Ceres Accelerator for Sustainable Capital Markets

October 7, 2022

Via Public Comment Portal

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

Re: Climate-Related Financial Risk RFI (87 Fed. Reg. 34856, Jun. 8, 2022)

Dear Sir:

We respectfully submit this letter in response to the Request for Information on Climate Related Financial Risk published by the Commodity Futures Trading Commission ("CFTC" or "Commission") on June 8, 2022.

Introduction

It is a pleasure to submit this response on behalf of Ceres and the Ceres Accelerator for Sustainable Capital Markets. Ceres is a nonprofit organization that has been working on climate-related financial risk with investors and companies for over 30 years. The Accelerator works to transform the practices and policies that govern capital markets to reduce the worst financial impacts of the climate crisis. It spurs capital market influencers to act on climate change as a systemic financial risk—driving the large-scale behavior and systems change needed to achieve a just and sustainable future and a net zero emissions economy. Ceres works with leading global investors and companies. Our Investor Network currently includes more than 220 institutional investors that collectively manage over $60 trillion in assets. These investors are concerned about the impact of climate change on financial assets and products, including derivatives. Our Company Network includes approximately 60 of the largest global companies with whom we work on climate strategy and disclosure, among other issues. Our Policy Network includes over 75 companies, including some of the most recognizable brands, who have become leading advocates in the fight against the climate crisis at both the state and federal level.

We applaud the CFTC for its effort to examine closely the impact of climate change on the markets and participants it oversees, and to take steps to address the physical and transition risks that climate change creates for those markets and participants. We particularly welcome the Commission's focus on the ways that derivatives markets can assist in addressing the perils of climate change, as well as the potential need for regulatory guardrails to ensure that those markets serve that end effectively.

While the RFI covers a broad range of important questions, and we will touch on many of them, our focus is on the potential for the CFTC to bolster confidence in domestic carbon markets by providing much needed oversight and implementing rigorous standards of quality and integrity.

Summary of recommendations

We appreciate the opportunity to offer our thoughts on how the CFTC can both enhance its oversight of derivatives markets by considering climate-related financial risks and encourage the systemically important markets it oversees to play a role in mitigating the worst of those risks. We respectfully submit that the CFTC should:

1. Create a framework, in concert with the Integrity Council for the Voluntary Carbon Markets (ICVCM) and other voluntary carbon market participants, to ensure rigorous evaluation and meaningful certification of all carbon credits by outside, neutral, and expert third parties.
2. Exercise its authority to oversee derivatives with offsets as underlying, including investigating cases of project fraud or manipulation not only in trading in derivatives, but in the commodities that underlie them.
3. Advocate for inclusion of provisions supporting Indigenous peoples in nature-based solutions.
4. Work with market participants and stakeholders to establish a new commodity representing bona fide carbon removals that could trade globally and at scale.
5. Encourage and promote responsible innovation in derivative instruments to aid in addressing the financial risks of climate change.
6. Encourage and accelerate the development of trustworthy data sources and classification systems which can enable better climate-related financial risk management.
7. Ensure that climate-related financial risks faced by derivatives market participants and intermediaries are appropriately disclosed, and establish appropriate oversight of these risks.
8. Emphasize the need for forward-looking analysis, as climate change is shifting fundamental environmental parameters, rendering traditional risk-modeling techniques, which rely heavily on historical data, increasingly inadequate.

The importance of carbon markets in addressing climate change

As jurisdictions, companies, and investors join in the global Race to Zero, hundreds of U.S. companies have made net zero commitments, although many lack credible, detailed plans to achieve these goals. Each industry and each company must rethink business processes from the ground up to reduce emissions. However, few businesses will be able to achieve zero emissions on their own. Projects and technologies that remove carbon dioxide from the atmosphere will be necessary to neutralize the residual emissions of economic activity. There is also a great funding need for projects that reduce emissions from their current levels, especially in cases where such projects are unlikely to happen without outside funding. It is essential to slow and reverse the elimination of natural

carbon sinks, such as forests and marine life. There is no future in which we limit global temperature rise to 1.5°C that does not include the prompt cessation of deforestation and loss of other native ecosystems. Natural solutions that avoid the loss of these ecosystems must be prioritized.

By far the best way to incent investment in these changes would be federal legislation imposing a price on carbon, well understood to be a pollutant just as are nitrogen oxides and sulfur dioxide. Congress could define a system for caps and allowances, as the European Commission has done with the EU ETS, or enact another mechanism to hold companies accountable for the impact of their emissions. Critically, such a system would provide revenues that could be used to spur climate-friendly innovation, as does the Inflation Reduction Act, provide retraining for those whose livelihoods are impacted by the transition, invest in adaptation and resilience initiatives in regions that will be most impacted by climate change, and provide a carbon dividend so that working class Americans are not impacted unfairly.

