



September 18, 2023

Via CFTC Comments Portal

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

Re: Risk Management Program Regulations for Swap Dealers, Major Swap Participants, and Futures Commission Merchants (Docket No. CFTC-2023-15056) (RIN 3038-AE59)

To Whom It May Concern:

Environmental Defense Fund (“EDF”) and Columbia Law School’s Sabin Center for Climate Change Law (“Sabin Center”) respectfully submit the following comments to the Commodity Futures Trading Commission (“CFTC” or “Commission”) in response to its advance notice of proposed rulemaking (“ANPRM”) on potential regulatory amendments under the Commodity Exchange Act governing the risk management programs of swap dealers, major swap participants, and futures commission merchants.¹ In particular, these comments respond to ANPRM questions A.6. and B.7.

One of the world’s leading international nonprofit organizations, EDF creates transformational solutions to the most serious environmental problems. To do so, EDF links science, economics, law, and innovative private-sector partnerships. The Sabin Center develops legal techniques to fight climate change, trains students and lawyers in their use, and provides the public with resources on key topics in climate law and regulation. It is affiliated with the Columbia Climate School, designed to advance new areas of climate inquiry, research, and impact across Columbia University.

EDF and the Sabin Center support the CFTC’s intention to update its risk management program regulations, and in particular urge the CFTC to ensure that such programs adequately account for climate-related financial risks. The ANPRM asks whether the CFTC should consider enumerating climate-related financial risk in the risk management program regulations.² Whether through regulation or guidance, the CFTC should make clear that climate-related financial risk has significant and increasing implications for the derivatives market, which market participants should assess and manage.

I. Derivatives Markets Face Significant Climate-Related Financial Risks.

Like the broader United States financial system, the derivatives market – which, at the end of 2021, totaled about \$600 trillion in the notional value of outstanding over-the-counter derivatives and \$79

¹ CFTC, Risk Management Program Regulations for Swap Dealers, 88 Fed. Reg. 45,826 (July 18, 2023) [hereinafter “ANPRM”].

² ANPRM at 45,828.

trillion in exchange-traded derivatives globally³ – faces significant and growing climate-related financial risks. Indeed, the Commission’s own advisory Climate-Related Market Risk Subcommittee released a report in September 2020 that highlighted how climate change poses a significant threat to the stability of the U.S. financial system and its institutions, including the derivatives market (“CFTC Report”). The CFTC Report also noted that the U.S. economy would be greatly disrupted should financial regulators fail to move swiftly to understand, measure, and address the risks of climate change. Broadly speaking, climate-related financial risk can be divided into two categories: physical and transition risk.

A. Physical Risk

The CFTC Report defines physical risk as “risk that arises from the material, operational, or programmatic impairment of economic activity and the corresponding impact on asset performance from the shocks and stresses attributable to climate change.”⁴ These impacts can stem from either acute weather events (such as flash flooding from a landfalling hurricane) or chronic climatic conditions (including changing baseline conditions, such as rising sea levels). The physical impacts of climate change already present significant financial risk across the U.S. – in 2022 alone, there were 18 extreme weather events that caused *at least* \$1 billion in direct economic damages each.⁵ So far this year, there have already been a record-setting 23 billion-dollar weather events, surpassing the record previously set in 2020.⁶ Additionally, the CFTC Report found that the financial impact of physical climate risks to the country’s economy could amount to approximately 1.2 percent of annual gross domestic product for every 1°Celsius increase in temperature by the end of the century.⁷

B. Transition Risk

According to the CFTC Report, transition risk “arise[s] when firms fail to prepare for or recognize broader market transitions.”⁸ Climate-related transition risk refers to impacts associated with societal shifts in response to climate change; such changes can introduce market, credit, policy, legal, technological, and reputational risks that can result in financial damages.⁹ For example, industries with

³ BLAIR BATESON & JIM SCOTT, CERES ACCELERATOR FOR SUSTAINABLE CAPITAL MARKETS, DERIVATIVES & BANK CLIMATE RISK: FINANCING A NET ZERO ECONOMY 11 (2022), https://www.ceres.org/sites/default/files/reports/2022-09/Ceres%20Derivatives%20and%20Bank%20Climate%20Risk%20Report%202022_0.pdf [hereinafter “Ceres Report”].

⁴ CLIMATE-RELATED MARKET RISK SUBCOMM., CFTC, MANAGING CLIMATE RISK IN THE U.S. FINANCIAL SYSTEM 11 (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> [hereinafter “CFTC Report”].

⁵ *Billion-Dollar Weather and Climate Disasters*, NAT’L CTRS. FOR ENV’T INFO., NOAA, <https://www.ncei.noaa.gov/access/billions/> (last visited Sept. 15, 2023). These 18 ‘billion-dollar’ extreme weather events resulted in a total of \$165 billion – the third highest total on record – and the number of billion-dollar weather events nearly doubled between 2000-2009 (67 events) and 2010-2019 (128 events). *See id.*

⁶ Brady Dennis, *U.S. Has Seen a Record Number of Weather Disasters this Year. It’s only September.*, WASH. POST (Sept. 12, 2023), <https://www.washingtonpost.com/climate-environment/2023/09/12/us-weather-2023-record-hurricane-wildfire-flooding/>.

⁷ Betty Moy Huber, et al., *CFTC Identifies Climate-Related Financial Risks and Urges Action*, HARVARD L. SCH. FORUM ON CORP. GOVERNANCE (Oct. 8, 2020), <https://corpgov.law.harvard.edu/2020/10/08/cftc-identifies-climate-related-financial-risks-and-urges-action/>.

⁸ CFTC Report, *supra* note 4, at 19.

⁹ Huber, et al., *supra* note 7.

large greenhouse gas emissions face greater transition risk because more drastic changes to their business models are likely needed in order to align with the transition to a low- or net-zero carbon economy.¹⁰

C. Climate-Related Financial Risks in the Derivatives Market

Reports from Ceres and the Center for American Progress have identified market risk, credit risk, and operational risk as key channels by which climate-related financial risk propagates through the derivatives market.¹¹

i. Market Risk

Market risk is defined as “the risk caused by volatile changes in the price of the underlying asset class,” and both physical and transition risks can impact the market prices of the asset class on which the value of a derivative contract is based.¹² Any climate-related threats to that asset could present market risk.

In instances where a derivatives contract is settled physically instead of financially (that is, where a borrower receives the physical underlying asset itself as settlement),¹³ extreme weather events could damage the asset or disrupt its delivery. For example, a bank borrower could purchase an energy commodity derivative where the underlying asset is crude oil, and, upon settlement of the contract, the bank would then deliver the crude oil to the borrower for industrial usage.¹⁴ In this example, a physical risk to the underlying asset (oil) could include a major hurricane that causes severe damage to refineries and production capacity in the Gulf of Mexico, which could cause oil prices (per barrel) to spike. For example, following Hurricane Katrina’s landfall in 2005, the price of crude oil futures briefly reached \$70 a barrel before dropping following the release of 30 million gallons from the country’s Strategic Petroleum Reserve.¹⁵ Additionally, a recent analysis found that roughly 40 percent of the world’s oil and gas reserves – equivalent to more than 600 billion barrels – are facing “high or extreme risks from more frequent storms and floods, rising sea levels, and extreme temperatures.”¹⁶ Climate risks could also

¹⁰ See, e.g., *Climate: Transition Risks*, S&P GLOBAL, <https://www.spglobal.com/esg/education/essential-sustainability/climate/transition-risks> (last visited Sept. 15, 2023); EMILY GASTON, ET AL., IFRS, FINANCED AND FACILITATED EMISSIONS (2022), <https://www.ifrs.org/content/dam/ifrs/meetings/2022/september/issb/ap4d-climate-related-disclosures-financed-and-facilitated-emissions.pdf> (“Financed and facilitated emissions metrics can be used as proxy for measuring transition risk to a low carbon economy. Counterparties, borrowers or investees with higher emissions may be more susceptible to transition risks such as technological changes, shifts in supply and demand and policy change”); Sante Carbone, et al., *The Low-Carbon Transition, Climate Commitments and Firm Credit Risk*, ECB WORKING PAPER SERIES NO. 2631 (2021), <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2631~00a6e0368c.en.pdf> (“[E]nvironmental scores may not be an adequate proxy for transition risk. By contrast, GHG emissions are likely to be a better proxy.”).

¹¹ Ceres Report, *supra* note 3, at 15 (assessing the derivatives activity of the 25 largest banks that perform most of the derivatives transactions in the United States); TODD PHILLIPS, CTR. FOR AM. PROGRESS, A CLIMATE AND COMPETITION AGENDA FOR THE COMMODITY FUTURES TRADING COMMISSION (2022), <https://www.americanprogress.org/article/a-climate-and-competition-agenda-for-the-commodity-futures-trading-commission/> [hereinafter “CAP Report”].

