



May 21, 2025

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

Re: Request for Comment on the Trading and Clearing of “Perpetual” Style Derivatives

Dear Mr. Kirkpatrick:

Hyperliquid Labs Pte. Ltd. (“Hyperliquid Labs”) is pleased to offer this response to the request for comment on the trading and clearing of “perpetual” style derivatives (the “RFC”) published by the Commodity Futures Trading Commission (the “CFTC” or “Commission”) on April 21, 2025.¹ Hyperliquid Labs appreciates the opportunity to share its views and welcomes the CFTC’s interest in understanding the potential uses and benefits of perpetual derivatives.

I. Background on Hyperliquid Labs and the Hyperliquid Blockchain²

Hyperliquid Labs, based in Singapore, is a core contributor to the Hyperliquid general-purpose layer-one blockchain (“Hyperliquid”). Hyperliquid supports decentralized finance (“DeFi”) applications and enables those applications to operate fully on-chain—meaning that all transactions are verified and recorded directly on the blockchain itself.

As one component of its broader financial infrastructure and ecosystem, Hyperliquid integrates a fully on-chain order book optimized for trading spot digital assets and perpetual derivatives. In this regard, Hyperliquid incorporates a number of core technological features which are unique to and/or developed using blockchain and DeFi technology and which facilitate safe, resilient, and robust trading on a 24/7 basis, including:

- Fully On-Chain Order Book. Every order, fill, liquidation, and funding payment on Hyperliquid is executed and recorded directly on-chain. There is no off-chain matching engine.
- Oracle Pricing. Validators publish spot oracle prices for the spot assets underlying each perpetual derivative in real-time, which are used to compute funding rates. Oracle prices

¹ *Request for Comment on the Trading and Clearing of “Perpetual” Style Derivatives*, Release No. 9069-25 (CFTC Apr. 21, 2025).

² The description of Hyperliquid in this submission is summary and high level in nature and is based on the current state of Hyperliquid. Additional information regarding Hyperliquid is available in the protocol’s public documentation, available at <https://hyperliquid.gitbook.io/hyperliquid-docs>.

are also inputs into the mark price, a measure of fair price of the perpetual derivative itself that is used for margining, liquidations, and the triggering of certain order types.³

- Sub-Second Finality and High Throughput. Hyperliquid uses a custom consensus mechanism, called HyperBFT, that finalizes blocks in under 0.2 seconds and has been benchmarked to process up to 200,000 orders per second.
- Zero-Gas Trading Costs. Transactions on Hyperliquid incur minimal fees, lowering friction for price discovery, increasing liquidity and market depth and as a result giving better execution to users. Trading messages do not incur fees.
- Self-Directed Collateral. Traders post collateral from self-custodial wallets. Collateral never sits in an exchange omnibus account and no such account exists or is required for the operation of Hyperliquid as a decentralized blockchain.
- Automatic Liquidations. Liquidations on Hyperliquid occur directly on Hyperliquid's on-chain order book. When a trader's account equity falls below the required maintenance margin level, the position is liquidated based on a liquidation methodology that minimizes market impact while prioritizing timely closing of undercollateralized positions.
- User Funds Self-Custodied. Hyperliquid contributors neither custody nor rehypothecate user funds.

These state-of-the-art features have positioned Hyperliquid as a top marketplace for trading in perpetual derivatives. The front-end user interface on which Hyperliquid Labs worked is governed by Terms of Use that prohibit trading by U.S. persons. However, as a core contributor to Hyperliquid, Hyperliquid Labs has unique perspectives regarding the issues posed in the RFC and appreciates the opportunity to contribute to the CFTC's discussion regarding the potential uses and benefits of perpetual derivatives.

II. Defining & Classifying Perpetual Derivatives

As the RFC recognizes, it is important at the outset to formulate a working definition of perpetual derivatives. A perpetual derivative can be defined as a derivatives instrument that does not have a specified expiry, termination, or maturity date. The absence of an expiration date and the ability for parties to hold a position indefinitely is the key defining characteristic of a perpetual derivative. Different types of perpetual derivatives are possible. This submission focuses on attributes of the most widely-traded perpetual derivatives in global markets.