In the absence of such legislation from Congress, companies and other actors are participating in voluntary carbon markets, which have grown rapidly in recent years. These markets create financing, through transactions in carbon offsets, for projects that reduce or avoid emissions, or in certain instances remove carbon dioxide from the atmosphere. These projects, properly conceived and executed, can have benefits beyond their greenhouse gas (GHG) impact. Natural climate solutions can provide sustainable livelihoods for Indigenous peoples and other local communities. Investment in technologies that reduce emissions or remove CO2 from the atmosphere will create new well-paying jobs. However, this evolving market has prompted debate around both the use of offsets by companies in their efforts to be carbon neutral and the projects themselves.

There is some disagreement over what claims a company that purchases and retires carbon offsets is entitled to make. Many offset buyers have counted emissions reductions offsets as negative emissions and claimed that they are net zero as a result, but this accounting sleight of hand has been broadly criticized. There is growing consensus that only bona fide carbon dioxide removals may be counted as negative emissions, and even then, only after companies have completed a deep decarbonization of their own operations. The Science Based Targets initiative (SBTi) has published stringent guidelines clarifying what disclosures a company may and should make regarding offset purchases. In our report Evaluating the Use of Carbon Credits, Ceres laid out a framework for the use of carbon credits in ambitious corporate climate commitments**.** The Voluntary Carbon Markets Integrity Initiative (VCMI) is focused on improving the integrity of corporate claims. In its Provisional Claims Code of Practice, the VCMI states, "Carbon credits underpinning VCMI claims are not counted as internal emission reductions that a company undertakes to meet decarbonization targets. Rather, these purchases represent a contribution to both the company's climate goals and to global mitigation." Ceres applauds the flow of capital to projects that result in verified emissions reductions, provided those that retire the offsets articulate their claims as *financing emission reductions*, and not net them against their own emissions.

In The Enhancement and Standardization of Climate-Related Disclosures for Investors, the SEC proposes that companies using offsets must "disclose the role that carbon offsets or RECs play in the registrant's climate-related business strategy." It further proposes that companies must disclose their emissions data "in gross terms, excluding any use of purchased or generated offsets," and would require disclosure of "the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs" as well as other related information. In our comment letter, Ceres encouraged the SEC to recognize that companies must "reduce first, mitigate second, reserving the use of carbon offsets for difficult to abate emissions" and emphasized the importance of excluding "the impact of any purchased or generated offsets from the issuer's reported emissions within the 'GHG emissions metrics' provision of the proposal." In its work on carbon markets, Ceres encourages the CFTC to collaborate with both the SEC and the VCMI to establish guidelines and best practices in disclosing GHG emissions and use of offsets.

There has also been quite a bit of criticism of the integrity of emissions reductions projects themselves. Early projects adhered to standards that have now been proven to be insufficient. When evaluated against critical principles such as additionality, permanence, and leakage, many projects, especially of earlier vintage, are found wanting. However, standards have been evolving. New approaches such as jurisdictional REDD+ address many of these concerns (for example leakage is largely addressed, and far easier to monitor, by looking at forestation levels across a jurisdiction) and include efforts to develop local expertise in developing countries and address concerns around environmental justice and Indigenous peoples. Furthermore, the ICVCM has developed its Core Carbon Principles (CCPs), setting a threshold for high-quality carbon credits. Ceres supports the development of the CCPs and believes the ICVCM can play a much needed role in ensuring high-quality carbon credits and affirming integrity in the VCM. Framed properly, as financed emissions reductions, most of these projects have great merit. Led by groups such as SBTi and the VCMI, market participants should agree that companies may not count financed emissions reductions as negative emissions in their own carbon accounting. With a correct formulation of what claims buyers of offsets are permitted to make, the emissions reductions projects can be seen more clearly as critical to the preservation of our precious natural ecosystems.

True carbon removal projects are less common, and many are still quite expensive, but will be essential if we are to avoid the worst impacts of climate change. Projects that truly restore depleted natural ecosystems are difficult and their potential supply is finite. Engineered solutions such as Direct Air Capture (DAC) are still very expensive. There are examples of companies paying far more than the prevailing VCM price (and far more than the price of European Emissions Trading Scheme allowances) to prove the concept of DAC and finance the R&D required to make that technology scalable and affordable. Carbon markets will be an important source of financing for these critical high integrity carbon removal projects.

With the oversight of the CFTC and other relevant regulators as appropriate, carbon removals could underlie a new commodity representing a ton of carbon dioxide removed

from the atmosphere anywhere in the world. A liquid, globally harmonized carbon market could attract investor capital at scale, leading to hundreds of billions of dollars invested in climate solutions, including natural climate solutions and any other projects that sequester carbon economically. Such a market would also provide a signal of future carbon prices which would be of tremendous value to capital allocation decisions inside companies and by investors.

Ceres encourages the Commission to pursue its authority to oversee derivatives with offsets as underlying. In addition, we believe the CFTC could play a critical role advancing this market by collaborating with market participants, including holding convenings like the June 2, 2022 event on Voluntary Carbon Markets, and engaging directly with market-based initiatives. The CFTC's expertise in issues of market design and integrity, including implementation of best practices in clearing, settlement, disclosure, and data availability, could catalyze a great step forward in the integrity of the carbon markets. Such engagement and oversight could play an important role in setting appropriate standards for carbon offsets, thereby increasing confidence in that market, and ultimately encouraging the flow of risk capital into the market for climate solutions.