¹² Ceres Report, *supra* note 3, at 15.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ Esther Pan & Richard Karp, *Katrina and Oil Prices*, COUNCIL ON FOREIGN RELATIONS (Sept. 7, 2005), <https://www.cfr.org/interview/katrina-and-oil-prices>.

¹⁶ Will Nichols & Dr. Rory Clisby, *40% of Oil and Gas Reserves Threatened by Climate Change* (Dec. 16, 2021), VERISK MAPLECROFT, <https://www.maplecroft.com/insights/analysis/40-of-oil-and-gas-reserves-threatened-by-climate-change/>.

disrupt the supply chain or slow procurement of the physical commodity by the bank, thereby impacting the time in which a contract could be physically settled.

In terms of transition risk, “when the underlying contract involves high-GHG emitting commodities, this business line will result in a higher level of transition risk.”¹⁷ For example, the liability risks to fossil fuel companies or the introduction of new climate policies (such as a carbon tax) could impact the market risk profile for a crude oil derivative.

Agricultural commodities are also highly vulnerable to the impacts of climate change given the importance of consistent climatic conditions for sustainable yields. For example, a prolonged heatwave in India caused the global price of wheat to reach record levels last year, with the price of wheat futures reaching an all-time record high of \$12.68 per half bushel in May 2022.¹⁸ Additionally, an article from the Center for American Progress noted the “increased commodity volatility that results from climate change,” citing a recent study that found that rising global temperatures will result in “dramatic increases in the variability of corn yields from one year to the next ... which could lead to price hikes and global shortages.”¹⁹

ii. Credit Risk

Credit risk is defined as “the risk that the counterparty to a derivative transaction can no longer make its contractually obligated payments (either due to default or significant deterioration of its credit rating),” and climate risk can drive credit risk due to the counterparty’s exposure to physical and transition risks.²⁰ According to the Ceres report, the “major driver of climate risk for derivative transactions is counterparty credit risk.”²¹ Parties generally price estimated credit risk into derivatives transactions with a credit valuation adjustment (“CVA”) – but “most bank CVA models have not been updated to include climate risk factors.”²² Over the long term, increased exposure to the physical and transition risks of climate change will impact counterparties’ probability of credit downgrade or default, and without accurate estimation and pricing of this exposure, banks would face increasing financial risk without adequate reserves.²³

iii. Operational Risk

In addition to affecting the underlying assets and counterparties of derivatives contracts, climate-related events could also threaten the operation of facilities that house key derivatives market servers either due to the direct damage of these facilities themselves or due to disruptions to surrounding infrastructure (such as power outages stemming from downed power lines).²⁴

¹⁷ Ceres Report, *supra* note 3, at 21.

¹⁸ Arshad R. Zargar, *Wheat Prices Hit Record High as India’s Heat Wave-Driven Export Ban Compounds Ukraine War Supply Woes*, CBS NEWS (May 17, 2022), <https://www.cbsnews.com/news/india-heat-wave-wheat-prices-soar-climate-change-ukraine-war-supplies/>.

¹⁹ CAP Report, *supra* note 11, at Chpt. 1.

²⁰ Ceres Report, *supra* note 3, at 15.

²¹ *Id.*

²² *Id.* at 16.

²³ *Id.* at 16-17.

²⁴ CAP Report, *supra* note 11, at Chpt. 3.

II. Derivatives Markets Do Not Yet Sufficiently Account for Climate-Related Financial Risks.

While market participants are already using certain types of derivatives products to specifically try to manage climate-related financial risks,²⁵ such risks can affect all types of derivatives transactions and are not yet adequately identified, disclosed, or managed. The Ceres report found that, because derivatives do not yet rigorously account for climate-related financial risks, these financial products can create the potential for unexpected exposure and market instability.²⁶

At the firm level, Ceres' analysis found that “[d]erivatives have the potential to dramatically change a bank’s climate risk exposure, increasing it by up to 3x in certain cases.”²⁷ As another indicator of the scale of this risk, “[t]he credit exposure from derivatives for the top 25 largest U.S. banks (approximately \$1 trillion) is equivalent to an additional 50% of the credit exposure generated by their syndicated loan portfolio (approximately \$2 trillion).”²⁸

At a systemic level, it is often the case that a bank’s derivatives counterparty is also a counterparty in other financial transactions, which could further exacerbate financial risk should a counterparty default occur.²⁹ While the Ceres report notes that derivatives are “unlikely to be the primary cause of a climate-related financial crisis,” “[a] sudden change in investor expectations on climate could trigger a systemic shock where assets are rapidly revalued due to changes in default probabilities across banks’ loan books [...]” and “losses from different asset classes could be highly correlated, resulting in potentially increased systemic risk, as well as risk to individual banks.”³⁰

III. To Ensure Effective Management of Climate-Related Financial Risks, the CFTC Should Amend its Risk Management Program Regulations or, in the Alternative, Issue Guidance on the Relevance of Climate Impacts to Existing Requirements.

The CFTC has a key role in ensuring the soundness of the derivatives market in the face of growing climate-related financial risks. The CFTC’s mission is to “protect market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity futures, options and swaps, and to foster open, competitive, and financially sound commodity futures, options and swaps markets.”³¹ Courts have confirmed the CFTC’s authority to address “fraud or manipulation in derivatives markets and underlying spot markets,”³² have given deference to the CFTC’s expertise on technical aspects of rules,³³

²⁵ ISDA, OVERVIEW OF ESG-RELATED DERIVATIVES PRODUCTS AND TRANSACTIONS 7 (2021), <https://www.isda.org/a/qRpTE/Overview-of-ESG-related-Derivatives-Products-and-Transactions.pdf>; Edward So, *ESG Derivatives: Our Views on Changing Dynamics in Energy, ESG, Finance, Globalization, and US Policy*, WHITE & CASE (Apr. 6, 2021), <https://www.whitecase.com/insight-our-thinking/esg-derivatives>; Alain Brisebois, *Hedging Against Climate Risks Using Weather Derivatives*, INV. EXEC., (Sept. 10, 2021) https://www.investmentexecutive.com/inside-track_/the-canadian-derivatives-institute/hedging-a-against-climate-risks-using-weather-derivatives/.

²⁶ Ceres Report, *supra* note 3, at 4-5.

²⁷ *Id.* at 5.

²⁸ *Id.*

²⁹ *Id.* at 6.

³⁰ *Id.*

³¹ *Summary of CFTC Mission Statement, Strategic Goals & Outcomes*, CFTC, <https://www.cftc.gov/sites/default/files/reports/presbudget/2012/2012presidentsbudget0405.html> (last visited Sept. 15, 2023).

³² *See, e.g., CFTC v. McDonnell*, 287 F. Supp. 3d 213, 217 (E.D.N.Y. 2018).

³³ *See, e.g., Inv. Co. Inst. v. CFTC*, 720 F.3d 370, 380-81 (D.C. Cir. 2013) (deferring to CFTC determinations on certain definitions and thresholds in a regulation).

and have upheld CFTC regulations justified by systemic risk considerations.³⁴ Given the significant and increasing threats that climate-related financial risks pose to the soundness of the derivatives markets, the CFTC should amend its risk management program regulations or, in the alternative, issue guidance on the relevance of climate impacts to existing requirements to ensure effective management of these risks.

The CFTC’s authority to protect market participants and the soundness of the derivatives market has been established and expanded by multiple acts of Congress over many decades, namely the Commodity Exchange Act of 1936 (“CEA”), the CFTC Act of 1974, and the Dodd-Frank Act of 2010.³⁵ The CEA originally provided authority for federal regulation of futures trading in certain enumerated agricultural commodities, and has been expanded in scope by Congress several times since its passage.³⁶ The CFTC Act established the CFTC as an independent agency, granting it “exclusive jurisdiction over futures trading in all commodities.”³⁷ The CFTC’s authority was again expanded in 2010 with the passage of the Dodd-Frank Act,³⁸ which authorized the CFTC to regulate all swaps transactions, except for securities swaps overseen by the SEC.³⁹ The Dodd-Frank Act directed the CFTC to establish “comprehensive reporting and recordkeeping requirements” to ensure market transparency by providing real-time surveillance of trends in the swap market.⁴⁰ The CFTC must create rules to establish regulatory oversight in line with the Dodd-Frank Act’s requirements,⁴¹ including robust and professional risk management systems.⁴²

As the CFTC notes in its ANPRM, the Dodd-Frank Act “enhanced the rulemaking and enforcement authorities of the CFTC with respect to all registered entities and intermediaries subject to its oversight, including, among others, futures commission merchants (FCMs).”⁴³ In line with the Dodd-Frank Act’s requirements, the CFTC issued a rule on risk management program requirements for swap dealers and major swap participants in 2012.⁴⁴ In 2013, in light of two recent FCM insolvencies, the CFTC issued a final rule establishing similar risk management program requirements for FCMs.⁴⁵

The CFTC’s current risk management program regulations for swap dealers, major swap participants, and FCMs direct these market participants to establish policies and procedures for managing applicable risks,

³⁴ *Inv. Co. Inst. v. CFTC*, 891 F. Supp. 2d 162, 215 (D.D.C 2012) (upholding CFTC regulation designed to enable the agency “to better assess potential threats to the soundness of derivatives markets and thus the financial system of the United States”).

