coinbase DERIVATIVES

February 12, 2025

VIA CFTC Portal

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

Re: CFTC Regulation 40.2(a) Certification: Listing of nano Solana Futures Contract Submission #2025-02

Dear Mr. Kirkpatrick:

Pursuant to Commodity Futures Trading Commission ("CFTC" or "Commission") Regulation 40.2(a), Coinbase Derivatives, LLC (the "Exchange" or "COIN") hereby submits for self-certification its initial listing of the nano Solana Futures contract to be offered for trading on the Exchange on or after February 18, 2025.

Contract Description

The nano Solana Futures contract (the "Contract") will be a monthly cash-settled and margined Contract with the following specifications:

Product	nano Solana Futures
Product Type	USD-settled index future
Contract Size	5 Solana
Displayed Price Example	$250.01
Contract Notional	~$1,250.00 Contract notional (i.e. ~$250 x 5)
Contract Code	SOL
Minimum Tick Size and Value	**Min tick size**: $0.01 per Solana **Min tick value**: $0.05 per Contract
Listed Contracts	3 nearest monthly Contracts
Daily Settlement	Lead Month Daily Settlement: 3:00 PM CT 1. If a Trade occurs in the sixty (60) seconds prior to 3:00 PM CT, the Daily Settlement will be calculated using the VWAP of such Trades, rounded to the nearest tradable tick. 2. If there are no Trades during this time, the Exchange will use the TWAP of the Futures Contract's midpoint of the bid/ask from the sixty

	(60) seconds prior to 3:00 PM CT, rounded to the nearest tradable tick. 3. If a two-sided market is not available during the sixty (60) seconds prior to 3:00 PM CT, the Daily Settlement Price will be the Index value - (difference between the previous day's Index value and the previous day's relevant Futures Contract's Settlement Price).
Final Settlement	Final settlement price of the expiring Contract will be the value of the MarketVector™ Coinbase Solana benchmark reference rate at 4:00 PM London time, calculated and disseminated by MarketVector Indexes GmbH ("MVIS"). Contracts will be cleared by Nodal Clear. The index value is determined using a one (1) hour settlement window, MVIS breaks the period into twenty (20) three-minute intervals. In each of these intervals, MVIS aggregates all trades and volume from the constituent 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. Should any abnormal activity occur during the settlement window, any combination of the following measures will be considered: 1. Should MVIS detect an abnormal price during the settlement window, the price shall be removed from the calculation 2. Should the Exchange determine the settlement price is not representative of the market, it will manually settle the Contract using sources of historical data and prices on other exchanges and indexes.
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 business day in the U.S., trading terminates on the preceding day that is a U.S. business day.
Position Limits	3,500 SLC contracts, aggregate
Large Trader Reporting	25 Contracts
Trading Hours	5:00 - 4:00 PM CT Sunday - Friday, with a trading halt from 4:00 PM - 5:00 PM CT Monday - Thursday.

Contents:

I. Solana Market Overview

Solana is a high-performance blockchain platform designed to enable fast, scalable, and low-cost decentralized applications (“dApps”). Launched in 2020 by Anatoly Yakovenko and his team at Solana Labs, the network aims to address the limitations of earlier blockchain platforms by offering a highly efficient infrastructure for developers and enterprises. Solana has quickly gained popularity for its ability to process thousands of transactions per second, making it one of the fastest blockchain networks in the industry.

At the core of Solana's architecture is its unique Proof-of-History (“PoH”) consensus mechanism, which works in conjunction with Proof-of-Stake (“PoS”). PoH introduces a cryptographic timestamping method that establishes the chronological order of transactions before they are processed by the network. This innovation reduces the time required for consensus and significantly enhances throughput. Combined with PoS, PoH enables Solana to achieve high-speed performance without compromising security or decentralization.

The native cryptocurrency of the Solana network is SOL, which serves multiple purposes within the ecosystem. SOL is used to pay transaction fees, secure the network through staking, and participate in governance by enabling holders to vote on protocol upgrades and decisions. The total supply of SOL is capped at approximately 489 million tokens, with a portion of transaction fees burned to create a deflationary effect.

One of Solana's standout features is its ability to handle a high volume of transactions with minimal latency and cost. The network can process over 65,000 transactions per second (“TPS”) with an average transaction fee of less than $0.01. This scalability has made Solana particularly attractive for applications in decentralized finance (“DeFi”), non-fungible tokens (“NFTs”), gaming, and Web3.