We believe the questions that the Commission has posed, on carbon markets and other important aspects of climate-related financial risk, demonstrate a serious commitment to exploring the ramifications of climate change on its regulatory mission.

The CFTC and carbon markets

We will address the issues related to the risks to the Commission's markets and market participants, but we first address the part that the markets the CFTC oversees play, and can play, in helping to address climate change. And the place to start is with carbon markets.

As Ceres reported in March of this year,

> In 2021, the voluntary carbon market, where companies purchase credits to offset their emissions, surpassed a significant marker. The total value of the market exceeded $1 billion, the highest ever tracked. Much of the growth in the voluntary carbon market is driven by corporate net zero commitments, which have also seen unprecedented growth in the last year. According to a recent Ceres analysis, of 637 companies from the S&P 500 and high-emitting sectors, 27% of U.S. companies now have set net zero targets.

As the Commission and other financial regulators recognized in 2011, after the passage of the Dodd-Frank Act, in their Report on the Oversight of Existing and Prospective Carbon Markets: "Along with existing regulation of commodity futures and securities exchanges[,] there will be comprehensive regulation of carbon and other environmental derivatives whether they are traded on an exchange, a SEF, or executed

bilaterally." Futures, swaps, and other derivatives can and will play an important role in the carbon markets and the push to Net Zero, as illustrated in detail by the Taskforce on Scaling Voluntary Carbon Markets (TSVCM)'s 2021 Phase II Report. It is important, then, that the CFTC do its part to ensure that carbon credit derivative markets have integrity and are trustworthy, to ensure that they are robust and serve effectively as price discovery and risk transfer mechanisms.

The greatest threat to the carbon markets comes from concerns about the integrity of carbon offsets, the projects and developers that create them, and the organizations that verify and register them. There is a significant risk that claimed benefits will not materialize, whether deliberately or through no misconduct, which in turn creates fundamental risk for the entire market. For instance, Ceres explains how projects have overstated their climate impact because the baseline scenarios used to estimate the GHG benefit incorrectly assumed that forests in a given area would have been cut down in the absence of the project. As NCX, one of the carbon market players, noted in a recent filing with the SEC, some projects assess additionality based on models that are geographically non-specific and/or projected decades into the future, and from methodologies that do not account for the inherent uncertainty in their baseline modeling. In addition, many nature-based carbon offset standards evaluate permanence over a 100 year timeframe, which highlights the risk of non-delivery. When compared to technical methods for GHG removal, natural climate solution-based removals are considered less durable. In their comment letter responding to the SEC's proposed rule on Climate-Related Disclosures, NCX argues that "disruptions like wildfires and disease, when inadequately accounted for, can wipe out the claimed climate benefits of some types of nature-based solutions." The CFTC could play an important role, working with market participants, to implement contracts that fairly account for these risks.

In addition, the potential of natural climate solutions to meaningfully reduce the systemic risk of climate change depends substantially on whether they contribute to sustainable communities and resilient ecosystems. In the past, poorly executed carbon offset projects have resulted in land grabbing or restricting communities from accessing critical resources, causing harm to communities. As outlined in Tropical Forest Credit Integrity Guide for Companies, projects must respect the rights of Indigenous peoples and other local communities who are often essential stewards of the ecosystems the projects seek to preserve.

Carbon market guardrails and the systems that exist have not ensured the integrity and quality of carbon offsets. For instance, the degree of permanence risk is not currently tracked in the offset markets. In sum, carbon offsets—of any type—require sound measurement and accounting methodologies to ensure that they deliver real and lasting emission reductions and carbon removals.

The CFTC should use its regulatory authority to protect the integrity of carbon credit derivatives. The CFTC has the authority to ensure that swaps, futures contracts, and other derivatives are structured to avoid the risk of manipulation or market disruption. Indeed, the Commission's very Mission Statement says, "The mission of the Commodity Futures

Trading Commission is to promote the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation." Derivatives based on underlying carbon offsets that turn out to be illusory surely risk creating catastrophic market disruption.[1]

The best way to guard against the risk of market disruption because of the lack of the integrity of the underlying credits would be to require all credits underlying derivative instruments be subject to a meaningful evaluation and certification process by an outside, neutral, and expert third party. In that regard, it is important for the CFTC to look beyond its jurisdictional borders to work with sister agencies in the US and in other countries to build and maintain effective carbon markets. We are encouraged by Chairman Benham's leadership of the IOSCO Sustainable Task Force's Carbon Markets Workstream and hope to see similar collaboration with other international organizations. As the Chairman recently stated, "recognizing that carbon emissions have no geographic boundaries, it's critical that regulators from around the world work together to ensure a thoughtful and harmonized approach to carbon allowances, carbon offsets, and the related derivatives." The CFTC should undertake to work with other US regulators and their foreign counterparts in addressing the market-impact issues that, as the Chairman has also recognized, arise from the so-called "Article 6 Rulebook," stemming from the Paris Agreement, which opens the door for international carbon markets based on country offsets. Standards coming out of that international work could then be incorporated into the domestic standards for derivatives based on carbon credits, to ensure that instruments avoid the risk of market disruption.