³⁵ *Commodity Exchange Act & Regulations*, CFTC

<https://www.cftc.gov/LawRegulation/CommodityExchangeAct/index.htm> (last visited Sept. 15, 2023).

³⁶ *US Futures Trading and Regulation Before the Creation of the CFTC*, CFTC,

https://www.cftc.gov/About/HistoryoftheCFTC/history_precftc.html (last visited Sept. 15, 2023).

³⁷ *Id.*

³⁸ *Commodity Exchange Act & Regulations*, CFTC

<https://www.cftc.gov/LawRegulation/CommodityExchangeAct/index.htm> (last visited Sept. 15, 2023).

³⁹ MICHAEL K. ADJEMIAN & GERALD E. PLATO, USDA, THE DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT: CHANGES TO THE REGULATION OF DERIVATIVES AND THEIR IMPACT ON AGRIBUSINESS (2010) https://www.ers.usda.gov/webdocs/outlooks/35818/6115_ais89_1_.pdf?v=371.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² 7 U.S.C. § 6s(j)(2) (codifying language from Dodd-Frank Act § 731).

⁴³ ANPRM at 45,827.

⁴⁴ CFTC, Swap Dealer and Major Swap Participant Recordkeeping, Reporting, and Duties Rules; Futures Commission Merchant and Introducing Broker Conflicts of Interest Rules; and Chief Compliance Officer Rules for Swap Dealers, Major Swap Participants, and Futures Commission Merchants, 77 Fed. Reg. 20,128 (Apr. 3, 2012) [hereinafter “2012 CFTC Swap Dealer and Major Swap Participant Rule”].

⁴⁵ *Id.*

with mechanisms for oversight and revision. The regulations enumerate certain categories of risks that such programs must cover (as well as “any other applicable risks”): market, credit, liquidity, foreign currency, legal, operational, settlement, segregation, technological, and capital risks.⁴⁶ The regulations require these market participants to provide quarterly risk exposure reports to their senior management, governing bodies, and the CFTC.⁴⁷ Further, the regulations set forth requirements for regular review and testing of risk management programs to ensure adherence and effectiveness, as well as to identify any needed modifications.⁴⁸ For swap dealers and major swap participants, the regulations also include a requirement to “identify and take into account the risks of any new product prior to engaging in transactions involving the new product.”⁴⁹

The CFTC’s Climate-Related Market Risk Subcommittee recommended in 2020 that, “[a]s better understanding emerges of the risk-transmission pathways and of where the material climate risks lie, [the CFTC should] consider expanding [its] risk management rules and related quarterly risk exposure reports to cover material climate-related risks.”⁵⁰ Given the escalating severity of climate risks and advances in financial regulators’ understanding of these risks, enumerating climate-related financial risk in the risk management regulations would be in line with the design and purposes of these regulations.

In the release of its original risk management program regulations, the CFTC explained that the regulations were designed to ensure that market participants have programs that sufficiently protect other market participants and the public, while affording flexibility in the manner in which they comply. In the preamble of the final rule on the swap dealer and major swap participant risk management program regulations the CFTC explained that its requirements “represent prudent risk management practices” while allowing registrants “an adequate amount of flexibility.”⁵¹ Similarly, the preamble of the CFTC’s final rule on the FCM risk management program regulations states that the requirements “represent prudent risk management practices,” but “do not prescribe rigid organizational structures.”⁵²

Like other already enumerated categories, a climate-related financial risk category would help ensure that these risks are adequately identified and managed (while still allowing flexibility on how this is accomplished), and therefore give greater confidence to market participants. As the CFTC stated in promulgating the current FCM risk management program regulations, these requirements serve to assure market participants that “customers are provided with appropriate notice of the risks” and “FCMs are monitoring and managing risks in a robust manner.”⁵³ Given that derivatives markets do not yet rigorously account for climate-related financial risks,⁵⁴ adding a climate-related financial risk category would be appropriate to provide explicit instruction to market participants to effectively identify and manage these growing risks.

Alternatively, the CFTC could issue guidance on the application of existing risk management program regulations to climate-related financial risks. Climate-related physical and transition risks can propagate through market, credit, operational, and other already enumerated risk channels, as detailed above, so market participants should already be identifying and managing climate-related financial risks pursuant to

⁴⁶ 17 C.F.R. § 23.600(c)(4)(i)-(vii) (swap dealers and major swap participants); 17 C.F.R. § 1.11(e)(1)(i) (FCMs).

⁴⁷ 17 C.F.R. § 23.600(c)(2) (swap dealers and major swap participants); 17 C.F.R. § 1.11(e)(2) (FCMs).

⁴⁸ 17 C.F.R. § 23.600(e) (swap dealers and major swap participants); 17 C.F.R. § 1.11(f) (FCMs).

⁴⁹ 17 C.F.R. § 23.600(c)(3).

⁵⁰ CFTC Report, *supra* note 4, at 52.

⁵¹ 2012 CFTC Swap Dealer and Major Swap Participant Rule, *supra* note 44, at 20,136.

⁵² CFTC, Enhancing Protections Afforded Customers and Customer Funds Held by Futures Commission Merchants and Derivatives Clearing Organizations, 78 Fed. Reg. 68,506, 68,519 (Nov. 14, 2013).

⁵³ *Id.* at 68,506.

⁵⁴ Ceres Report, *supra* note 3, at 23-26.

existing requirements, including assessing risks for any new climate-related derivatives products. If the CFTC decides not to enumerate climate-related financial risk in the risk management program regulations, it should issue guidance explaining how climate-related financial risk can implicate the existing enumerated risk areas and affirming that market participants should therefore identify and manage it as applicable.

The CFTC should also continue to develop its understanding of other financially relevant environmental risks and consider how to account for such risks in its risk management program oversight. Financial regulators globally are starting to consider nature-related financial risks and biodiversity loss. For example, the Network for Greening the Financial System, a coalition of central banks and financial supervisors, has concluded that “nature-related risks, including those associated with biodiversity loss, could have significant macroeconomic implications,” and that “failure to account for, mitigate, and adapt to these implications is a source of risks for individual financial institutions as well as for financial stability.”⁵⁵ Nature-related financial risks arise through declining stock of natural resources. These declines in natural capital can lead to a decline in ecosystem services, meaning services provided by the ecosystem, such as crop pollination, irrigation, and water purification. Much like climate-related risks, nature-related financial risks can arise in the form of physical risk or transition risk and translate into financial risk in the derivatives market. For example, commodity markets may be affected by biodiversity tipping points, such as disruption to the Amazon rainfall cycles, which could impact agricultural output.⁵⁶

IV. The CFTC Should Consider Additional Actions to Better Account for Climate-Related Financial Risks.

The risk management program regulations are just one area of CFTC oversight where it should consider addressing climate-related financial risks. As the CFTC considers and pursues such actions, it should coordinate with its fellow U.S. financial regulators to ensure efficient and consistent development of best practices in climate risk identification and management across the financial system.

The CFTC exhibited early leadership in its efforts to better understand and address climate-related financial risk. The 2020 CFTC Report included 53 recommendations to mitigate the risks climate change poses to financial markets.⁵⁷ In 2021, the CFTC established its Climate Risk Unit to “leverage the agency’s resources and expertise to better understand the role of derivatives in pricing and mitigating climate-related risk.”⁵⁸ In 2022, the CFTC released a Request for Information (“RFI”) to gather more information on climate-related financial risk and its effects on the derivatives markets and underlying commodities markets;⁵⁹ the Sabin Center’s response to that RFI is attached to this submission for reference.⁶⁰ Earlier this year, the CFTC established the Environmental Fraud Task Force to “combat

⁵⁵ See *Statement on Nature-Related Financial Risks*, NETWORK FOR GREENING THE FIN. SYS. (Mar. 24, 2022), <https://www.ngfs.net/en/statement-nature-related-financial-risks>.