³ The spot oracle prices are computed by validators as the weighted median of prices on certain specified reference exchanges. Mark price is the median of (i) oracle price plus a 150 second exponential moving average of the difference between Hyperliquid's mid price and the oracle price; (ii) the median of best bid, best ask, and last trade on Hyperliquid; and (iii) the median of the mid prices of multiple perpetual derivatives exchanges. If two of the three inputs above exist, the 30 second exponential moving average of the median of best bid, best ask, and last trade on Hyperliquid is also added to the median inputs. Mark price is updated whenever validators publish new oracle prices, which is approximately once every 3 seconds.

A. How Perpetual Derivatives Work

As with a futures contract or over-the-counter derivatives contract in traditional markets, one party to a perpetual contract is long the relevant underlying asset and the other party is short the relevant underlying asset. Accordingly, as with more familiar derivatives, perpetual derivatives can be used to hedge or to speculate.

The absence of an expiry date, however, means that perpetual derivatives fundamentally differ from derivatives contracts seen in traditional markets, in that there is no set date upon which a settlement price is determined and expiring positions are settled. Instead, perpetual derivatives rely on a funding rate mechanism that is used to ensure the price of the perpetual derivative tracks the underlying asset's spot price. The funding rate is a periodic payment from the party on one side of the perpetual derivative to the counterparty, with the direction of the payment (*i.e.*, whether payable by the long or the short side of the contract) determined based on market conditions as follows:

- Positive Funding Rate. When the relevant perpetual derivative is trading at a significant premium to the spot price of the underlying asset, the funding rate is positive, which means the long side pays a funding rate payment to the short side.
- Negative Funding Rate. When the relevant perpetual derivative is trading at a significant discount to the spot price of the underlying asset, the funding rate is negative, which means the short side pays a funding rate payment to the long side.

The funding rate is slightly positive over a premium range around zero. The premium itself is determined based on prices on the perpetual derivative's order book.

Such a funding rate mechanism prevents large price disparities between the perpetual derivative and the underlying asset. For example, when the funding rate is a large positive number, it can incentivize market participants to short the asset (often hedging with a spot position) and thus help to bring the contract's price closer to the spot price of the underlying asset.

Like derivatives in traditional markets, perpetual derivatives may employ margining and can allow for leverage. Market participants post an initial margin amount in order to open a position in a perpetual derivative and are subject to ongoing maintenance margin requirements in order to keep their position open. If leverage is offered, market participants can gain exposure to larger positions with a smaller amount of capital.

B. The Decentralized, On-Chain Model for Perpetual Derivatives

Today, trading in perpetual derivatives is available through both (i) centralized exchanges and (ii) decentralized exchanges. As outlined above, Hyperliquid is a decentralized blockchain that includes an on-chain order book, with buyers and sellers placing limit and market orders that match based on price-time priority. Its unique consensus algorithm, HyperBFT, provides the speed and throughput necessary for efficient on-chain trading and settlement. Every step of the trading process, from the initial order placement to the settlement of profits or losses, occurs transparently

and verifiably on the blockchain state. Other models for perpetual derivatives trading may utilize an off-chain order book and matching system or a hybrid system.

C. Perpetual Derivatives Product Classification

Perpetual instruments may have similarities both to futures and to certain types of swaps, but do not map neatly to an existing category of derivative contracts. We respectfully submit that the Commission should adopt a flexible, principles-based approach to any definitional framework for perpetual derivatives, considering the varying and distinguishing features of perpetual derivatives—focusing on risk profile, transparency, and user protections—rather than forcing them into a specific categorization which could cause regulatory confusion and hamper innovation without enhancing market development and safety.

III. Features of Perpetual Derivatives and Their Benefits

A. Benefits of Perpetuality for Liquidity, Pricing, and Risk Mitigation

The defining characteristic of perpetual derivatives—their perpetual nature—is also their key advantage as a financial product, with multiple benefits for market participants.

First, perpetual derivatives have the potential to provide improved liquidity and thus tighter pricing spreads for market participants. Because perpetual derivatives do not have an expiry date, they are not subject to fragmentation of liquidity across contracts with different expiries referencing the same underlying asset. In futures markets, liquidity tends to be concentrated in the front-month and most short-dated contracts, and the lack of liquidity in longer dated contract months can result in wider spreads and thus worse pricing for market participants.