There are currently several organizations that provide GHG certifications, which reduce the risk of credits that are not additive to carbon reduction or are otherwise not real.[2] Most importantly, the ICVCM has a process underway to create the Core Carbon Principles and Assessment Framework, which the Council intends to release in the fourth quarter of 2022. The Council is "an independent governance body for the voluntary carbon market. Our purpose is to ensure the voluntary carbon market accelerates a just transition to 1.5ºC." It is tasked with "setting and enforcing definitive global threshold standards, drawing on the best science and expertise available, so high-quality carbon credits channel finance towards genuine and additional greenhouse gas reductions and removals that go above and beyond what can otherwise be achieved, and contribute to climate resilient development." The Council states that the Principles and Framework "will set new threshold standards for high-quality carbon credits, provide guidance on how to apply the CCPs, and define which carbon-crediting programs and methodology types are CCP-eligible." We believe that the Council's process will provide a valuable

[1] See also Appendix C to17 C.F.R Part 38, Para. (a)(1) (for cash-settled contracts, DCMs to "ensure the contract's term and conditions reflect the underlying cash market and that the futures contract will perform the intended risk management and/or price discovery functions"), Para. (b)(1)(I)(B) (for physically settled contracts,"[c]areful consideration also should be given to the quality of the cash commodity and … there exist external factors . . .that could affect the price or supply of the cash commodity"); Appendix B to 17 C.F.R. Part 38, Core Principles 3 & 4 (referencing various steps for Swaps Execution Facilities to prevent price distortions in the market).

[2] "Amazon Seeks To Restore Trust In Voluntary Carbon Market With New Credit Designation," *S&P Global Commodity Insights* (Jul. 7, 2022) discussing new accreditation label for carbon credit meeting certain quality standards, called the ABACUS Verified Carbon Unit.

framework that could provide criteria that should underlie carbon credit derivatives. The CFTC should engage with Council's process, perhaps in coordination with the National Futures Association or other relevant organizations, to ensure that there emerge robust standards for any carbon credits that may be used to underlie swaps and futures. Ceres also believes that the market would be well served if carbon offset registries and validation/verification bodies (VVBs) were required to register with the CFTC (if they operate in the US) or another governmental entity, just as the SEC oversees credit rating agencies.

But the CFTC should not stop there. If there is not policing of the carbon markets, they will remain at risk of losing their reliability and therefore their value. The CFTC should undertake to use its authority to sanction fraud or manipulation not only in trading in derivatives but in the commodities that underlie futures and swaps contracts, to investigate and sanction instances of intentional or reckless creation of low-quality carbon credits, as well as misrepresentations of the quality of the credits, the risks associated with the credits, and the express or implicit ongoing oversight of the bases for the credits. The CFTC should insist that its Self-Regulatory Organizations do the same regarding the derivatives trading they oversee. We believe that policing the integrity of these markets is so vital to addressing climate change that the CFTC should seek additional funding to allow for effective enforcement efforts in this arena. But we urge the CFTC to proceed whether or not it is able to procure additional resources.

Moreover, there can be instances in which carbon credits can become invalid without fault–- e.g., a forest of planted trees burns down or is decimated by invasive species. It is important that the market be protected against those disruptions as well. Just as the International Swaps and Derivatives Association (ISDA) has created mechanisms for addressing issues that arise in traditional derivative transactions, the CFTC should explore the creation of mechanisms, including standards for buffering and mitigation guarantees, to address in an orderly manner the potential for the faultless, unanticipated reversals of carbon credits that underlie derivatives.

The CFTC could also enhance the integrity of these markets, and therefore their vitality, by encouraging the development of reliable price reporting mechanisms and uniform marking-to-market mechanisms. As the Commission has seen in the past with other markets that rely on pricing and marking based on market participants' reports of transactions, there are significant issues with the reliability of those processes in the carbon markets. As it has done in other markets, the CFTC should work with market participants and potential price-reporting and index-producing organizations to create a reliable price to which derivatives can reliably reference.

The CFTC can encourage the growth of these markets in other ways as well. Encouraging the expansion of exchanges offering products, encouraging them to create standardized expiration dates and contract sizes, and working with clearing organizations to bring margining requirements into harmony all would help grow liquidity and therefore the value of the market for price discovery and risk shifting. In addition, the CFTC, as a member of Financial Stability Oversight Council, has responsibility to and can address

the risk that carbon market failure could trigger or contribute to systemic failure and should work to ensure this risk is addressed.

By taking these steps, the CFTC can create greater confidence in and thereby invigorate the carbon credit trading markets.

