

coinbase DERIVATIVES

Coinbase Derivatives (LMX Labs, LLC)
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LMX Labs Submission #2022-17E

August 25, 2022

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

VIA CFTC Electronic Filing

Re: CFTC Regulation 40.2(a) Certification: Listing of Nano Ether Futures Contract

Dear Mr. Kirkpatrick:

Pursuant to Commodity Futures Trading Commission (“CFTC” or “Commission”) Regulation 40.2(a), LMX Labs, LLC, operator of Coinbase Derivatives, (the “Exchange”, “CDE”) hereby submits for self-certification its initial listing of the Nano Ether Futures contract to be offered for trading on the Exchange on or after August 29, 2022.

Contract Description

The Nano Ether Futures contract (the “Contract”) will be a monthly cash-settled and margined contract with the following specifications:

Contract Name	Nano Ether Futures
Rulebook Chapter	1107
Contract Code	ET
Contract Size	1/10th ETH (Current ETH Price ~\$1,600) contract notional
Price Quotation	\$ 0.50
Minimum Tick Size	1 tick (\$0.05 per contract)
Listed Contracts	Initial listing of two (2) nearest months
Daily Price Limits	30% Daily Price Limits based on previous day settlement.
Price Fluctuation Limits	10% of Hourly Calculated Reference Price

Last Trading Day	Trading terminates at 4:00 pm London time on the last Friday of the contract month. If that day is not a U.S. business day, trading terminates on the preceding day that is a U.S. business day.
Daily Settlement	Daily Settlement: 3:00 pm CT 1. 1-min VWAP of futures contract rounded to the nearest tradable tick 2. 1-min TWAP of futures contract midpoint of the Bid/Ask rounded to the nearest tradable tick 3. If a two-sided market is not available during the sixty (60) seconds prior to 10:00 am CT, then the Settlement Price will be Market Vector CETBR index value - (difference between previous day's CETBR index value and previous day's futures settlement)
Final Settlement	Final settlement price of the expiring contract will be the value of the Market Vector Coinbase Ethereum Benchmark Rate at 4:00 p.m. London time, calculated and disseminated by the index provider and calculation agent. Contracts will be cleared by Nodal Clear
Forks	In the case of a hard fork, the new token will not be added to the index unless it becomes the dominant coin. The Exchange, in conjunction with the Index provider, will notify market participants in advance in the case of any change to the Index.
Position Limits	400,000 Ether
Large Trader Reporting	5 contracts
Trading Hours	5-4pm CT Sun-Fri, with trading halt from 4pm to 5pm CT Mon-Thurs.

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Ether Market Overview

The Ether token (ETH) is a digital asset that was launched by the Ethereum Network in 2014 through an Initial Coin Offering. Like other digital assets, Ethereum is created on an open source network with no intermediaries. As of June 30, 2022 there were approximately 119.48 million ETH in circulation.¹ Every 15 seconds, a new Ether block is created, and 2-3 ETH are assigned to the computer that created the block. Unlike Bitcoin, ETH is designed to have an unlimited supply, though there is an annual maximum limit of 18 million ETH allowed to be created every year. In that respect, it mimics fiat currencies where a higher supply generally leads to lower value. This benefits the smaller trader or those entering the market as it makes investing in ETH more attainable for the individual trader².

Contract Description

The Nano Ether Futures contract is a cash-settled contract based on the Market Vector Coinbase Ethereum Benchmark Rate (“Contract”). This Contract tracks the price of Ethereum traded on the Coinbase spot exchange. Market Vector is an Index Provider based in Frankfurt, Germany and is regulated by the Federal Financial Supervisory Authority (“BaFin”).

Each contract represents 1/10 Ether. The price of Ether rose steadily in the fall of 2021. However, the recent decreases occurring across the cryptocurrency market have brought the price of Ethereum down to its current level of approximately \$1600³. The Exchange will initially offer the two front months of the contract for trading. (*Please see the chart on the following page.*)

¹ https://ycharts.com/indicators/ethereum_supply

² <https://investerest.vontobel.com/en-se/articles/13356/ether-explained---chapter-6-ethereum-vs-bitcoin-part-1/>

³ As of August 24, 2022.

