]

Voluntary Carbon Markets (Questions 22-25)

The availability of low quality, cheap carbon offsets creates systemic risk by disincentivizing genuine carbon mitigation and effective emissions reductions—reductions that are essential to limiting further warming and reducing climate impacts, including to the financial system. Concerns about transparency, credibility, greenwashing, and environmental injustice in the voluntary primary and secondary carbon markets are well-founded;[27] it will require significant oversight and regulation by the CFTC to prevent fraudulent and misleading claims, market manipulation, and undisclosed financial risk.

2015, Pages 9-15, ISSN 2212-0963. https://www.sciencedirect.com/science/article/pii/S221209631500011X

[23] "The Securitization of Insurance Risk: Insurance-Linked Securities," *Insurance Information Institute*. https://www.iii.org/fact-statistic/facts-statistics-catastrophe-bonds

[24] Letter to the Federal Insurance Office on the Insurance Sector and Climate-Related Financial Risks RFI, *Americans for Financial Reform Education Fund*, November 2021. https://ourfinancialsecurity.org/wp-content/uploads/2021/11/11.15.21-AFREF-comment-to-Treasury-FIO-o n-Insurers-and-Climate-Risk.pdf

[25] "Is the CAT in or out?," *Climate Bonds Initiative*. https://www.climatebonds.net/cat-or-out

[26] "14-152," Division of Swap Dealer and Intermediary Oversight at the *CFTC*. December 18, 2014. https://www.cftc.gov/node/213266

[27] Zelikova, Jane, Freya Chay, Jeremy Freeman, and Danny Cullenward. 2021. "A Buyer's Guide to Soil Carbon Offsets." *CarbonPlan*, July 15, 2021. https://carbonplan.org/research/soil-protocols-explainer; West, Thales A. P., Jan Börner, Erin O. Sills, and Andreas Kontoleon. 2020. "Overstated Carbon Emissions Reductions from Voluntary REDD+ Projects in the Brazilian Amazon. *Proceedings of the National Academy of Sciences* 117, no. 39 (September): 24188–194. https://www.pnas.org/doi/full/10.1073/pnas.2004334117; "Evicted for carbon credits: Norway, Sweden, and Finland displace Ugandan farmers for Carbon Trading," *Oaklandinstitute.org*. (2020, October 14). Retrieved July 12, 2022, from https://www.oaklandinstitute.org/evicted-carbon-credits-green-resources

Innovation in the voluntary carbon offset spot and derivatives markets has not occurred responsibly to date, but these markets continue to grow exponentially; the spot commodity market is expected to reach $50 billion by 2030.[28] This level of market expansion without guardrails on quality and transparency will create incredible risks for investors, the capital markets, and the broader economy. We recommend that the CFTC:

- investigate the integrity of currently approved derivatives and their underlying carbon offsets, and develop qualifying standards for carbon offsets that effectively reduce greenhouse gas emissions and can serve properly as underlying commodities for approved derivatives in the future;
- create a registration framework for offsets, offset brokers, and offset registries;
- pursue cases of individual project fraud; and
- develop a working group to study both the risk to investors associated with carbon offsets and derivatives (legal, reputational, and regulatory) and the systemic climate financial risk created by their availability and usage.[29]

If CFTC finds that integrity issues within the primary carbon offsets markets cannot be resolved, it should disallow carbon offset derivatives trading.

Electricity Futures

Similar to other commodities, electricity futures contracts can be purchased to guarantee the price of electricity for a provider at a future date. In the energy transition, the CFTC could provide support and guidance for newer and perhaps smaller industries, such as renewable energy providers to decrease their barriers to entry in derivatives markets and continue to build out the resilience and vibrancy of the CFTC-regulated markets. Currently there exist some hedging opportunities for smaller market participants, but they are prohibitively expensive and do not have the detail necessary for risk management in the market. Additionally, as the Climate-Related Market Risk Subcommittee of MRAC noted, "... new futures contracts could be developed to manage risks around wind and solar power generation, as well as transmission and storage, including via managing intermittent generation, congestion risk, and Renewable Energy Certificates markets."[30]

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[28] "Voluntary Carbon Market Rankings 2021," *Environmental Finance*. https://www.environmental-finance.com/content/awards/voluntary-carbon-market-rankings-2021/