Derivatives as a tool to manage and diversify climate-related financial risk

The role of derivatives in addressing climate change does not end with carbon credit derivatives. The 2020 report Managing Climate Risk in the US Financial System (Climate Risk Report) from the Climate-Related Market Risk Subcommittee of the Commission's Market Risk Advisory Committee noted that derivatives that hedge climate-related risks have been used for more than 25 years. They include instruments based on weather, electricity, and ESG-related factors. They are used by agriculture, energy, metals, and financial market participants. Indeed, traditional derivative products in agriculture, metals, and energy themselves can be used to manage climate risk, given the embedded climate considerations in their pricing. And the need for new products likely will grow. Derivative instruments can not only serve to provide needed risk-transfer mechanisms, but their role in price discovery means that the trading of well-constructed instruments could shed valuable light on the true anticipated costs of climate risks such as flooding, fire, drought, and invasive species.

We urge the CFTC to take steps to encourage and promote the responsible innovation in and creation of additional derivative instruments to aid in the adaption and resilience steps needed in the face of climate change. Those steps can include conducting and encouraging economic research, using its "bully pulpit" to press its registrants to look for opportunities to create new contracts, conducting forums for the discussion and advancement of innovation, and creating a "sandbox" program to help those seeking to innovate in this space.

Moreover, the CFTC can undertake additional steps to encourage the role of derivative markets in addressing climate change. As the Climate Risk Report noted, the Commission can and should work actively with Designated Contract Markets (DCMs) to ensure that contracts are modified in a timely and effective manner to support product changes influenced by climate risk concerns. Private sector groups can be encouraged to create standards and guidelines for products that incorporate sustainability elements, which in turn can be incorporated into the requirements for derivative contracts. Furthermore, as the Report says, there have already been instances in which swaps have been modified to create improved environmental performance. The CFTC, working with ISDA and other relevant parties, should undertake to find additional opportunities for that kind of contract enhancement.

Finally, Ceres also agrees that,

> there is no comprehensive and comparable set of metrics for climate-related risks, and the ability to accurately quantify

> climate risks is critically important for financial functions ranging from assessing lending risk, to pricing derivatives, and, ultimately, to constructing sustainable finance products. Derivatives products can only be developed if climate-related data is transparent, reliable, and trusted by market participants. If that happens, new-product innovation would likely span multiple asset classes as data becomes more available… The development of new derivative products focused on measurable climate-related events such as sea level rise, extreme rainfall events, and natural disasters should appeal to a broad set of market participants. Reliable and trustworthy data sources that help measure environmental attributes and characteristics throughout the physical commodity supply chain will be needed to underpin these new derivatives contracts. Private sector companies are finding new ways to collect, process, and transfer decision-useful lifecycle datasets to differentiate their products on the basis of their climate impacts and reveal the market value or risks associated with asset-level environmental attributes.

The Report provided several useful suggestions on how the CFTC can encourage these developments. The Report also recognized the importance of reliable and comparable classification system for the various risks associated with climate change, "spanning asset classes and sections," and recommended that the government study the establishment of a Standards Developing Organization composed of public and private sector members.

We believe the CFTC can encourage and accelerate the development of trustworthy data sources and classification systems which can fuel these important new derivative products, through the methods discussed above and by active outreach to the relevant sister regulators and departments in the federal government and abroad.

Derivative market participants must evaluate climate-related financial risk

The Commission's RFI, in questions 8-12, asks whether and how the risk of climate change should be evaluated by regulated market participants. Ceres strongly urges the CFTC to move forward on those concerns. There can be little doubt that climate change poses risks to CFTC-regulated market participants. Extreme weather events such as hurricanes, as seen with Hurricanes Katrina, Sandy and just last week, Hurricane Ian, can have disruptive effects on businesses and infrastructure. As the Climate Risk Report stated,

> in a recent span of 24 months, the United States experienced several unprecedented extreme events. In 2017, for the first time in history, three Category 4 hurricanes made U.S. landfall in a single year, causing extensive damage to the

> Gulf Coast. In 2018, California experienced its deadliest and most destructive wildfire season in recorded history. And in the year through May 2019, the United States experienced its wettest 12 months on record, including devastating floods affecting 14 million people in the Midwest and South.

A 2019 analysis of 215 of the world's largest companies identified just under $1 trillion of potential risk to them from climate change – and noted that half of these losses are expected to materialize in the next five years. In 2021, there were 20 climate-related disasters causing over $1 billion damage each in the US, for a total cost of $152.6 billion. More than 40 percent of Americans live in counties hit by climate disasters in 2021 and more than 80 percent of Americans experienced a heat wave.

Events tied to climate change, such as drought and invasive species, can have devastating impacts on the value of derivative products, at times without a great deal of warning. Wildfires, droughts, floods, and extreme temperatures all pose disruptive threats to markets underlying derivatives, and thus to the derivative markets themselves. There is widespread consensus, moreover, that these events will only become more frequent and more severe. As recently stated by the thoughtful and comprehensive October 2021 Financial Stability Oversight Council (FSOC) Report on Climate-related Financial Risk, Climate change poses an emerging and increasing threat to U.S. financial stability. US financial regulators have begun to act on these threats, as evidenced by 230 actions they have taken since the start of 2020.