Ether Price as of August 24, 2022

Ethereum ETH ☆ ↑ Share

Rank #2 Coin On 2,894,329 watchlists

[Website](#) [Explorers](#) [Community](#) [Chat](#)

[Source code](#) [Whitepaper](#)

Contracts:
BNB Smart Chain (BEP20): [0x2170...9f933f8](#) [More](#)

Audits: [Fairyproof](#)

Tags: [Mineable](#) [PoW](#) [Smart Contracts](#) [Ethereum Ecosystem](#) [View all](#)

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Ethereum Price (ETH)

\$1,649.53 ▲ 1.06%

0.07693 BTC ▲ 1.42%

Low: **\$1,610.10** High: **\$1,666.68** 24h

Market Cap **\$201,395,207,524** ▲ 1.08%

Fully Diluted Market Cap **\$201,678,254,743** ▲ 1.06%

Ethereum to USD Chart



Source: <https://coinmarketcap.com/currencies/ethereum/>

Volatility

Ether is considered a relatively volatile commodity. Some of the reasons include its later adoption as a cryptocurrency, lower market cap and higher concentration of holdings (many by the original holders of ETH.) Since the start of 2022, the 30-day trailing standard deviation of daily price changes has averaged 4.3%. During the month of June, the price of ether is slightly more volatile with a comparable figure of 5.1%. Spikes in volatility occur periodically, similar to our other product classes, such as OIL. Spikes of volatility as well as time periods or prolonged volatility will be managed using risk controls to protect both market participants and the Exchange. Such controls include daily price limits, price banding, exposure limits, kill switches, and appropriate margin levels. All contracts are centrally cleared by Nodal clear, which has in place its own risk limits, offering further protection to market participants.



Source: Coinbase Exchange, Daily Price Data Captured at 15:00:00 CT, Data as of June 27th 2022

Analysis of Deliverable Supply

As stated above, the supply of ETH has no limit. As of August, 2022, the deliverable supply of ETH stands at approximately 120.22 million, and will continue to increase by a maximum of 18 million in each subsequent year⁴. The Exchange proposes a position limit of 400,000 Ether, which represents 0.33% of the current deliverable supply.

Compliance with Core Principles

The Exchange has reviewed the designated contract market (“DCM”) core principles (“Core Principles”) set forth in the Commodity Exchange Act and has identified that the Contract may most directly implicate the following Core Principles:

Core Principle 2 -- Compliance with Rules

Trading in the Contract is subject to the Exchange Rulebook (the “Rulebook”) including Chapter 5, which prohibits fraud, non-competitive trading, market manipulation and abusive and disruptive trade practices. Additionally, as with all contracts traded on the Exchange, trading will be subject to monitoring and surveillance by the Market Regulation Department, which has the authority to investigate and enforce Exchange rules, as described in Chapter 7.

Core Principle 3 -- Contracts Not Readily Subject to Manipulation

The Nano Ether future is based on the Market Vector Coinbase Ethereum Benchmark Rate, which was first published on May 16, 2022. MV Index Solutions GmbH (“MVIS”) is governed by the European Benchmark Regulation (the “EUBMR”) and supports the International Organisation of Securities Commissions (IOSCO) “Principles for Financial Benchmarks” (the IOSCO Principles). CDE has a licensing agreement for the use of Market Vector for Coinbase Ether futures. Market Vector manages the governance and oversight of the index, as described in Appendix A below. CDE has signed an information sharing agreement with Coinbase, Inc. to allow the exchange to request spot market data when necessary. Given the size of the market for the Ethereum token, and the fact that it is traded on multiple exchanges both in the United States and abroad, and the manner in which the Index is calculated, it would be difficult, if not impossible, to manipulate the price of the underlying market in a way that would affect the futures contract. In addition Coinbase, Inc. has in place an experienced surveillance team and policies and procedures to detect suspected manipulation in the spot market. Given this oversight, the Index is not readily subject to manipulation.

Core Principle 4 -- Prevention of Market Disruption

Chapter 5 of the Rulebook prohibits Participants from manipulating, distorting the price of, and disrupting the settlement process of the Contract. As with all contracts traded on the Exchange, trading in the Contract will be subject to monitoring and surveillance by the Market Regulation Department. Further, trading in the Contract shall be subject to price limits consistent with the US equity market-wide circuit breakers. In addition, the Index Provider uses a Methodology which makes potential manipulation of the underlying spot market unlikely to have an effect on the Index price.