[29] Public comment on carbon offsets, carbon credits, and related derivative products in response to the CFTC's Climate-Related Financial Risk RFI, on behalf of 67 organizations. October 7, 2022. https://comments.cftc.gov/PublicComments/ViewComment.aspx?id=70843&SearchText=

[30] "Managing Climate Risk in the U.S. Financial System," Report of the *Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission*, Pg. 113. September 2020. https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf

ESG Derivatives

Environmental, social, and governance (ESG) derivatives currently available include sustainability-linked derivatives (SLDs), credit-default-swap indexes, and exchange-traded derivatives on listed ESG-related equity indexes; emissions-trading derivatives also fall into this category.[31] These products are marketed as delivering sustainability-related investment outcomes, without any standard or legal definitions available to investors to understand the impacts of ESG derivatives. The CFTC should provide oversight on the integrity of ESG products entering the derivatives market and work to standardize definitions and disclosures, informed by the SEC's current work in this area.

SLD's have different payouts depending on whether key performance indicators for sustainability are achieved.[32] An example of this occurred in 2020, when JP Morgan and Enel entered into a swap for which certain interest payments are tied to the respective companies' environmental performance targets.[33] Other emerging products include ESG futures and options, which allow investors interested in incorporating ESG criteria to participate in derivatives contracts based on ESG equity index benchmarks or other ESG standards. Although the trading of these derivatives is relatively small at the moment, the market is growing from 364,000 contracts traded in March 2020 up to 437,000 contracts traded in December 2020. ESG futures and options will continue to grow as the investments in underlying ESG mutual funds and exchange-traded funds are projected to double in asset value between 2020 and 2023.[34]

Parties may market these novel ESG derivatives products as aligning with or even contributing to the fulfillment of public climate or sustainability goals, but it is questionable whether these derivatives actually create additionality to financing for the decarbonization transition since they are based on alignment with commitments already made from the underlying ESG equity indices, rather than any party creating more advanced ESG goals as a result of demand for another layer with derivatives.[35] Or if these derivatives in any way help mitigate related transition risks. Other capital market regulators are taking action to minimize greenwashing and

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[31] John Ainger and Greg Ritchie, "Exotic World of ESG Derivatives Triggers Warning From Regulator," *Private Wealth Magazine*. October 18, 2021. https://www.fa-mag.com/news/exotic-world-of-esg-derivatives-triggers-warning-from-regulator-64442.html?section=75

[32] Blair Bateson and Jim Scott, "Derivatives and Bank Climate Risks," *Ceres Accelerator for Sustainable Capital Markets*, Pg. 29. September 2022. https://www.ceres.org/sites/default/files/reports/2022-09/Ceres%20Derivatives%20and%20Bank%20Climate%20Risk%20Report%202022_0.pdf; https://www.db.com/news/detail/20201029-deutsche-bank-draws-up-the-world-s-first-esg-fx-derivative-framework-agreement-for-primetals-technologies?language_id=1

[33] See Anna Hirtenstein, "JPMorgan Currency Deal Highlights Finance's Green Shift," Wall Street Journal, Oct. 26, 2020, https://www.wsj.com/articles/jpmorgan-currency-deal-highlights-finances-green-shift-11603727838.

[34] Will Acworth and Chris Mendelson, "Data Spotlight - ESG futures gaining traction," *Futures Industry Association*. March 3, 2021. https://www.fia.org/resources/data-spotlight-esg-futures-gaining-traction

[35] Ritchie, Greg, "JPMorgan Plots Derivatives Path Into New Era of ESG Finance," *Bloomberg*. August 16, 2021. https://www.bloomberg.com/news/articles/2021-08-16/jpmorgan-plots-derivatives-path-into-new-era-of-esg-finance?leadSource=uverify%20wall&sref=f7rH2jWS

increase the integrity of the underlying ESG funds and indices, such as the SEC's recent proposed rules on fund names and ESG disclosures, and the CFTC should similarly establish an oversight regime for ESG derivatives.[36] The CFTC could work with or build off of the International Swaps and Derivatives Association's proposed guidelines on key performance indicators for SLDs.[37]