Of course, disruption of the operations of trading facilities, clearing organizations and even major market participants could have broader systemic impact and devastating waterfall effects. While the risks posed by climate changes may to some degree be priced into the market price of derivatives in a general way, unexpected disruption of the market by a particular storm, period of drought, infestation, or flood could have a devastating impact on liquidity and trigger domino effects. In addition, discontinuities in the impact of climate change can mean that variables can reach a tipping point and cause "sudden and disorderly" price adjustments in the markets.

Even the premise that the markets factor into the value of derivatives the general, long-term predictions regarding climate change may be fundamentally flawed: "Evidence is accumulating that markets are pricing in climate-related risks imperfectly, and sometimes not at all." Chapter 3 of the CFTC's Climate Risk Report delves into further detail on the challenges climate change presents to financial stability in the U.S., particularly in how it is linked to systemic and sub-systemic shocks. Part of the issue is that "climate change is shifting fundamental environmental parameters," and therefore [t]raditional risk-modeling techniques, which rely heavily on historical data, will become increasingly unhelpful guides to the future. . . . Thus, society's ability to understand climate risk will require forward-looking analysis, which is still being developed… A sudden revision of market participants' perceptions about climate risk could trigger a disorderly repricing of assets, which could have cascading effects on portfolios and balance sheets and,

therefore, systemic implications for financial stability." That, in turn, could trigger systemic waterfall effects in the financial system.

> A combination of slow-onset and sudden extreme weather events in major agricultural states, for example, could lead to high volatility in certain agricultural commodity prices. Commodity prices can become especially volatile when storage facilities are damaged or storage capacity is otherwise constrained, forcing contracting parties supplying the physical commodity to incur additional costs. High volatility, in turn, could result in calls for variation-margin payments to clearinghouses and to greater pressure on short-term funding markets at the same time as other institutions, such as insurers and reinsurers, may be tapping the markets to fund large payouts related to the same extreme weather events. The result could be a liquidity crunch that temporarily interferes with the smooth functioning of the commodity futures market. Transition risk could plausibly cause similar disruptions, for example with challenges to liquidity or energy futures markets.

Likewise, climate-related transition and physical risks may cause certain assets (including trading book assets) to become so illiquid that they are effectively stranded. And, of course, unanticipated threats to the stability of Derivative Clearing Organizations, Swaps Dealers or Major Swaps Participants could have broad waterfall effects on the national and international financial system.

There are also both transition and physical risks from climate change impacting the potential value, and therefore strategy, associated with the commodities underlying derivatives being recommended by Commodity Trading Advisors (CTAs) and traded by Commodity Pool Operators (CPOs). That is true whether the underlying commodities are agricultural, metals, energy or financial. Just as it is important that investors in securities be informed of the climate-related risks faced by the companies in which they are investing, clients of CTAs and participants in commodity pools should be informed of the risks that climate change pose to the trading strategies being advised or being implemented.

The CFTC has the authority to ensure that these risks are considered and disclosed as appropriate. It has regularly exercised its authority over Swaps Dealers, Major Swaps Participants, Derivative Clearing Organizations (DCOs), and Futures Commission Merchants, including with regard to how capital requirements are set considering, *inter alia*, market risk, and for establishing risk management programs designed to monitor and manage the risks associated with its activities, including certain enumerated risks and "any other applicable risks." The CFTC should use that authority, in coordination with other regulators where necessary, to ensure that the increasing climate-change related risks are considered in all aspects of required risk management programs and in

evaluating capital requirements. Ceres has highlighted the need for stress testing for banks, including both physical and transition risks and the need for certain standardized measurement standards in previous regulatory submissions like the recent comment letter to the Financial Stability Board. As the Federal Reserve has acknowledged in its launch of climate scenario analyses for US banks, supervision of derivatives markets participants should include climate-related scenario analysis. As Federal Reserve Governor Lael Brainard has recognized,

> Climate scenario analysis identifies climate related physical and transition risk factors facing financial firms, formulates appropriate stresses of those risk factors under different scenarios, and measures their effects on financial intermediaries and the financial system. This analytic approach gives us a structured way of uncovering the parts of the financial system where physical, transition, and other risks may have outsized effects through potential spillovers. It also helps identify the limits of our knowledge.

There are, of course, challenges to calibrating those risks. Larger financial institutions tend to incorporate some climate-risk scenario analysis, but often are unsure of which climate scenarios are most relevant for their business model or the most relevant scenarios do not provide sufficient detail in some areas critical to financial institutions. Smaller financial institutions often do not have sufficient resources to conduct climate scenario analysis and may wait for regulatory guidance before investing resources in the design of climate-risk scenario analysis.

Regulators and market observers have begun to focus on these climate-related financial risks in some parts of the market, like bank loan portfolios, which hold significant transition and physical risks. But the risks in the derivatives markets have prompted less discussion to date. Ceres' recent report on Derivatives and Bank Climate Risk explains,

> Derivatives have the potential to dramatically change a bank's climate risk exposure, increasing it by up to 3x in certain cases. For comparison purposes, the 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)… Derivatives could serve as an amplifier of climate risk at a systemic level, given that banks' counterparties across lending, derivatives, and other asset classes can significantly overlap. In the case of a "climate shock" where assets are rapidly revalued, losses from different asset classes could be highly correlated, resulting in potentially increased systemic risk, as well as risk to individual banks.