⁴ https://ycharts.com/indicators/ethereum_supply

Core Principle 5 -- Position Limits or Accountability

The Contract shall be subject to a position limit of no more than 400,000 Ether per month, with a reportable level of 5 contracts.

Core Principle 7 -- Availability of General Information

The Exchange shall publish on its website and in its Rulebook the specifications, terms and conditions of the Contract.

Core Principle 8 -- Daily Publication of Trading Information

The Exchange shall publish on its website on a daily basis the trading volumes, open interest, and price information for the Contract.

Core Principle 9 -- Execution of Transactions

The Contract shall be listed for trading on the Exchange's trading system, which provides for efficient, competitive, and open execution of transactions.

Core Principle 10 -- Trade Information

All requisite trade information shall be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.

Core Principle 11 -- Financial Integrity of Transactions

The Contract shall be cleared by Nodal Clear, LLC, a CFTC registered derivatives clearing organization subject to the CFTC regulations related thereto.

Core Principle 12 -- Protection of Markets and Market Participants

Chapters 4 and 5 of the Rulebook require all market participants, including futures commission merchants (FCMs) carrying customer accounts, to observe high standards of integrity, market conduct, commercial honor, fair dealing, and just and equitable principles of trade and prohibits, among other things, fraud, non-competitive trading, market manipulation, and abusive and disruptive trade practices. As with all contracts traded on the Exchange, trading will be subject to monitoring and surveillance by the Market Regulation Department.

Core Principle 13 -- Disciplinary Procedures

Rulebook Chapter 7 sets forth the rules and procedures for the investigation, enforcement, and sanctioning of persons that violate the Exchange's Rules.

Core Principle 14 - Dispute Resolution

Disputes related to the Contract are governed by Chapter 8 of the Exchange Rulebook, which provides for arbitration procedures overseen by the National Futures Association.

Certification

The Exchange has spoken with FCMs and market participants who support the decision to launch an Ether contract. The Exchange is not aware of any substantive opposing views to the Contract. The Exchange certifies that the Contract and related rules certified herein comply with the Commodity Exchange Act and the rules and regulations promulgated thereunder.

The Exchange certifies that this submission has been concurrently posted on the Exchange's website at: www.coinbase.com/derivatives.

If you have any questions or require any further information, please contact me at 773-409-4128 or anne.loranger@coinbase.com

Sincerely,

/s/

Anne Loranger
Chief Regulatory Officer
Attachments:

Appendix A Market Vector Ethereum Coinbase Benchmark Rate Index Methodology
Appendix B Amendments to FairX Rulebook Chapter 11

APPENDIX A

Market Vector Coinbase Ethereum Benchmark Rate Contract Methodology and Oversight

The Market Vector Coinbase Ethereum Benchmark Rate contract (“Contract”, “CETBR”)⁵ is produced by Market Vector Indexes of Frankfurt, Germany, an affiliate of Van Eck Associates Corporation (“MVI”). The Contract is calculated and disseminated in USD and tracks the price of Ether as traded on the Coinbase spot exchange.

How the Constituent Exchanges are Chosen

The governance and organizational structure of MVI includes the Advisory Board, the Independent Oversight Function, the Management Board of MVI and its employees and their specific participants, roles and responsibilities.

Advisory Board

The MVI Advisory Board is governed by the Rules of Procedure for the Advisory Board. The Advisory Board is responsible to supervise and advise the Managing Directors of MV. The approval of the Advisory Board is required for certain important decisions.

Independent Oversight Function

MVI has implemented an Independent Oversight Function (“IOF”) that consists of employees of the Legal and Compliance department of VanEck (Europe) GmbH. Some of the key task and responsibilities of the IOF are:

- Periodic review of the Index Guide and Methodology;
- Review and approval of the procedures for index cessation;
- Oversee third parties involved in the provision of the indices, including calculation or dissemination agents;
- Assess internal and external audits or reviews, and monitor the implementation of identified remedial actions; and
- Monitor input data and contributors and MVI’s related actions in challenging or validating contributions of input data.