The Solana ecosystem has grown rapidly, with a vibrant community of developers and users building and engaging with projects on the network. Popular applications include decentralized exchanges (“DEXs”), lending protocols, NFT marketplaces, and blockchain-based games. Solana's robust infrastructure and developer-friendly tools, such as the Solana Software Development Kit (“SDK”), have encouraged innovation and adoption across various industries.

Solana has also established itself as a hub for NFTs and gaming, with platforms like Magic Eden and Metaplex enabling creators to mint, trade, and showcase digital collectibles. The network's high-speed performance and low fees make it an ideal environment for these use cases, fostering a thriving NFT and gaming ecosystem.

Solana's focus on speed, scalability, and low costs has positioned it as a key player in the blockchain industry, particularly for applications requiring high performance. As the demand for efficient and scalable blockchain solutions grows, Solana's innovative technology and expanding ecosystem make it a strong contender in the race to power the next generation of decentralized applications.

II. Contract Description

The nano Solana Futures Contract is a cash-settled Contract based on the MarketVector™ Coinbase Solana Benchmark Rate (“Index”). This Index tracks the price of Solana traded on the Coinbase, Inc. spot exchange. MarketVector Indexes GmbH is an Index Provider based in Frankfurt, Germany and is regulated by the Federal Financial Supervisory Authority (“BaFin”).

Each Contract represents 5 Solana. The Exchange will initially offer the three front months of the Contract for trading.

III. Volatility

Solana is considered a relatively volatile asset, driven by its lower market capitalization compared to larger cryptocurrencies like Bitcoin and Ethereum, and its strong focus on high-performance blockchain applications, including DeFi and NFTs. These sectors are highly dynamic, contributing to periods of heightened price fluctuations. In the last year, the 30-day 30D volatility for Solana has averaged ~3-4%[1].

The Exchange has successfully managed cryptocurrency-related products during both prolonged and abrupt periods of volatility. Proven risk management controls, including daily price limits, price banding, exposure limits, kill switches, and margin levels aligned with Solana's risk profile, have ensured market stability and continuous liquidity across all trading scenarios.

Solana's current 30-day volatility is approximately 3.9%.[2] In similar timeframes, Bitcoin and Ethereum's 30-day realized volatilities are around 2.3% and 3.1%[3], respectively. When compared to other digital assets, Solana's volatility is moderately higher, reflecting its emerging market position and the rapid growth of its ecosystem.

The Exchange has a strong track record of managing high-volatility environments across various products, including cryptocurrency and traditional commodity contracts. For example, in December 2024, the Exchange effectively handled Dogecoin volatility exceeding 8% and Stellar volatility surpassing 15%. This experience ensures readiness to navigate Solana's market dynamics while maintaining robust risk management practices.

IV. Analysis of Deliverable Supply

Solana was created without a maximum supply. Instead, it has a fixed inflation rate that decreases each year. The initial inflation rate was set to 8% and is distributed through staking rewards. This inflation rate is reduced by 15% each year until reaching a long-term inflation target of 1.5%. The current inflation rate is 4.78%. There are 484M Solana tokens currently in circulation, which represent the deliverable supply.[4]

Given that each COIN Solana cash-settled Contract represents 5 Solana, a single Contract is <0.000001% of the deliverable supply.

To set position limits, the Exchange will be referencing the position limits to market cap ratio for existing crypto currency futures such as its Bitcoin contracts and adjusting downwards.

The Exchange will set the position limit to 3,500 Solana (SLC) futures, which is equivalent to 350K Solana. With a $240 price of Solana, this is equal to $84M notional, which would be 0.07% of the Solana market cap, currently at $118B.

As a comparison, COIN Bitcoin Futures position limits are currently 0.10% of the Bitcoin market cap. The proposed Solana position limits would be 30% lower as a percentage of the underlying asset's market cap.