Second, the perpetual nature of perpetual derivatives means that holders can use these instruments to hedge price exposures and for risk mitigation strategies on an ongoing basis without the burden and expense of rolling expiring contracts on a periodic basis. In particular, users of futures contracts in traditional markets must be prepared to either (i) enter an offsetting position or (ii) make or take cash settlement or physical settlement (as applicable) when a futures contract expires. In order to roll their position, users of futures contracts in traditional markets then must re-establish a position in a futures contract with a longer dated expiry month. As has been widely observed, discrepancies in pricing between the expiring contract month (which is typically more heavily traded) and longer dated contract months can lead to higher spreads and other negative pricing impacts for rolling customers. In contrast, a perpetual derivative allows market participants to maintain their position indefinitely. For example, a market participant holding a significant amount of Bitcoin could take a short position in a BTC perpetual derivative to offset potential losses in their spot holdings. Because this perpetual derivative does not expire, the market participant can maintain this hedge for as long as desired, without the need to roll the position as would be required using futures contracts and without the associated exposure to roll related risks and losses.

B. Benefits of Continuous 24/7 Trading

Perpetual derivatives markets generally operate on a 24/7 basis. For example, Hyperliquid operates continuously in alignment with the global, always-on nature of digital asset markets more broadly. This provides important benefits to market participants, providing uninterrupted market access for trading and hedging. Upon a market participant incurring or obtaining a price exposure, the perpetual derivatives markets provide an immediately available opportunity to hedge—regardless of whether such price exposure was obtained outside of traditional market hours. The continuous trading of the on-chain order book also contributes to real-time price discovery, price efficiency, and market liquidity.

Hyperliquid Labs welcomes the CFTC’s accompanying request for comment on trading and clearing derivatives on a 24/7 basis⁴ and refers to Hyperliquid Labs’ concurrently filed submission in response thereto for additional, more detailed discussion regarding 24/7 trading in perpetual derivatives.

IV. Perpetual Derivatives Traded in the Decentralized, On-Chain Model

Although DeFi is not the direct focus of the RFC, many of the key benefits and advantages of perpetual derivatives are inherently intertwined with the benefits and advantages of DeFi and blockchain systems more generally. The nature of perpetual derivative trading on-chain may also pose certain risks that are worth considering.

A. Benefits of On-Chain Perpetual Derivatives

The following list identifies key benefits and advantages with respect to decentralized, on-chain implementations of perpetuals trading, such as on Hyperliquid:

- Transparency and Verifiability. The on-chain perpetual derivatives trading model, including as implemented on Hyperliquid, provides improved opportunities for transparency and verifiability. For example, every user action on Hyperliquid—order placement, cancellation, execution, and liquidation—is immutably recorded on the Hyperliquid blockchain and is publicly auditable. The HyperBFT consensus algorithm ensures one-block finality, making each transaction certain and irreversible, a contrast to traditional systems with potential settlement delays and intermediary risks.⁵ Publicly available blockchain explorers then provide the ability for market participants and regulators to verify and view all on-chain activity. Furthermore, anyone can run a validating or non-validating node to connect directly to and verify in real time all transactions on the network. This provides a level of transparency and verifiability that is typically absent in traditional financial systems, where trade data may be proprietary or not easily accessible to all participants. For example, the location and movement of funds and

⁴ *Request for Comment on Trading and Clearing Derivatives on a 24/7 Basis*, Release No. 9068-25 (CFTC Apr. 21, 2025).

⁵ Note that all proof of stake blockchains can technically hard-fork, which Ethereum demonstrated in 2016. Consensus is ultimately social, but there is strong precedent across all major blockchains to respect on-chain execution as final.

audit trail of the execution and settlement of transactions by centralized exchanges is often opaque and delayed, whereas the on-chain perpetual derivatives trading model makes such information publicly available in real time for anyone to monitor and verify. The availability of this on-chain information also allows for the development of analytics to monitor market activity and supplement traditional market surveillance tools.