Managing Directors

MVI has two Managing Directors (MD), the Operations and the Shared Services MD. The roles and responsibilities of the two different MDs are documented and serve to ensure mitigation of conflicts of interest and enhance governance standards. The Managing Directors are responsible for the ongoing review and monitoring of compliance with MVI’s policies and procedures by all involved parties and the notification of possible breaches or incidents to the IOF.

⁵ <https://www.mvis-indices.com/indices/digital-assets/mvis-cryptocompare-bitcoin-benchmark-rate>

The MVIS Ethereum Benchmark Rate Index is not Subject to Manipulation

The index is calculated as an average of 1-hour quantity weighted median prices, which are calculated for 20 3-minute intervals. The Contract price is determined by using a median price, which filters out any prices that might be considered outliers, either high or low.

$$Index\ Value = \frac{1}{n} \sum_{i=1}^n M(i).$$

where the quantity weighted median price for each interval i is

$$M(i) = \begin{cases} p_{i,k} & \text{if } k \text{ satisfies } \sum_{j=1}^{k-1} q_{i,j} < \frac{1}{2} \sum_{j=1}^{J_i} q_{i,j} \text{ and } \sum_{j=k+1}^{J_i} q_{i,j} \leq \frac{1}{2} \sum_{j=1}^{J_i} q_{i,j}, \\ p_{i,1} & \text{if } q_{i,1} \geq \frac{1}{2} \sum_{j=1}^{J_i} q_{i,j}, \\ \frac{p_{i,k} + p_{i,k+1}}{2} & \text{if } \sum_{j=k+1}^{J_i} q_{i,j} = \frac{1}{2} \sum_{j=1}^{J_i} q_{i,j}, \end{cases}$$

with the number of intervals calculated as the total index time window divided by the interval window:

$$n = \frac{T}{b},$$

and

- $p_{i,j}$ = j th price in i th interval,
- $q_{i,j}$ = j th quantity/volume traded in i th interval,
- J_i = number of trades in i th interval,
- b = interval window for the calculation of the median prices,
- n = number of intervals,
- T = total index time window for the calculation of an index price.

The set of trades for the total index calculation consists of transactions occurring within the total index time window as follows:

$$\theta_t = \{a_{i,j}(s_{i,j}, p_{i,j}, q_{i,j}) | t - T \leq s < t\},$$

with

- θ_t = set of trades for the calculation of the index price at time t ,
- $a_{i,j}$ = trade j in trade set A_i ,
- $s_{i,j}$ = time of trade $a_{i,j}$.

Each interval consists of a subset of trades of θ_t :

$$A_i \subset \theta_t$$

A_i being the set of trades for the calculation of the median price in interval i , where each trade $a_{i,j}$ within A_i is sorted by price $p_{i,j}$ in ascending order and it holds that trades occur within the interval window as follows:

$$A_i = \{a_{i,j}(s_{i,j}, p_{i,j}, q_{i,j}) | (t - T) + (i - 1)b \leq s < (t - T) + ib\}.$$

Due to the sheer number of times the price is recalculated, and the use of median prices, any attempt to manipulate the price of the index would be extremely difficult. In addition to the calculation safeguards, MVI has procedures in place to prevent manipulation, MVI has a number of policies and procedures in place to ensure a fair marketplace. MVI has instituted measures to investigate and correct a potentially erroneous price due to bad data, late or delayed transactions and non-reporting exchanges. Incorrect or missing data is corrected immediately.

Disruptions with calculation agents are handled by Compliance and Senior Management at MVI. MVI will communicate any error to all affected clients. In addition, if MVI identifies any conduct that may involve manipulation of an index by calculation/dissemination agent, it will report this to its regulator, BaFin.

How Settlement is Calculated

During the 1-hour settlement window, MVI breaks the hour into 20 3-minute intervals. In each of these intervals, MVI aggregates all trades and volume from the Coinbase spot exchange and calculates a volume weighted median price for the interval. The settlement is based on a simple average of the 20 volume weighted median prices calculated.