Therefore, we urge the CFTC to devote resources to the development of effective measurements, working with outside economic experts and institutions, industry representatives, and relevant sister government agencies, such as the Department of Agriculture, NOAA, the Federal Energy Regulatory Commission, and the various U.S. federal bank regulators, to provide effective foundations for incorporating the risks posed by climate change into capital calculations and risk management, sufficiently particularized to recognize the differing nature of climate risks in each industry sector to which the registrants may be exposed. Industry members should be encouraged to develop standardized models that can be used in lieu of or alongside proprietary models, to allow for comparability. Without incorporation of those risks into modeling and testing in a robust manner, the market protections that those guardrails are meant to be provide will become increasingly illusory.

Similarly, the CFTC has robust authority to require CPOs and CTAs to disclose risks associated with their trading strategies.[3] Those disclosures remain incomplete without considering the physical and transition risks associated with the particular mix of derivative products being traded on behalf of their pool participants and advisory clients. Even if those risks cannot be fully quantified, there are plenty of resources already available that discuss the climate-related risks to agriculture, extractive industries, energy, and the financial sector. The CFTC should require CPOs and CTAs to incorporate those elements into their disclosure documents, with additional specificity and quantification as more robust and reliable information and data becomes available.

In addition, Swap Dealers and Major Swap Participants are required to disclose to certain counterparties risks before entering into a swap, including certain enumerated risks, "and any other applicable risks." It seems well within the CFTC's authority to require them to disclose both qualitative and, to the degree possible, quantitative risks arising from climate, and Ceres believes it should do so.

The CFTC can and should also provide leadership in working with other expert agencies, institutions, and individuals to improve the quantification of those risks, and thereby provide the basis to refine those disclosures to make them increasingly effective for market participants. We strongly encourage the CFTC to undertake such efforts in fulfillment of its mission to protect its markets and its market participants and commend the Commission for its progress on this key topic, with special recognition for the guidance provided by recommendations 4.11, 4.15, 4.16, and 7.1 of the Climate Risk Report.

[3] See, e.g., 17 C.F.R. §§4,24(g)(disclosure document for a commodity pool must include A "discussion of the principal risk factors of participation in the offered pool"), 4.24(w) ("Nothing set forth in [the other provisions of the regulations] shall relieve a commodity pool operator from . . . the obligation to disclose all material information to existing or prospective pool participants even if the information is not specifically required by such sections."), 4.34(g)(disclosure document for a commodity trading advisor must include a "discussion of the principal risk factors of [the advisor's] trading program"), 4.34(o)("Nothing set forth in [the other provisions of the regulations] relieve a commodity trading advisor from . . . the obligation to disclose all material information to existing or prospective clients even if the information is not specifically required by such sections")

Conclusion

We at Ceres appreciate the CFTC's various initiatives that allow it to play a leadership role in examining the perils of climate change and its impact on and risks created for the derivative markets, as well as the opportunities that exist for those markets to play a valuable role in addressing climate-related concerns. This RFI is just the latest manifestation of that commitment. If you have questions or would like further information, please contact Steven Rothstein at srothstein@ceres.org or Eric Pitt at ericpitt.consultant@ceres.org.

Sincerely,

Steven Rothstein
Managing Director, Ceres Accelerator for Sustainable Capital Markets

Eric Pitt
Ceres Accelerator for Sustainable Capital Markets

CC:

Chairman Rostin Behnam	Abigail S. Knauff
Commissioner Kristin N. Johnson	Brigitte C. Weyls
Commissioner Christy Goldsmith Romero	Andrew Ruggiero
Commissioner Summer K. Mersinger	Richard Haynes
Commissioner Caroline D. Pham	Diana Dietrich
David Gillers	Mark Fajfar

RESPONSES TO CFTC QUESTIONS

Data (Questions 1-3)

Ceres understands that there are many sources of data used to assess climate risk associated with derivative products. There are sources of data offered for sale and there are proprietary data used by institutions for their own trading. We understand that the quality of that data can vary widely. Ceres certainly thinks that it would be useful to the marketplace for the CFTC to encourage the development of reliable sources of data that can support trading decisions. Much of that data would need to be sourced from the agencies that are involved with the underlying commodity, be it the Department of Agriculture, NOAA, the Department of Transportation, FERC, and others. The CFTC would serve the development of the markets for climate-risk products and help ensure that other markets accurately reflect associated climate risk by working with its sister agencies to create and publish information that is robust and reliable.