⁵⁶ For further information on concepts in nature-related financial risk, see UNIV. OF CAMBRIDGE INST. FOR SUSTAINABILITY LEADERSHIP, *HANDBOOK FOR NATURE-RELATED FINANCIAL RISKS: KEY CONCEPTS AND A FRAMEWORK FOR IDENTIFICATION* (2021), <https://www.cisl.cam.ac.uk/system/files/documents/handbook-for-nature-related-financial.pdf>.

⁵⁷ *CFTC’s Climate-Related Market Risk Subcommittee Releases Report*, CFTC (Sept. 9, 2020), <https://www.cftc.gov/PressRoom/PressReleases/8234-20>.

⁵⁸ *Remarks of Chairman Rostin Behnam at the July 28, 2022 Financial Stability Oversight Council Meeting*, CFTC (July 28, 2022), <https://www.cftc.gov/PressRoom/SpeechesTestimony/opabehnam25>.

⁵⁹ CFTC, *Request for Information on Climate-Related Financial Risk*, 87 Fed. Reg. 34,856 (June 8, 2022).

⁶⁰ Letter from Eleonor Dyan Garcia, et al., Sabin Ctr. for Climate Change Law, to CFTC (Oct. 7, 2022), <https://climate.law.columbia.edu/sites/default/files/content/docs/comments%20and%20legal%20briefs/Sabin%20Ce>

environmental fraud and misconduct in derivatives and relevant spot markets,” “relating to purported efforts to address climate change and other environmental risks.”⁶¹ While these are important steps, the CFTC has not yet issued a proposed rule or guidance addressing climate-related financial risk in the derivatives market. The CFTC should consider additional measures to ensure it is fully protecting market participants and the soundness of the derivatives markets.

Without endorsing specific recommendations, we note that experts and stakeholders have recommended many potential additional CFTC actions on climate-related financial risk. The CFTC Advisory Report recommended that the Commission: (1) “review the extent to which rules for non-centrally cleared over-the-counter derivatives ... are appropriate for monitoring and managing climate-related risks;” (2) “review rules related to capital and margin requirements of futures commission merchants and swap dealers, as well as initial margin and default fund rules, risk management rules, and capital requirements pertaining to central counterparties;” and (3) “[e]xpand its own central counterparty stress testing to cover the operational continuity and organizational resilience of central counterparties, including organizational resilience of operations, contingency planning, and engineering resilience for facilities exposed to climate-related physical risks.”⁶²

A 2021 report from Public Citizen and Americans for Financial Reform similarly recommended that the CFTC pursue actions including “adjusting capital and margin requirements to reflect climate risk, incorporating climate risk into supervisory stress tests, and requiring jurisdictional entities to disclose information on climate risk.”⁶³ Additionally, a 2022 report from the Center for American Progress recommends that the CFTC include climate-related risks in stress tests of central counterparties, and further recommends that the CFTC “undertake a full economic analysis of the systemic impact of speculation in the form of passive investments, including the so-called massive passives that have the potential to raise commodity prices on American consumers.”⁶⁴

The CFTC can also look to actions taken by other U.S. financial regulators on climate-related financial risk. While the CFTC has yet to issue a proposed rule or guidance document on climate-related financial risk in the derivatives market, other independent U.S. financial regulators have proposed climate risk-related rules and guidance within their respective areas of authority. For example, the Securities and Exchange Commission (“SEC”) has proposed a rule specifying disclosure requirements for publicly traded companies that would advance the consistency, comparability, and reliability of corporate climate risk disclosures in response to inadequate disclosure practices and investor demand.⁶⁵ Additionally, the SEC has proposed two rules addressing naming standards⁶⁶ and ESG related disclosures⁶⁷ for investment funds and advisers. These rules would require greater clarity and transparency regarding ESG-related

[nter%20CFTC%20Comment%20Letter%20-%20FINAL.pdf](#) (regarding Request for Information on Climate-Related Financial Risk).

⁶¹ CFTC Division of Enforcement Creates Two New Task Forces, CFTC (July 29, 2023)

<https://www.cftc.gov/PressRoom/PressReleases/8736-23>.

⁶² CFTC Report, *supra* note 4, at 51-52.

⁶³ DAVID ARKUSH, ET AL., PUB. CITIZEN & AMS. FOR FIN. REFORM, CLIMATE ROADMAP FOR U.S FINANCIAL REGULATION 11 (2021), <https://www.climateworks.org/wp-content/uploads/2021/03/PC-AFR-Climate-Financial-Reg-Report-Finalv2-043021.pdf>.

⁶⁴ CAP Report, *supra* note 11.

⁶⁵ SEC, The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 Fed. Reg. 21,334 (Apr. 11, 2022).

⁶⁶ SEC, Investment Company Names, 87 Fed. Reg. 36,594 (June 17, 2022).

⁶⁷ SEC, Enhanced Disclosures by Certain Investment Advisers and Investment Companies About Environmental, Social, and Governance Investment Practices, 87 Fed. Reg. 36,654 (June 17, 2022).

claims, addressing a lack of “specific requirements about what a fund or adviser following an ESG strategy must include in its disclosures.”⁶⁸ The CFTC can learn from the SEC’s ongoing efforts, and responsive public input, to identify and develop effective disclosure requirements on significant climate risk channels, and to bolster transparency and integrity of investment products that investors are using to manage climate-related risks and pursue climate-related opportunities. Additionally, the SEC and the CFTC specifically share authority over “mixed swaps” products and are required to coordinate on certain definitions and regulations.⁶⁹

The U.S. prudential regulators – the Office of the Comptroller of the Currency (“OCC”), Federal Deposit Insurance Corporation (“FDIC”), and Federal Reserve – have all released substantially similar principles for climate-related financial risk management for large financial institutions.⁷⁰ These principles outline how banks should approach managing climate risk within their portfolios and identify several relevant risk management areas, including credit risk, liquidity risk, other financial risk (including price and interest rate risks), operational risk, legal/compliance risk, and other non-financial risk. Building on their draft principles and responsive public input, the OCC, FDIC, and Federal Reserve expect to jointly issue interagency guidance on climate risk management.⁷¹ At an international level, the Basel Committee on Banking Supervision has likewise issued principles on climate-related financial risk.⁷² The CFTC should coordinate with the prudential regulators on climate risk management, as the CFTC supervises derivatives-related activities of the same financial institutions overseen by these regulators.

The Federal Reserve is also conducting a climate scenario analysis pilot exercise with certain large financial institutions to improve understanding of how certain potential climate scenarios could affect financial institutions and the financial system.⁷³ The International Swaps and Derivatives Association (“ISDA”) has taken steps to advance climate scenario analysis as well. In a 2022 survey,⁷⁴ ISDA found that banks are prioritizing climate scenario analysis, “but they face several challenges, including a lack of standardized methodology and a scarcity of reliable data.”⁷⁵ In August 2023, ISDA created a climate

⁶⁸ Letter from Stephanie Jones, et al., Env’t Def. Fund, to SEC (Aug. 16, 2022), <https://www.sec.gov/comments/s7-17-22/s71722-20136427-307320.pdf> (regarding Enhanced Disclosures by Certain Investment Advisers and Investment Companies About Environmental, Social, and Governance (“ESG”) Investment Practices (File No. S7–17–22)).

⁶⁹ *Derivatives*, SEC (May 4, 2015), <https://www.sec.gov/spotlight/dodd-frank/derivatives.shtml>; *Derivatives*, CFA INST. RSCH. & POLICY CTR. (Oct. 29, 2019), <https://www.cfainstitute.org/en/advocacy/issues/derivatives>.

⁷⁰ OCC, PRINCIPLES FOR CLIMATE-RELATED FINANCIAL RISK MANAGEMENT FOR LARGE BANKS, <https://www.occ.treas.gov/news-issuances/news-releases/2021/nr-occ-2021-138a.pdf>; FDIC, Statement of Principles for Climate-Related Financial Risk Management for Large Financial Institutions, 87 Fed. Reg. 19,507 (Apr. 4, 2022); Bd. of Governors of the Fed. Reserve Sys., Principles for Climate-Related Financial Risk Management for Large Financial Institutions, 87 Fed. Reg. 75,267 (Dec. 8, 2022). Additionally, the National Credit Union Administration issued an RFI on climate-related financial risk earlier this year. NCUA, Climate-Related Financial Risk, 88 Fed. Reg. 25,028 (Apr. 25, 2023).

⁷¹ Michael S. Barr, Vice Chair for Supervision, *Making the Financial System Safer and Fairer*, BD. OF GOVERNORS OF THE FED. RESERVE SYS. (Sept. 7, 2022), <https://www.federalreserve.gov/newsevents/speech/barr20220907a.htm> (transcript of speech at the Brookings Institution, Washington, D.C.).

