Comments of XCHG (Xpansiv CBL Holding Group)
Responding to the Climate-Related Market Risk Subcommittee's
April 14, 2020 Notice Soliciting Input on Report Topics & Issues

XCHG (Xpansiv CBL Markets Holding Group) respectfully submits the following comments to the Commodity Futures Trading Commission's ("CFTC" or "Commission") Climate-Related Market Risk Subcommittee (the "Climate Risk Subcommittee") as part of its investigative efforts on climate change-related financial and market risks.[1]

XCHG is a data refinery and digital trust platform company building a collaborative marketplace and meta-registry system for companies to package, register and transact in digitized commodities that include the associated environmental attributes, characteristics and climate-related risks and/or benefits of physical commodities. The XCHG platform employs a range of digital technologies (e.g. internet of things, artificial intelligence, advanced data analytics, and distributed ledger technologies) to enable companies new abilities to collect, process, contextualize and transfer decision-useful lifecycle datasets to (a) differentiate their products on the basis of their climate impacts, and (b) reveal the market value or risks associated with asset-level environmental attributes.[2]

Data-driven insights and intelligence are the core of every decarbonization pathway going-forward. Markets can trace and quantify risks based on as atomized and aggregate environmental performance data. The Climate Risk Subcommittee should highlight the base need build a full spectrum brown-to-green taxonomy of asset- and commodity-specific attributes and impacts that can be correlated to policy-based or market-based standards.

[1] On April 9, 2020, the CFTC issued a notice seeking public comment on, and nominations of, topics and issues that will assist the Climate Risk Subcommittee identify and examine climate change-related financial market risks (see CFTC Notice, 85 FR 20678 (2020), https://www.federalregister.gov/documents/2020/04/14/2020-07860/climate-related-market-risk-subcommittee-under-the-market-risk-advisory-committee.)

[2] For example, in otherwise uniform natural gas markets, having authenticated data on fugitive methane controls or emissions leak rates from gas production facilities allows markets an ability to differentiate and price the nature, cost and total value of the in situ natural gas. XCHG uses a range of digital technologies to reveal, authenticate and market such vital information at previously unimaginable scale. For more information go to http://www.XCHG.net.

This mapping and classification of commodity market benchmarks, metrics and standards architecture is a necessary first step to enable climate-related risk accounting methodologies to be devised and harmonized. Our vision at XCHG is that the real-time digital measurement, reporting, and verification of corporate sustainability and transition data will scale market-based solutions to climate change, empower companies to financially manage their climate-related risks, and transform how markets operate, allocate capital, and define value… *provided there is normative trust in both the data itself, its provenance, and its market governance.*

Build Principles-based, Algorithmic Data Governance Frameworks

There are dozens if not hundreds of first-rate existing metrics, standards and methodologies to classify, measure, report and verify the sustainability, climate-related or environmental profile, characteristics and/or impacts associated with each stage in the lifecycle of raw materials, commodities, commercial products, processes or services (collectively "MRV"). In mathematic terms, every MRV approach should be understood as an algorithm, a process or set of rules to be followed in calculations or other problem-solving.[3]

These MRV best practices can now be automated at previously unfathomable scales. Systems can securely collect, store, and certify static and dynamic data on GHG emission intensity, embedded or avoided carbon, water use and literally any other environmental attributes that can help give consumers, investors, and governments a more complete, timely, credible, and trustworthy assessment of the climate-related or other environmental impact of a particular commodity, product, facility, or company.

Regulators and policymakers should therefore start at the beginning. Is climate-related data public good? How can digital tools rewire the economy and its underlying infrastructure to empower individuals with greater data transparency? What level of data transparency is necessary in commodity and corporate asset-level data to understand their climate-related financial, physical, and supply chain risks? What access should consumers have to material,

[3] Generally, there are two components of MRV: 1) the technical component, i.e. inputs and outputs being measured; and 2) the contextual component, i.e. the derived measurement or meaning of those technical findings based on some normative context (i.e. sustainability, "clean" energy, or superlative environmental performance relative to a base case).

decision-useful information?

1. **A universal "common language" is needed.** Market alignment must sit atop harmonized brown-to-green taxonomy that informs both companies and investors on how to identify, digest, and harness climate-related financial risk factors to drive investment decision-making in a carbon-constrained world.
2. **Develop Climate-Related Product Classification and Climate Risk Accounting Systems.** For markets to price climate-related risks, products and services must be correlated to endogenous and exogenous environmental impacts. A full mapping of the environmental attributes (e.g. embodied carbon) and derived impacts of every good and service traded in interstate commerce would be a good start.
3. **Tie Policy Interventions & Risk Quantification Metrics to Net Zero Desired Outcomes.** To allow the market to pull climate-related risks forward, policy must also define the desired net zero outcome to be encoded into financial valuation methodologies. Markets can then reverse engineer an algorithmic, net present value and set of risk factors attributable to all commodities, products and commercial activities.
4. **Set Digital Guardrails.** Robust data governance principles must be built into markets for climate-related data transparency, accuracy, replicability, predictability, and interoperability.
    - *Transparency Should be Asset- and Commodity-Specific.* Digitizing MRV rules and measures of derived risk requires that underlying data is real and trusted. Without data integrity, any claimed attributes or risks is unreliable and not credible.
    - *Digitized MRV Should be Developed*. Any measure of data-driven risk factors must include a "digital passport" auditability function to (i) trace and identify the provenance of the data, (ii) certify that the MRV process was executed accurately, and (iii) verify that any standard or certification meets the policy requirements.
    - Digital Twins Should be Registered to Ensure Market Trust & Integrity**.** A trusted registry platform, ledger or meta-registry is essential to identify the existence, type, quality and legal ownership rights to any environmental risks or claims**.** Environmental commodities market registries have been fundamental to preventing manipulation, fraud and unintentional double counting.

****