Scenario and Stress Testing (Questions 4-7)

As discussed in the body of our letter, Ceres strongly advocates for the inclusion of stress testing and scenario analysis by Commission-regulated entities. That testing should cover geographical stress where relevant and should vary by asset class, since the climate-related risks can vary widely between asset classes. In addition to various adverse climate scenarios, analysis should include changes to regulatory scenarios that could impact transition risk and the value of carbon offsets. As discussed in the letter, we believe some degree of such testing can be done with currently available information. The CFTC should work with experts and the industry to continue to develop and refine the capability for conducting that testing, and then increasing the regulatory requirements and expectations as the available testing capacity increases.

Risk Management (Questions 8-12)

As also discussed in the body of our letter, Ceres strongly advocates for the inclusion of climate-related risk as part of the risk management for CFTC-regulated entities, including DCOs. The CFTC can build those requirements into its existing regulatory structure by including climate-related risk as one of the specified required components of any risk management program. The requirement should be no different than other required components of risk management; to the degree that other components of risk management consider a registered entity's or registrant's size, complexity, risk profile, and existing enterprise risk management processes, it would be appropriate to do so for climate risk. The CFTC should use its resources, in conjunction with its sister agencies and private industry, for the continued refinement of the measurement of these risks, and, as appropriate as they develop, promulgate regulations or issuing guidance for registrants and/or registered entities regarding the implementation of policies and procedures to measure, track, and account for physical and transition risk. It is not clear at this time how the CFTC might take climate-related risk into account in setting minimum capital and liquidity requirements, but the Commission should continue to both encourage and

monitor the development of methods for analyzing those risks, with an eye towards considering changing those minimum requirements in the future.

Disclosure (Questions 13-17)

As discussed in the body of our letter, Ceres urges climate-risk disclosures for most CFTC-regulated individuals and entities. Awareness of the climate-related risks to the regulated entities and associated with trading strategies will allow those seeking to use the services of those entities and individuals to have a more complete and accurate picture of what they are purchasing. It will also incentivize those regulated entities to confront those risks in a responsible manner. All four of the core elements of the Task Force on Climate-Related Financial Disclosures can be incorporated in those disclosures: providing information on the governance structures in place to monitor, assess, and respond to climate-related risks; the strategy for addressing the risks, particularly with regard to trading programs and advice; how those risks are managed, as discussed above; and, using and disclosing metrics as they are or become available, which will provide quantified information to the user. To the degree disclosures can be structured in a manner that allows for comparability across regulated entities, that would certainly enhance the ability for market participants to make informed decisions. Finally, Ceres believes that disclosure of GHG emissions without context would not necessarily be useful to most market participants; any disclosure should provide enough context for the average user to understand the significance of any particular data, including GHG emissions.

Product Innovation (Questions 18-21)

Ceres has commented extensively in its letter on the importance of innovation in the derivatives markets in addressing the impact of climate change. Innovative products that create new opportunities for price discovery of climate-related risks and for shifting of those risks to those in a position to carry them would be an invaluable contribution. We have made suggestions on what the Commission can do to encourage those developments and the need to establish standards and accurate reporting – and then enforcement of those requirements – to make those markets reliable and therefore attract the liquidity necessary to be successful.

Voluntary Carbon Markets (Questions 22-24)

Pages 2-8 of this letter are devoted to the carbon markets, including derivatives, and the steps we believe the CFTC needs to take to make those markets reliable, trustworthy and therefore vibrant. Our recommendations include steps the Commission could take to enhance the integrity of voluntary carbon markets and foster transparency, fairness, and liquidity in those markets, and address the potential for fraud and manipulation and/or merit enhanced Commission oversight. We do not see a need for a special registration category for market participants.

Financially Vulnerable Communities (Questions 26-27)

Ceres encourages the CFTC to consider the impacts of its policies on financially vulnerable communities, who have suffered disproportionate damage from climate change. The Commission should also keep the rights and needs of Indigenous people foremost it its work on carbon offset projects. As part of the work that Ceres encourages the CFTC to undertake to foster the development of additional derivative products, the Commission should ensure attention is paid to what products might be developed that focus, whether geographically or in terms of particular vulnerabilities, on the risks to financially vulnerable communities.

Climate Risk and Derivatives (Question 30)

We submit the recent Ceres report, Derivatives and Bank Climate Risk, for the Commission's review. While this is focused primarily on climate risk in the derivatives books at banks, the analysis may be applicable to commodities markets participants as well.

Capacity and Coordination (Questions 33-34)

As Ceres has stated in the letter, climate risk knows no borders, so international coordination is vital. Existing international mechanisms such as IOSCO, the FSB, or the United Nations Framework Convention on Climate Change (UNFCCC) can be used to develop the necessary international agreements and guideposts. Internally, as noted, the CFTC should ensure that it has the enforcement resources to monitor behavior in the carbon credit markets as well as other existing and future climate-related markets. It should ensure it has enough internal staff expertise on climate-related risks that can impact its markets to work with outside parties to develop standards, protocols and guardrails, as well as to evaluate the standards and guardrails that are in use or are developed in the future by outside entities. The markets overseen by the CFTC will play an important role in climate-change issues in the years to come, and if they are not properly structured or operationalized, they can do affirmative damage to addressing climate change. The CFTC needs the expertise to differentiate between those two potential impacts of the derivative markets.