⁷² *Principles for the Effective Management and Supervision of Climate-Related Financial Risks*, BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT’L SETTLEMENTS (June 15, 2022), <https://www.bis.org/bcbs/publ/d532.htm>.

⁷³ BD. OF GOVERNORS OF THE FED. RESERVE SYS., PILOT CLIMATE SCENARIO ANALYSIS EXERCISE: PARTICIPANT INSTRUCTIONS (2023), <https://www.federalreserve.gov/publications/files/csa-instructions-20230117.pdf>.

⁷⁴ *Climate Risk Scenario Analysis for the Trading Book*, ISDA (Oct. 20, 2022), <https://www.isda.org/2022/10/20/climate-risk-scenario-analysis-for-the-trading-book/>.

⁷⁵ *A Blueprint for Climate Risk Management*, ISDA (Aug. 1, 2023), <https://www.isda.org/2023/08/01/a-blueprint-for-climate-risk-management>.

scenario analysis framework,⁷⁶ which “provides a blueprint for banks to estimate the impact of future climate events on traded assets.”⁷⁷ Climate scenario analysis is a useful tool for better understanding risks, and the CFTC should learn from these efforts as it seeks to improve risk management practices.

* * *

We thank the CFTC for its attention to risk management issues in the derivatives market, including climate-related financial risk, and its consideration of these comments.

Respectfully submitted,

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Attachment (1):

Letter from Eleonor Dyan Garcia, et al., Sabin Center for Climate Change Law, to CFTC (Oct. 7, 2022) (regarding Request for Information on Climate-Related Financial Risk)

⁷⁶ ELEANOR EDEN, ET AL., ISDA, A CONCEPTUAL FRAMEWORK FOR CLIMATE SCENARIO ANALYSIS IN THE TRADING BOOK (2023), <https://www.isda.org/a/boogE/A-Conceptual-Framework-for-Climate-Scenario-Analysis-in-the-Trading-Book.pdf>.

⁷⁷ *A Blueprint for Climate Risk Management*, ISDA (Aug. 1, 2023), <https://www.isda.org/2023/08/01/a-blueprint-for-climate-risk-management>.

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SABIN CENTER FOR CLIMATE CHANGE LAW

October 7, 2022

Christopher Kirkpatrick
Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street NW
Washington, D.C. 20581

Re: Request for Information on Climate-Related Financial Risk
87 Fed. Reg. 34856; June 8, 2022

Dear Mr. Kirkpatrick,

Columbia Law School's Sabin Center for Climate Change Law ("Sabin Center") respectfully submits these comments in response to the Commodity Futures Trading Commission's ("Commission") request for information ("RFI") on climate-related financial risk.¹

The Commission's acknowledgement that climate change involves financial risk is consistent with the findings of regulators and investors across the global financial markets.² What was once viewed by the finance community as an ethical issue has now clearly been recognized as a source of financial risk that impacts investors and financial institutions.³

Regulations to address this risk are consistent with the Commission's mandate to ensure the integrity of transactions under the Commodities Exchange Act and to avoid systemic risk in the derivatives market and underlying commodities market. The Sabin Center strongly supports the Commission's efforts to respond to the financial consequences of climate change, and offers the below comments regarding the legal basis for appropriate rule-making to address these risks.

-
1. Request for Information on Climate-Related Financial Risk, 87 Fed. Reg. 34856 (June 8, 2022) [hereinafter "CFTC RFI"].
 2. *See generally* ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, FINANCIAL MARKETS AND CLIMATE TRANSITION: OPPORTUNITIES, CHALLENGES AND POLICY IMPLICATION 15-22 (2021), <https://perma.cc/F36N-HA58>.
 3. *See generally* BANK OF INTERNATIONAL SYSTEMS, THE GREEN SWAN: CENTRAL BANKING AND FINANCIAL STABILITY IN THE AGE OF CLIMATE CHANGE (2020).

1. Climate Change Creates Risk in the Financial Markets

a. *Climate Change Causes Systemic Financial Risk to the Derivatives Market*

There is overwhelming scientific consensus on the fundamental reality of climate change: human activities are increasing atmospheric greenhouse gas (“GHG”) concentrations, which is causing global average temperatures to rise. In a 2021 report, the United Nations Intergovernmental Panel on Climate Change (“UN IPCC”) concluded that “[i]t is unequivocal that human influence has warmed the atmosphere, ocean and land.”⁴ The IPCC found that “[e]ach of the last four decades has been successively warmer than any decade that preceded it since 1850. Global surface temperature in the first two decades of the 21st century (2001-2020) was 0.99 [degrees Celsius] higher than 1850-1900.”⁵ Rising temperatures are increasing the frequency and severity of many types of weather extremes, such as heatwaves and floods, and contributing to sea-level rise and other slow-onset phenomena.

The adverse impacts on financial assets associated with these and other consequences of climate change are undeniable and increasing.⁶ Numerous studies confirm the conclusion that climate risk is not extraneous to the financial marketplace. Indeed, a 2019 study by the CDP, a not-for-profit organization that measures climate risk, found that 215 of the largest companies globally face almost \$1 trillion in potential financial risk from climate change, with approximately half of that risk identified as “likely, very likely, or virtually certain to materialize [...] [within] five years.”⁷ More recently, in its 2021 report on Climate-Related Financial Risk, the Financial Stability Oversight Council (“FSOC”) noted that “[t]he intensity and frequency of extreme weather and climate-related disaster events are increasing and already imposing substantial economic costs.”⁸ The FSOC recognized that, as the magnitude of climate hazards and associated costs increases in coming years, so too will risks to the financial system.⁹

Indeed, in the same report, the FSOC noted that “climate-related financial risks are an emerging threat to the financial stability of the United States.”¹⁰ This is partially due to an under-appreciation of the risk. The UN IPCC has warned that “climate-related financial risks remain greatly

4. United Nations (“UN”) Intergovernmental Panel on Climate Change (“IPCC”), *Summary for Policymakers, in CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE SIXTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 4* (V. Masson-Delmotte et al., eds, 2021).

5. *Id.* at 5.

6. *See, e.g.*, FINANCIAL STABILITY OVERSIGHT COUNCIL (“FSOC”), REPORT ON CLIMATE-RELATED FINANCIAL RISK (2021), <https://perma.cc/6V34-EU4F>; BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, FINANCIAL STABILITY REPORT (2020), <https://perma.cc/2VWA-67LV>; BANK OF INTERNATIONAL SYSTEMS, *supra* note 3.

7. CDP, MAJOR RISK OR ROSY OPPORTUNITY: ARE COMPANIES READY FOR CLIMATE CHANGE? (2019), <https://perma.cc/XVL3-YF7T>.

8. FSOC, *supra* note 6, at 10.

9. *Id.*

10. *Id.*

underestimated by financial institutions and markets,”¹¹ leading to market distortions driven largely by the failure of market participants to price in these risks.

Climate-related financial risk can also increase the likelihood of market volatility. Consider a simple example: market participants in the derivatives market may rely on assumptions about the weather to hedge against changes in commodity prices. Without an appreciation of extreme weather hazards, climate impacts can increase the risk of transaction instability. Wisely, the Commission has recognized that climate change poses significant financial risks to market participants and the financial system more generally.¹² The Commission’s Climate-Related Market Risk Subcommittee has concluded that climate-related risks “are already impacting, or are anticipated to impact, nearly every facet of the U.S. economy” and “may affect the functioning of markets essential for economic activity.”¹³ The Commission’s own Climate Risk Unit, which focuses on accelerating action on climate risk and “building a climate-resilient financial system,” is a response to these threats.¹⁴

b. Climate-Related Financial Risk Directly Impacts Climate-Related Derivatives Products

The derivatives and commodities markets, both of which fall within the regulatory authority of the Commission, are notable for their rapid development of products that adapt to new circumstances. With respect to climate risk, the commodities market has evolved in recent years to include derivative products aimed at addressing the financial harms of climate change, facilitating an expansion of renewable energy, and reducing emissions. These include, for example, ESG-linked derivatives, catastrophe swaps, carbon and renewable energy derivatives, and financial (virtual) power purchase agreements.¹⁵

Derivative products are also expressly sought by market participants seeking opportunities to transition to a carbon neutral economy. The International Swaps and Derivatives Association (“ISDA”) has stated that “[d]erivatives markets can play an essential role in facilitating the transition to a sustainable economy.”¹⁶ In the U.S. market, for example, power purchase agreements are widely utilized by large multinational corporations for their transition to reliance on renewable energy sources.¹⁷ Virtual power purchase agreements (“vPPAs”) are a type of derivative contract that allows energy purchasers to hedge against renewable energy pricing risks (sometimes caused by weather events, seasonal demand, or market volatility) and also receive

11. See UN IPCC, *Summary for Policymakers*, in CLIMATE CHANGE 2022: MITIGATION OF CLIMATE CHANGE. CONTRIBUTION OF WORKING GROUP III TO THE SIXTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE Ch. 15 (J. Skea, et al., eds, 2022).