Underlying Commodities Market Disclosure (Question 13)

The CFTC should increase disclosure of climate risks in the derivatives and underlying commodities markets. A challenge facing regulators seeking to account for climate risk is the dearth of climate-related disclosures by key market participants. This absence of uniform reporting obscures climate-related financial risk. The CFTC has the authority to compel market participants to disclose a range of upstream and downstream risks, which should be interpreted as quantitative and qualitative data on climate-related risks as well, with certain of this information then shared with the public.[38]

Climate Stress Testing (Questions 1, 4-7, 34)

The CFTC should incorporate climate-related risks into its stress tests, as well as consider conducting climate-related scenario analyses in line with other financial regulators.[39] The CFTC regularly conducts supervisory stress tests of central clearinghouses or central counterparties, also known as derivatives clearing organizations (DCOs), to ensure they can handle a range of extreme scenarios. Currently, the tests do not incorporate climate-related considerations, but should. Stress tests look at whether DCOs have sufficient reserves, whether they are collecting enough margin from their counterparties, and whether they would be able to collect new capital from their members if their reserves would not cover their needs.[40] DCOs need to be able to withstand the unique risks climate change presents to their operations.

Climate stress tests need to incorporate shocks in series and in parallel, rather than as discrete perturbations, to reflect the correlated and increasing nature of physical and transition risks.

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[36] "Press Release: SEC Proposes Rule Changes to Prevent Misleading or Deceptive Fund Names," *SEC*. May 25, 2022. https://www.sec.gov/news/press-release/2022-91; https://www.sec.gov/news/press-release/2022-92

[37] "Sustainability-linked Derivatives: KPI Guidelines," *ISDA*. September 2021. https://www.isda.org/a/xvTgE/Sustainability-linked-Derivatives-KPI-Guidelines-Sept-2021.pdf

[38] "Managing Climate Risk in the U.S. Financial System," Report of the *Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission*, Pg. 113. September 2020. https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf

[39] "Press Release: Federal Reserve Board announces that six of the nation's largest banks will participate in a pilot climate scenario analysis exercise designed to enhance the ability of supervisors and firms to measure and manage climate-related financial risks," *Board of Governors of the Federal Reserve System*. September 29, 2022. https://www.federalreserve.gov/newsevents/pressreleases/other20220929a.htm

[40] Phillips, Todd. "A Climate and Competition Agenda for the Commodity Futures Trading Commission," *Center for American Progress*. February 1, 2022. https://www.americanprogress.org/article/a-climate-and-competition-agenda-for-the-commodity-futures-trading-commission/

These stress tests also need to reflect that the use of historical data and local knowledge to predict climate disaster vulnerability will not suffice. The biggest climate-related floods and fires of the upcoming decades will be far bigger and more destructive than the events of the past, with new records set regularly. For instance, despite there only being a 0.5% chance forecasted of Houston flooding in any given year, it recently experienced three '1-in-500-year' flood events three years in a row.[41] During one month in the summer of 2022, at least six '1-in-a-1,000-year' rainfalls, each event with only a 0.1% chance of occurring in any given year, damaged cities and regions across the U.S.[42]

Scenario analyses and stress testing for climate-related risks are critical for evaluating CFTC-regulated markets. One way for the CFTC to better align with other US regulators in evaluating climate risk is by joining them in NGFS as a member, to access more knowledge on and potentially influence the development of more relevant future modeling tailored for derivatives markets. Some of this framework for modeling could come from the European Securities and Markets Authority (ESMA), which in early 2022 put out its own call for evidence regarding a new climate stress testing framework for central counterparties, which are equivalent to US derivatives clearing organizations.[43] From 2022-2024, ESMA intends to "Develop methods, parameters and scenarios for bottom-up climate change stress testing to be used by supervisors and supervised entities," which it will do in coordination with the European Banking Authority and the European Insurance and Occupational Pensions Authority. ESMA also plans to perform regular climate change stress tests or scenario analyses of its regulated entities.[44]

Margin Requirements (Questions 8, 12)