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[1] https://messari.io/project/solana/charts/market/risk
[2] https://messari.io/project/solana/charts/market/risk
[3] https://messari.io/project/ethereum/charts/market/risk
[4]https://messari.io/project/solana/charts/supply

V. 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 Solana future is based on the MarketVector™ Coinbase Solana Benchmark Rate (the "Index"), which will be published in or prior to February 2025. MarketVector Indexes 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). COIN has a licensing agreement for the use of MVIS for Coinbase Solana Benchmark Rate. MVIS manages the governance and oversight of the Index, as described in Appendix A below. COIN has signed an information sharing agreement with Coinbase, Inc. to allow the Exchange to request spot market data when necessary. Given that the Solana token 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 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 fluctuation limits. In addition, MVIS uses a methodology which makes potential manipulation of the underlying spot market unlikely to have an effect on the Index price.

Core Principle 5 -- Position Limits or Accountability

The Contract shall be subject to a position limit of no more than 3,500 Solana (SLC) futures contracts, or 350,000 Solana, with a reportable level of 25 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 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 a nano Solana 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 jane.downey@coinbase.com.

Sincerely,

/s/

Jane Downey
Chief Regulatory Officer

Attachments:

Appendix A Market Vector Coinbase Solana Benchmark Rate Index Methodology
Appendix B Amendments to COIN Rulebook Chapter 11
Appendix C Amendments to COIN Rulebook Chapter 5

APPENDIX A

Market Vector Coinbase Solana Benchmark Rate Index Methodology

The MarketVector™ Coinbase Solana Benchmark Rate ("Index") is produced by MarketVector Indexes GmbH ("MVIS") of Frankfurt, Germany. The Index is calculated and disseminated in USD and tracks the price of Solana as traded on the Coinbase, Inc. spot exchange.

Advisory Board

The MVIS 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 MVIS. The approval of the Advisory Board is required for certain important decisions.

Independent Oversight Function

MVIS has created an Independent Oversight Function ("IOF"). Some of the key tasks 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

MVIS 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 MVIS' policies and procedures by all involved parties and the notification of possible breaches or incidents to the IOF.

The MVIS Solana 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

$p_{i,j}$ = jth price in ith interval,
$q_{i,j}$ = jth quantity/volume traded in ith interval,
J_i = number of trades in ith 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, MVIS has procedures in place to prevent manipulation, MVIS has a number of policies and procedures in place to ensure a fair marketplace. MVIS 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 MVIS. MVIS will communicate any error to all affected clients. In addition, if MVIS identifies any conduct that may involve manipulation of an index by calculation/dissemination agent, it will report this to its regulator, BaFin.

The Exchange has in place an agreement with Coinbase, Inc. to share information and trade data occurring on Coinbase, Inc. in connection with regulatory inquiries. This agreement gives the Exchange the opportunity to investigate activity in the spot market which may have an impact on the listed futures Contract.

How Settlement is Calculated

During the 1-hour settlement window, MVIS breaks the hour into 20 3-minute intervals. In each of these intervals, MVIS aggregates all trades and volume from the Coinbase, Inc. 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 underscored; deletion are ~~struckthrough~~

CHAPTER 11: CONTRACTS

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RULE 1122. nano Solana Futures

(a) Scope. Rule 1122 is limited in application to the trading of the nano Solana futures ("SOL Contract"). In addition to Rule 1122, the nano Solana Contract is subject to all Rules of the Exchange as applicable. Unless otherwise stated, all times referred to herein are Central Time Zone. The relevant index for the SOL] Contract is the MarketVector™ Coinbase Solana Benchmark Rate ("Index"), as calculated and disseminated by MarketVector Indexes GmbH as the index provider and calculation agent (the "Index Provider").

(b) Trading Schedule. The nano Solana Contract shall be offered for monthly trading in the front three (3) months during such hours as the Exchange shall determine from time-to-time.

(c) Contract Size. The Contract size is equal to the price of 5 Solana.

(d) Price Increments. The minimum price increment shall be 0.01 Index points ($0.05 SOL Contract).

(e) Position Limits, Position Accountability, and Reportable Levels. Pursuant to Rules 530 to 533 and subject to the requirements and exceptions therein, the nano Solana Contract is subject to the following:

(1) Position Limit. 3,500 SLC aggregate.

(2) Reportable Level. 25 SOL Contracts.

(f) Price Fluctuation Limits. Trading in the SOL Contract shall be subject to price fluctuation limits. If a price fluctuation limit is reached on the lead month of SOL Contract, all related instruments will be halted. If a price fluctuation limit is reached on the non-lead month SOL Contracts, only the specific instrument which reached the price fluctuation limit will be halted.