APPENDIX B

Additions underscoring; deletion are ~~struckthrough~~

CHAPTER 11: CONTRACTS

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RULE 1107. Nano Ether Futures

- (a) Scope. Rule 1107 is limited in application to the trading of the Nano Ether futures (“ET Contract”). In addition to Rule 1107, the ET Contract is subject to all Rules of the Exchange as applicable. Unless otherwise stated, all times referred to herein are Central Time Zone.
- (b) Trading Schedule. The ET Contract shall be offered for monthly trading in the front two months during such hours as the Exchange shall determine from time-to-time.
- (c) Trading Unit. The trading unit is equal to the price of one Ether.
- (d) Price Increments. The minimum price increment shall be 0.5 index points (\$0.05 per contract).
- (e) Position Limits, Position Accountability, and Reportable Levels. Pursuant to Rules 530 to 533 and subject to the requirements and exceptions therein, the CETBR Contract is subject to the following:
 - (1) Position Limit. 400,000 Ether.
 - (2) Reportable Level. 5 ET Contracts.
- (f) Price Fluctuation Limits. Trading in the ET Contract shall be subject to the following price fluctuation limits of
 - (1) 10% of the Hourly Calculated Reference Price at the top of each hour.
 - (2) Reference Price is calculated by using the settlement calculation from the last 60 seconds of each hour. A 10% up and down Price Limit will be applied to the Reference Price.
 - (3) The market will enter a Halt state for 2 minutes if a Price Limit is reached. Orders can be submitted, canceled, and amended during this state but no matching will occur.
 - (4) The new Reference Price will be the last Price Limit reached.
 - (5) If Price Limits are hit on the Lead Month contract, all related instruments will be Halted.

- (6) If Price Limits are hit on non-Lead Month contracts, only the specific instrument which reached the Price Limit will be Halted.
- (g) Daily Price Limits. Trading in the ET Contract shall be subject to the following Daily Price Limits of
- (1) 30% Daily Price Limits will be applied from the previous day's settlement price and applied to the next trading session.
 - (2) If Daily Price Limits are reached the market will remain Open but will not trade beyond the Daily Price Limit.
- (h) Trading terminates at 4:00 pm London time on the last Friday of the contract month. If that day is not a U.S. business day, trading terminates on the preceding day that is a U.S. business day.
- (i) Settlement. The ET Contract is cash settled
- (1) Daily Settlement Price shall be determined as follows:
 - (i) Volume-weighted average price of all trades occurring in the sixty (60) seconds prior to 3:00 pm CT on the relevant Business Day;
 - (ii) If no trades occur during the sixty (60) seconds prior to 3:00 pm CT, then the Settlement Price will be the time-weighted average midpoint between the bid and ask during the sixty (60) seconds prior to 3:00 pm CT; or
 - (iii) If a two-sided market is not available during the sixty (60) seconds prior to 10:00 am CT, then the Settlement Price will be determined using the latest price provided by MVI + (Previous Day Settlement - MVI ET spread)
 - (2) Final Settlement Price shall be the value of the underlying index at 4 p.m. London Time on the day of expiration, calculated and disseminated by MVI as the index provider and calculation agent.
 - (3) Final Settlement. Clearing Firms holding open positions in an expiring ET Contract at the termination of trading shall make or receive payment in accordance with the rules of the Clearing House.
- (j) Forks.

In the event of a hard fork, the Nano Ether Futures contract will settle to the Market Vector Coinbase Ether Benchmark Rate. The Exchange may, in its sole discretion, take alternative action with respect to hard forks in consultation with its index provider, its clearing house and its market participants.

- (k) Disclaimer.

The Market Vector Coinbase Ethereum Benchmark Rate is a trademark mark of Market Vector Indexes and its affiliates (collectively "MVI"). MVI or MVI's licensors own all proprietary rights in the Indices. MVI is NOT affiliated with Coinbase Derivatives, and

neither approves, endorses, reviews or recommends the Nano Ether futures. MVI does not guarantee the timeliness, accurateness or completeness of any data or information relating to the Coinbase Ethereum Benchmark Rate, and neither shall be liable in any way to Coinbase Derivatives, investors in the Nano Ether (ET) futures or other third parties in respect of the use or accuracy of the Coinbase Ethereum Benchmark Rate Index (ET) or any data included therein.