12. See CFTC RFI, 87 Fed. Reg. 34856. See also COMMODITY FUTURES TRADING COMMISSION (“CFTC”) CLIMATE-RELATED MARKET RISK SUBCOMMITTEE OF THE MARKET RISK ADVISORY COMMITTEE, MANAGING CLIMATE RISK IN THE U.S. FINANCIAL SYSTEM (2020), <https://perma.cc/6RHX-XTW7> [hereinafter “CFTC Climate-Related Market Risk Subcommittee”].

13. CFTC Climate-Related Market Risk Subcommittee, *supra* note 12, at 11 & 28.

14. Press Release, CFTC, CFTC Acting Chairman Behnam Establishes New Climate Risk Unit, Release Number 8368-21 (Mar. 17, 2021), <https://perma.cc/ZD8W-LHPR>.

15. See generally International Swaps and Derivatives Association (“ISDA”), Overview of ESG-related Derivatives Products and Transactions (Jan. 2021), <https://perma.cc/GN8K-DN9J>.

16. *Id.* at 2.

17. *Id.* at 11.

renewable energy certificates without physically taking possession of the renewable energy.¹⁸ Large corporations with already substantial vPPA engagements include McDonald’s, Verizon, General Motors, Facebook, Amazon and Google.¹⁹ The ISDA has also published support templates for trading in U.S. renewable energy certificates, which represent the property rights to the environmental and other non-power attributes of renewable electricity generation.²⁰ Meanwhile, in California, the Low Carbon Fuel Standard (“LCFS”), a greenhouse gas reduction program, focuses on incentivizing the transportation sector to use low-carbon fuel and alternative transportation methods.²¹ LCFS credits are also sold as futures in other jurisdictions.²² The Commission’s Energy and Environmental Markets Advisory Committee is also exploring the role of carbon markets in the transition to a net-zero economy, including the linkages between primary, secondary, and derivative carbon markets.²³ The complex and innovative nature of these new products—and the high likelihood of future products that will emerge in response to changing conditions—underscores the need for the Commission to regulate these transactions and ensure that the market remains a productive and fraud-resistant space for all participants.

c. Climate-Related Financial Risk is Measurable

The financial risks associated with climate change are typically divided into two general categories: (1) physical risks arising from the impacts of climate change on companies’ assets, operations, and supply chains; and (2) transition risks arising from government and market responses to climate change.

Climate scientists can model the causes and effects of climate change, including the risks arising from the impacts of climate change on a company’s operations, and market participants can use climate information to evaluate their exposure to these risks and hazards.²⁴ While all financial modeling involves assumptions, it is important to understand that the outcomes cannot be derided as simply “guesses.”²⁵

A 2021 report from the United Nations Environment Programme Finance Initiative (“UNEP FI”) illustrates the range of data and analytical techniques available to assess climate hazards; evaluate potential impacts on assets, operations, and supply chains; and communicate useful information about exposure to physical climate-related risks.

18. ISDA, *supra* note 15, at 11.

19. *Id.* at 11-12.

20. *Id.* at 12.

21. *Id.* at 13.

22. *Id.*

23. FSOC, *supra* note 6, at 35-37.

24. According to the IPCC, “risk” is “the potential for adverse consequences for human or ecological systems,” and a ‘hazard’ is “the potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property infrastructure, livelihoods, service provision, ecosystems, and environmental resources.” See IPCC, *Summary for Policymakers*, in CLIMATE CHANGE 2022: IMPACTS, ADAPTATION AND VULNERABILITY. WORKING GROUP II CONTRIBUTION TO THE IPCC SIXTH ASSESSMENT REPORT SPM-4 & SPM-5 (Hans-Otto Pörtner et al. eds., 2022).

25. See David Burton, The Heritage Foundation, Comment to CFTC RFI 4-5 (Aug. 8, 2022), <https://perma.cc/BL48-Z3CC> [hereinafter “Heritage Foundation – Comment”].

The report, titled *The Climate Risk Landscape* (“Landscape Report”), surveyed various climate risk assessment tools used by financial institutions to evaluate and disclose physical and transition risks associated with climate change.²⁶ The Landscape Report reviews nineteen commercially-available tools for assessing physical climate risk, and eighteen commercially-available transition risk assessment tools.²⁷ With respect to the former, the Landscape Report finds that existing tools can be used to evaluate acute risks associated with extreme weather events, flooding, wildfires, and landslides, as well as chronic risks associated with slow-onset climate change impacts, such as sea level rise.²⁸ The Landscape Report further notes that existing tools are “being constantly updated to allow for more granular analysis that takes into account a broader, more plausible set of scenarios,” and enables financial institutions to “provide consistent and market-ready disclosures.”²⁹ According to the Landscape Report, physical risk data is becoming easier to access in formats that are “easily usable by financial institutions.”³⁰

Following release of the 2021 Landscape Report, UNEP FI ran a pilot program in which forty-eight global banks and investors were given an opportunity to trial twelve commercially-available climate risk assessment tools.³¹ The tools modeled impacts under several scenarios of greenhouse gas concentration trajectories adopted by the IPCC (“Representative Concentration Pathways,” or “RCPs”).

The program participants included TD Asset Management Inc. (“TDAM”), which manages \$434 billion in assets on behalf of three million investors.³² TDAM trialed emissions analysis, climate scenario alignment analysis, transition risk analysis, and physical risk analysis tools made available by Institutional Shareholder Services (“ISS”) ESG.³³ We focus here on the physical risk analysis tool, which TDAM used to “measure[] the potential financial impact of the six most costly natural climate hazards such as floods, droughts or wildfires on the value of” a global equity portfolio that held 195 securities from over thirty countries.³⁴ TDAM’s analysis showed that physical climate risks are projected to result in a 1.6% and 2.8% change in portfolio value by 2050 under the most-likely and worst-case RCP scenarios, respectively, and that “80% of the climate value-at-risk of the portfolio can be attributed to just 30 securities.”³⁵ TDAM also used the ISS ESG tool to evaluate the financial risks posed by specific climate impacts, and found that wildfires and heat stress presented the greatest risk to its portfolio.³⁶

26. PAUL SMITH, UN ENVIRONMENT PROGRAMME FINANCE INITIATIVE (“UNEP FI”), *THE CLIMATE RISK LANDSCAPE: A COMPREHENSIVE OVERVIEW OF CLIMATE RISK ASSESSMENT METHODOLOGIES* (2021), <https://perma.cc/89ET-EKWT>.

27. *Id.* at 15 & 29.

28. *Id.* at 32.

29. *Id.* at 35 & 37.

30. *Id.* at 37.

31. DAVID CARLIN & ALEXANDER STOPP, UNEP FI, *THE CLIMATE RISK TOOL LANDSCAPE: 2022 SUPPLEMENT* (2022), <https://perma.cc/6SGP-WM9T>.

32. TD Asset Management, *About Us*, <https://perma.cc/8AR9-AXPN> (last visited Oct. 3, 2022).

33. CARLIN & STOPP, *supra* note 31, at 38-39.

34. *Id.* at 39.

35. *Id.* at 42.

36. *Id.* at 43.

Another participant in the pilot program was Intesa Sanpaolo, an Italian bank that serves 13.5 million customers and has €341 billion in assets under management.³⁷ Intesa Sanpaolo worked with Risk Management Solutions, Inc. (“RMS”), which has developed over 300 catastrophe risk models that can be used to assess “how frequently a given location can be expected to be impacted” by a particular hazard (e.g., flooding in excess of six feet), as well as “the frequency and severity of the economic impact caused by” the hazard.³⁸ RMS used the models to quantify the flood risk of a sample of Intesa Sanpaolo’s mortgage portfolio in regions throughout Italy under RCP6.0 and RCP8.5.³⁹ Using RMS data, Intesa Sanpaolo calculated the impact on Loss Given Default and the Probability of Default to range from 5% to 39% of the initial values.⁴⁰ Intesa Sanpaolo further estimated, under RCP8.5, the average annual loss would increase 50% over the baseline in the provinces of Rome and Naples by 2040.⁴¹