The CFTC should encourage central counterparties and exchanges to raise margin requirements to account for rising climate risk, both physical and transition risks. The purpose of these requirements is to protect counterparties and exchanges in the event that derivatives bets go sour by keeping sufficient cash on the table, keeping trading platforms solvent, and preventing contagion. Even when effective capital requirements are established, margin requirements are necessary to ensure that individual commodity products and markets are protected from climate risk. Exchanges set significantly higher margins for products perceived as risky. For example,

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[41] "Houston is experiencing its third '500-year' flood in 3 years. How is that possible?" *The Washington Post*. 2017. https://www.washingtonpost.com/news/wonk/wp/2017/08/29/houston-is-experiencing-its-third-500-year-flood-in-3-years-how-is-that-possible/

[42] Sistek, Scott, "6 rare '1,000-year' rain events within a month? Climate change may force NOAA to update criteria," *FOX Weather*. August 24, 2022. https://www.foxweather.com/extreme-weather/5-rare-1000-year-rain-events-within-a-month-climate-change-may-force-noaa-to-update-criteria

[43] Clarke, David. "US regulator considers climate stress tests for commodities and derivatives markets," Green Central Banking. June 7, 2022. https://greencentralbanking.com/2022/06/07/climate-stress-tests-commodities-derivatives/; "ESMA Launches Call for Evidence on Climate Risk Stress Testing for CCPS," *European Securities and Market Authority*. February 23, 2022. https://www.esma.europa.eu/press-news/esma-news/esma-launches-call-evidence-climate-risk-stress-testing-ccps

[44] "Sustainable Finance Roadmap 2022-2024," *European Securities and Market Authority*. February 10, 2022. https://www.esma.europa.eu/sites/default/files/library/esma30-379-1051_sustainable_finance_roadmap.pdf

the Chicago Mercantile Exchange (CME) set the initial margin for bitcoin futures at 35% of notional value, well above the typical 3-12% of notional value for futures contracts, because of the volatility and risks in that market.[45] After turmoil in the West Texas Intermediate (WTI) crude oil contract (which saw a one-day price fluctuation of $55 to a first-ever dive into negative pricing), CME raised crude oil futures maintenance margins by 20% for the June 2020 contract.[46] Increased margin requirements reflect increased risk, and carbon-intensive products, such as fossil fuels and their derivatives, are one example of where transition risk related to climate change should be reflected through higher margin requirements.

Additional Recommendations

To incorporate climate-related financial risk into prudential regulation, the CFTC should also do the following:

- **Integrate climate-related risk into agency-wide research and monitoring**. The Chair should direct all divisions of the agency to work with the newly established Climate Risk Unit to undertake research and publications aimed at understanding how climate-related risks are impacting and could impact the stability and proper functioning of markets and market participants under CFTC oversight, including central counterparties, futures commission merchants, commodity pool operators, and speculative traders and specific investment vehicles.

- **Write a rule barring financial institutions from speculating in fossil-fuel commodities**, to avoid market failures and make solutions easier to implement. Simply put, excessive speculation distorts prices and interferes with effective price signaling, contributing to market failures and making solutions more difficult to implement. This point has even more force regarding a problem as grave and systemically important as climate change. The climate crisis has been called "the greatest and widest-ranging market failure the world has ever seen."[47] To combat price distortions, and help facilitate an orderly transition, the CFTC should adopt a rule to eliminate speculation in or limit the size of permissible speculative positions in fossil fuel commodities.

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[45] "Margin: Know What's Needed," *CME Group*. https://www.cmegroup.com/education/courses/introduction-to-futures/margin-know-what-is-needed.html; "Bitcoin Futures Contract Specs," *RCM Alternatives*. November 14, 2017. https://www.rcmalternatives.com/2017/11/bitcoin-futures-contract-specs/

[46] Krishna Kumar, Devika , "A month after negative oil prices, U.S. crude contract expiry looms," *Reuters*. May 17, 2020.https://www.reuters.com/article/usa-oil-trading/a-month-after-negative-oil-prices-u-s-crude-contract-expiry-looms-idUSL4N2CX3WH

[47] "Managing Climate Risk in the U.S. Financial System: Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission", 2020. https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf

We appreciate the CFTC's request for information on climate-related financial risks. For further discussion, please contact Jessica Garcia at jessica@ourfinancialsecurity.org.

Sincerely,
Americans for Financial Reform Education Fund
Public Citizen