(1) Each hour, a Reference Price is calculated for each Contract using the Lead Month settlement procedures outlined in Rule 906(b)(ii)(1) (the "Reference Price").

(2) A 10% up and down price limit will be applied to that Contract's Reference Price.

(3) The market will enter a halt state for two (2) minutes if a price fluctuation limit is reached. Orders can be submitted, canceled, and amended during this state but no matching will occur.

(4) If a price fluctuation limit is reached, the new Reference Price will be the last price fluctuation limit for the remainder of that hour.

(g) Termination of Trading and Expiration. Trading terminates at 4:00 PM London time on the last Friday of the Contract month. If that day is not a Business Day, trading terminates on the preceding day that is a Business Day ("Termination of Trading"). Expiration will occur the same Business Day as the Termination of Trading for the Contract.

(h) Settlement. The SOL Contract is cash settled.

(1) Daily Settlement Price of the Contract, which is an Exchange Futures Contract based on a crypto currency, will be determined pursuant to the process set forth in Exchange Rule 906(b)(ii).

(2) On the day of expiration, the Final Settlement of the Contract, which is an Exchange Futures Contract based on a crypto currency, will be determined pursuant to the process set forth in Exchange Rule 906(c)(ii).

(3) Final Settlement. Clearing Firms holding open positions in an expiring SOL Contract at the Termination of Trading shall make or receive payment in accordance with the rules of the Clearing House.

(i) Forks. In the event of a hard fork, the SOL Contract will settle to the Index. 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.

(j) Disclaimer.

The MarketVector™ Coinbase Solana Benchmark Rate is a trademark of MarketVector Indexes GmbH and its affiliates (collectively "MarketVector"). MarketVector or MarketVector's licensors own all proprietary rights in the MarketVector™ Coinbase Solana Benchmark Rate. MarketVector is NOT affiliated with Coinbase Derivatives, LLC, and neither approves, endorses, reviews or recommends the SOL Contract. MarketVector does not guarantee the timeliness, accurateness or completeness of any data or information relating to the MarketVector™ CoinbaseSolana Benchmark Rate, and neither shall be liable in any way to Coinbase Derivatives, LLC, investors in the SOL Contract or other third parties in respect of the use or accuracy of the MarketVector™ Coinbase Solana Benchmark Rate or any data included therein.

APPENDIX C

Additions underscored; deletion are ~~struckthrough~~

CHAPTER 5: TRADING PRACTICES AND BUSINESS CONDUCT

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RULE 533. Position Limit, Position Accountability, Reportable Level, and Volume Threshold Level Table

The reportable levels for all Contracts covering Position Limit, Position Accountability, Reportable Level, and Volume Thresholds will be made available to Market Participants.

Product	CDE Code	Contract Size	Aggregate Into Futures	Aggregate Ratio	Exchange Reporting Level	Position Limit
nano Bitcoin Futures	BIT	0.01	BTI	100 BIT = 1 BTI	25	20,000 (BTI Aggregate) three (3) Business Days prior to the contract's expiration
Bitcoin Futures	BTI	1	BTI	N/A	25	
nano Ether Futures	ET	0.1	ETI	100 ET = 1 ETI	25	40,000 (ETI Aggregate)
Ether Futures	ETI	10	ETI	N/A	25	
Bitcoin Cash Futures	BCH	1	BCH	N/A	25	14,000
Litecoin Futures	LC	5	LC	N/A	25	10,000
Dogecoin Futures	DOG	5,000	DOG	N/A	25	20,000
Stellar Futures	XLM	5,000	XLM	N/A	25	3,000
Avalanche Futures	AVA	10	AVA	N/A	25	20,000
Chainlink Futures	LNK	50	LNK	N/A	25	6,000
Polkadot Futures	DOT	100	DOT	N/A	25	7,500
1k Shib Futures	SHB	10,000,000	SHB	N/A	25	30,000
nano Solana Futures	SOL	5	SLC	N/A	25	3,500 SLC Aggregate
Gold Futures	GOL	1	GOL	N/A	200	600,000
Silver Futures	SLR	50	SLR	N/A	150	300,000
nano Crude Oil Futures	NOL	10	OIL	10 NOL = 1 OIL	350	40,000 three (3) days prior to the end of trading in the spot month
Micro Crude Oil Futures	OIL	100	OIL	N/A	350	40,000 three (3) days prior to the end of trading in the spot month