A third pilot program participant was Desjardins Group, a financial cooperative with over seven million members and customers, and over \$397 billion in assets.⁴² Desjardins partnered with The Climate Service (“TCS”), which used its Climanomics platform to evaluate physical and transition risks across fifty of Desjardins’ real assets.⁴³ The Climanomics platform models absolute climate risk, measured in millions of USD and relative climate risk, reported as percent of asset value.⁴⁴ The analysis of Desjardins’ assets revealed that fluvial flooding is the greatest physical risk to the assets under both RCP4.5 and RCP8.5 scenarios.⁴⁵ Drought was identified as the second greatest physical risk to the assets.⁴⁶ Desjardins was also able to conduct asset-level risk analyses. For example, the analysis showed that a dairy farm located northeast of Montreal, Canada, would “face a modeled average annual loss (“MAAL”) of 6.7% to 8.5% for RCP4.5 and RCP8.5, respectively.”⁴⁷ The analysis further showed that “[t]he highest risks faced are from temperature extremes, followed to a lesser degree by fluvial flooding and drought at both RCP4.5 and RCP8.5 scenarios. The largest difference among the two is temperature extremes representing a 5.7% MAAL in RCP8.5 and 3.9% MAAL in RCP4.5.”⁴⁸

The above examples demonstrate how companies can, and do, use existing tools to evaluate and disclose the physical risks they face from flooding, drought, and other climate change impacts. As the Landscape Report has noted, climate risk assessment methodologies are advancing rapidly, and new tools continue to become available.⁴⁹ UNEP FI predicts that physical risk models will continue to improve and provide increasingly “granular” data that will “allow[] more accurate risk analysis.”⁵⁰

37. Intesa Sanpaolo, *Business*, ABOUT US, <https://perma.cc/QU5L-VXT2> (last updated Oct. 3, 2022).

38. CARLIN & STOPP, *supra* note 31, at 26 & 62.

39. *Id.* at 64.

40. *Id.* at 66.

41. *Id.* at 65.

42. Desjardins Group, *Quick facts about Desjardins*, <https://perma.cc/7HHX-XPXQ> (last visited May 19, 2022).

43. CARLIN & STOPP, *supra* note 31, at 80.

44. *Id.*

45. *Id.* at 84.

46. *Id.*

47. *Id.* at 85.

48. *Id.*

49. *Id.* at 8; SMITH, *supra* note 26, at 35.

50. SMITH, *supra* note 26, at 37.

2. The Commission is Authorized to Regulate Climate-Related Financial Risk

The development of climate-related derivative products and the impact of climate-aggravated weather events on the broader derivatives market all point to the natural conclusion that the Commission is compelled to regulate climate-related financial risk. Its authority to do so is discussed below.

a. The Commission's Core Function is to Regulate Market Risk

The regulation of climate-related financial risk is squarely aligned with the Commission's statutory authority 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 [Commodity Exchange Act ('CEA')]."⁵¹ As provided in Section 5(b) of the CEA, the Commission must:

1. deter and prevent price manipulation and other disruptions to market integrity;
2. ensure financial integrity of all transactions;
3. avoid systemic risk to transaction integrity;
4. protect market participants from fraudulent or abusive sales practices; and
5. promote fair competition.⁵²

The Commission's general statutory authority over the commodities and derivatives markets is provided in the CEA, which was passed in its original form in 1936.⁵³ In 1974, Congress passed the Commodity Futures Trading Act, which created the Commission and outlined its jurisdiction over futures commodities (previously, the CEA had only regulated agricultural commodities).⁵⁴ In an opinion issued soon after the Commission was established, a federal district court in Illinois confirmed in *R.J. Hereley & Son Co. v. Stotler & Co.*⁵⁵ that amendments made to the CEA in 1974 established that the Commission's jurisdiction over "futures contract markets or other exchanges is exclusive[,] and includes the regulation of commodity accounts, commodity trading agreements, and commodity operations."⁵⁶ This was affirmed in *Hunter v. FERC*,⁵⁷ which held that the Commission, and not the Federal Energy Regulatory Commission, had exclusive jurisdiction over natural gas futures contracts.

In its current form, the CEA sets forth the Commission's statutory authority as well as its exclusive jurisdiction over transactions, accounts, and agreements involving swaps or contracts of sale of a

51. *Investment Co. Institute v. U.S. Commodity Futures Trading Comm'n*, 891 F. Supp. 2d 162, 168 (D.D.C. 2012), as amended (Jan. 2, 2013), *aff'd sub nom. Investment Co. Institute v. Commodity Futures Trading Comm'n*, 720 F.3d 370 (D.C. Cir. 2013). *See also* Commodity Exchange Act, as amended, 7 U.S.C. § 5 (b) [hereinafter "CEA"].

52. CEA, 7 U.S.C. § 5 (b).

53. ALAN N. RECHTSCHAEN, *THE HISTORY OF THE CFTC in CAPITAL MARKETS, DERIVATIVES, AND THE LAW: POSITIVITY AND PREPARATION* 367 (3d ed.).

54. *Id.* *See also* Commodity Futures Trading Commission Act, 7 U.S.C. § 2 (2) (a) (1974).

55. *R. J. Hereley & Son Co. v. Stotler & Co.*, 466 F. Supp. 345 (N.D. Ill. 1979).

56. *Id.* at 347.

57. *Hunter v. FERC*, 711 F.3d 155 (D.C. Cir. 2013).

commodity for future delivery (including significant price discovery contracts),⁵⁸ and its concurrent jurisdiction (shared with the Securities and Exchange Commission (“SEC”)) over accounts, agreements, and transactions involving a put, call, or other option on one or more securities (as defined under the Securities Exchange Act of 1934 (“Exchange Act”). This includes any group or index of such securities, or any interest therein or based on the value thereof, that is exempted by the SEC pursuant to the Exchange Act.⁵⁹ The history of the CEA’s amendments through later legislation, including the expansion of its jurisdiction in the CFTC Reauthorization Act of 2008 (“Reauthorization Act of 2008”), the Commodity Futures Modernization Act of 2000 (“CFMA”), and the Dodd-Frank Wall Street Reform and Consumer Protect Act (“Dodd-Frank Act”), has ensured that the Commission is empowered to protect the stability of the markets.

The regular renewal and expansion⁶⁰ by Congress of the Commission’s mandate also underscores its statutory authority to evolve with the commodities and derivatives markets’ increasing complexity. Notably, these Congressional authorizations expanding the Commission’s jurisdiction address the types of products that the Commission must regulate and supervise, and the statutes do not attempt to circumscribe the types of market risks upon which the Commission may act. For example, the CFMA amendments clarified the Commission’s jurisdiction over securities-related futures contracts (vis-à-vis SEC authority).⁶¹ The Dodd-Frank Act, which was passed in response to the 2008 financial crisis, expanded the Commission’s jurisdiction over bilateral swap contracts,⁶² while the Reauthorization Act of 2008 expanded the Commission’s jurisdiction to include retail over-the-counter foreign currency transactions.⁶³ The growth in the list of products over which the Commission has jurisdiction is representative of the crucial role its unique expertise plays in the financial market, and is indicative of a Congressional intent that the Commission regulate high-risk, high-stakes transactions.

Notably, the financial risks caused by climate change are not categorically distinct from other types of market risk that are already regulated by the Commission. Much like other types of systemic market risk regulated by the Commission, climate-related financial risks undermine transaction and market integrity and increase the risk for manipulation and fraudulent practices. In this way, the stability of the commodity and derivative markets directly intersects with physical and transition risks arising from climate change.

b. The Commission has a History of Responding to Evolving Market Risks

The Commission is an independent regulatory agency vested, as one federal district court explained, with “a broad authority to adopt rules that, in its judgment, are necessary to carry out the purposes of the [CEA].”⁶⁴ In recent decades, the Commission has sought to comply with its mandate by adopting regulations under its broad rulemaking authority that respond to evolutions

58. CEA, 7 U.S.C. § 2 (a) (1) (A).

59. *Id.* § 2 (C) (ii).

60. RECHTSCHAEN, *supra* note 53, at 367.

61. *Id.* at 373.

62. *Id.* at 382.

63. *Id.* at 386.

64. *Ikon Glob. Markets, Inc. v. Commodity Futures Trading Commission*, 859 F. Supp. 2d 162, 164 (D.D.C. 2012). *See also* *U.S. Commodity Futures Trading Comm’n v. Oystacher*, 203 F. Supp. 3d 934, 951 (N.D. Ill. 2016).

in the marketplace. This responsiveness is evident in the Commission’s enforcement of regulations on cross-border swaps transactions,⁶⁵ and the declaration of virtual currencies as a commodity under the CEA.⁶⁶ The Commission has always exercised its authority in a way that is sensitive to realities in the market. Former Commission Chairman Giancarlo’s statement on virtual currency is particularly insightful: “One thing is certain: ignoring virtual currency trading will not make it go away. Nor is it a responsible regulatory strategy.”⁶⁷ The federal district court cited this statement approvingly and validated the Commission’s response to emerging issues that threaten market stability.⁶⁸

Other important examples include the transition of markets to electronic trading platforms,⁶⁹ and the emergence of digital financial products,⁷⁰ both of which required the Commission to promulgate new rules in response. To illustrate, the Commission adopted a Final Rule on Electronic Trading Risk Principles (“Electronic Trading Risk Principles”) in 2020 to “address the potential risk of a designated contract market’s (DCM) trading platform experiencing a market disruption or system anomaly due to electronic trading.”⁷¹ The Electronic Trading Risk Principles include a set of “Acceptable Practices”, which are a set of rules and risks controls that DCMs may adopt and implement as these are “reasonably designed to prevent, detect, and mitigate market disruptions and system anomalies associated with electronic trading.”⁷² To address the proliferation of cryptocurrency platforms and virtual currency transactions in the market, the Commission has developed a “responsible regulator response,”⁷³ involving the assertion of legal authority, robust enforcement efforts, and government-wide coordination, as well as consumer education and market intelligence gathering.⁷⁴

All of these efforts are predicated on the need to promote transparency, accountability, and stability in the markets, and to eliminate opportunities for fraud and manipulation. While Congress could not have contemplated the proliferation of virtual currency platforms when it created the Commission in 1974, the agency is nonetheless empowered under its broad authority and mandate to respond to emerging issues such as these in the markets. Indeed, the Commission bears a responsibility to identify market innovations and to update its rules and enforcement efforts in response.

c. Courts have Consistently Recognized the Commission’s Exercise of Authority

A brief caselaw review involving the Commission’s regulatory powers offers precedent in support of the regulation of climate-related financial risk. As a threshold matter, courts have acknowledged

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65. See Interpretive Guidance and Policy Statement Regarding Compliance with Certain Swap Regulations, 78 Fed. Reg. 45291 (July 26, 2013).
 66. CFTC, Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets (Jan. 14, 2018), <https://perma.cc/Y4WP-GY57> [hereinafter “CFTC Backgrounder – Virtual Currency”].
 67. Commodity Futures Trading Commission v. McDonnell, 287 F.Supp.3d 213, 228 (2018).
 68. *Id.* at 222.
 69. See, e.g., CFTC Electronic Trading Risk Principles, 17 C.F.R. 38 (2021).
 70. See CFTC, Digital Assets, <https://perma.cc/J4CV-SRXK> (last visited Oct. 3, 2022).
 71. Press Release, CFTC, CFTC Approves Two Final Rules at December 8 Open Meeting, Release Number 8331-20 (Dec. 8, 2020), <https://perma.cc/MM4X-XNYZ>.
 72. CFTC Electronic Trading Risk Principles, 17 C.F.R. 38.
 73. CFTC Backgrounder – Virtual Currency, *supra* note 66, at 1.
 74. *Id.* at 1-2.

the Commission’s mandate to “[mitigate] risks that may impact the financial stability of the [U.S.]”⁷⁵ In an opinion following the 2008 financial crisis, the Court validated the Commission’s decision to implement a more robust framework to regulate market participants in light of the harm deregulated markets caused the financial sector.⁷⁶ The Court explained that the Commission’s rule change was permissible so long as the updated regulation “is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better, which the conscious change of course adequately indicates.”⁷⁷

Courts have also affirmed the Commission’s adoption of regulations to address new areas of market risk, such as the Commission’s inclusion of virtual currency as a commodity under the CEA.⁷⁸ In the case, the Court was persuaded by the Commission’s previous interpretations and expressions of intent to absorb virtual currency transactions within the ambit of its authority, which included a Commission order, the definition of a commodity in the CFTC Primer, a press release, and a statement by former Chairman Giancarlo on Virtual Currencies.⁷⁹ The Court further opined on the concurrence of jurisdiction between the Commission, SEC, and banking regulators over virtual currencies, and clarified that this overlapping jurisdiction should not, and does not, divest the Commission of jurisdiction over virtual currency transactions that relate to the commodities and derivatives markets.⁸⁰ This affirmation may be useful to note in light of the SEC’s Proposed Rule on “The Enhancement and Standardization of Climate Related Disclosures for Investors,”⁸¹ which also pertains to climate-related financial risk. This finding, read together with the statutory language of its jurisdiction in the CEA,⁸² bolsters support for any Commission action that might require similar forms of disclosure.

The above-referenced opinions support action by the Commission to regulate climate-related financial risk, and offer guidance on the considerations that should surround this rulemaking. Still, the Commission should be mindful of the prospect of judicial review, particularly as detractors have already made clear their intention to challenge new regulation on the basis of the relatively novel “major questions doctrine,”⁸³ which establishes that an agency “must point to [‘]clear congressional authorization[’] for the power it claims.”⁸⁴

While further clarification on the Commission’s rulemaking plans is needed in order to determine whether the major questions doctrine would apply, it is helpful to understand the interplay between

75. *Investment Co. Institute*, 891 F. Supp. 2d at 193. This case involves the Commission’s interpretation of its mandate to protect the integrity of the financial markets following the 2008 financial crisis, and as required under the Dodd-Frank Act. Pursuant to this obligation, and upon assessment of changing circumstances in the markets, the Commission promulgated a Final Rule rescinding certain registration and compliance exclusions for commodity pool operators (“CPOs”). CPOs argued that their registrations with the SEC rendered the Commission’s registration requirements unnecessary.

76. *Id.*

77. *Id.* at 194.

78. *McDonnell*, 287 F.Supp. 3d at 228-29.

79. *Id.* at 222, 226.

80. *Id.* at 228.

81. U.S. Securities and Exchange Commission, *The Enhancement and Standardization of Climate-Related Disclosures for Investors*, 87 Fed. Reg. 21334 (Apr. 11, 2022).

82. CEA, 7 U.S.C. § 2 (C) (ii).

83. *See, e.g.*, Heritage Foundation – Comment, *supra* note 25.

84. *West Virginia v. Environmental Protection Agency*, 597 U.S. ___, 19 (2022).

the agency’s statutory authority and the doctrine. Despite quips from opponents that “solving climate change” is analogous to “curing cancer” and other social ills,⁸⁵ and thus beyond the reach of the Commission, a rule-making that squarely addresses the financial risk to the derivatives market associated with climate change is likely to fall comfortably within the Commission’s purview.

For its entire existence, the Commission’s remit has been managing risk in the derivatives market. As discussed, climate-related financial risk is another form of systemic risk that the Commission is already empowered to regulate within its broad authority to address market risk.⁸⁶ Accordingly, in addressing these risks to the derivatives market, the Commission is neither claiming a new unheralded power nor exercising its statutory authority in a new way. There will always be costs to market participants associated with compliance with new rules, and new regulations can be crafted to ensure the rulemaking delivers net benefits. Further, the derivative market itself has always involved vast economic significance; indeed, the term “commodity”⁸⁷ in the CEA encompasses almost all agricultural and industrial products in the country. The protection of the commodities and derivatives markets thus sits at the core of American industry. But courts have not found this impact to be inherently disqualifying. The CEA provides the Commission with ample authority⁸⁸ to act on emerging dangers to the commodity and derivative markets, with guiding principles that bolster its actions.⁸⁹

There is no indication that the Commission is seeking to regulate carbon emissions or otherwise act outside its authority. The express goal of the RFI is to “consider how climate-related financial risk may affect any of its registered entities, registrants, or other market participants, and the soundness of the derivatives markets.”⁹⁰ As the impacts of climate change are clearly posing financial risks to market participants and the derivatives market, regulatory action by the Commission under the CEA should not only avoid scrutiny under the major questions doctrine but also ensure that the Commission is fulfilling its mandate.

3. Conclusion

As the IPCC has recognized, it is “unequivocal” that human activities are warming the planet, leading to “widespread and rapid changes” that pose significant economic risks.⁹¹ Proactive engagement on the part of regulators is necessary to manage these risks and promote market resilience. The Commission’s consideration of climate-related financial risk is consistent with its mandates to prevent fraud and manipulation, to promote fair competition and market integrity, and above all, to avoid systemic risk to transaction integrity. In particular, the frequency and severity of extreme weather events caused by climate change present an emerging systemic threat that the Commission is empowered to guard against. The Sabin Center appreciates the opportunity to comment on the Commission’s consideration of climate-related financial risk to the derivatives market and welcomes rulemaking from the Commission to address this risk.

85. Heritage Foundation – Comment, *supra* note 25, at 1-2.

86. *See* CEA, 7 U.S.C. § 5 (b).

87. *Id.* § 1a.

88. *Id.* §§ 2 (a) (1) and 5 (b).

89. *Id.* § 5 (b).

90. CFTC RFI, 87 Fed. Reg. at 34858.

91. UN IPCC, *supra* note 4.

Sincerely,

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