- Composability and Open Nature. The open and permissionless nature of on-chain perpetual derivatives allows market participants and developers to build a wide array of applications and strategies incorporating such derivatives. For example, Hyperliquid includes the HyperEVM, an Ethereum-compatible smart contract platform, allowing for the composability and integration of perpetual derivative positions with other protocols and smart contracts. This sort of composability and programmability can foster further product and market innovation, potentially unlocking new use cases.
- Self-Custody. Traders post collateral from self-custodial wallets. Collateral never sits in an exchange omnibus account and no such account exists or is required for the operation of Hyperliquid as a decentralized blockchain. This is a fundamental shift from traditional exchanges where users incur counterparty risk, even if central counterparty credit risk in facing a clearinghouse. It allows market participants to maintain greater control over their assets through self-custody and to manage their positions and orders directly on-chain. This model can mitigate risks from centralized intermediary failures, hacks, or fund mismanagement.

B. Risks of On-Chain Perpetual Derivatives

In addition to the advantages and benefits discussed above, perpetual derivatives trading may also pose potential risks, including potential risks associated with the usage of DeFi and blockchain systems more generally.

For example, as noted above, the reliance on self-custody allows users to maintain control over their own assets, the demand for which has grown in response to recent centralized exchange failures. While self-custody empowers users, it also requires them to manage their own wallet security and means that users may be exposed to, and need to understand, the risk of permanent loss of assets if they fail to secure their private keys adequately.

On-chain trading also may involve inherent risks relating to software vulnerabilities. This could include vulnerabilities in the code implementing a particular contract or vulnerabilities in the underlying blockchain itself.

At the same time, these DeFi and blockchain specific risks are also subject to counterweights and potential risk mitigants. Real-time observability on Hyperliquid lets everyone verify proper execution and trace the flow of funds. Other risk mitigation strategies may include, for example, bug bounty programs incentivizing the community and security researchers to identify and report security flaws or vulnerabilities, and the provision of community resources regarding self-custody security practices.

V. Perpetual Derivatives’ User Base and Relationship with Traditional Markets

A. Price Discovery and Arbitrage Opportunities

The emergence of perpetual derivatives trading also provides new and additional price discovery and arbitrage opportunities beyond those available in traditional markets. Arbitrage opportunities can arise between perpetual derivatives markets, futures markets in traditional finance, and spot markets due to temporary price discrepancies between them. For example, if the price of a Bitcoin perpetual derivative is significantly higher than the spot price of Bitcoin on a centralized exchange, or pursuant to a futures contract with a particular expiry date, an arbitrageur could buy Bitcoin on the spot market or the relevant futures contract and simultaneously short the perpetual derivative, profiting from the price difference. These arbitrage opportunities can foster beneficial price discovery and efficiency.

The sort of cash market convergence exhibited by traditional markets—namely, the tendency for futures contract prices to converge with the spot price as the expiration date approaches—is not strictly a feature of perpetual derivatives since they lack a fixed expiry date. However, the funding rate mechanism of perpetual derivatives described above keeps the perpetual derivative price anchored to the underlying spot price. For example, when a perpetual derivative is trading at a premium to the spot price, the funding rate is positive, meaning long positions pay the funding rate to short positions. This incentivizes short position holders and puts downward pressure on the perpetual derivative price. The funding rate mechanism thus provides a form of continuous cash market price convergence, albeit through a different mechanism than traditional markets.

B. User Base for Perpetual Derivatives

As with other derivatives more generally, perpetual derivatives can be used both to express a directional price view on a particular asset, and to hedge or mitigate price exposure to a particular asset. Given the unique attributes of on-chain, decentralized perpetual derivatives markets, including factors such as (i) 24/7 trading availability; (ii) the need for familiarity and comfort with decentralized finance and self-custody; (iii) transparency of on-chain execution; and (iv) the opportunity to trade without needing to trust a centralized intermediary, the user base for trading perpetual derivatives may include a disproportionate number of sophisticated individual traders and digital asset-native funds. Likewise, perpetual derivatives principally trade on digital assets, which themselves remain in the early stages of adoption by traditional market participants. Thus, while on-chain, decentralized perpetual derivatives may eventually attract a broader array of market participants, the current state of the global market reflects the nascency of perpetual derivatives as a product class.

This dynamic may be exacerbated by a continued lack of regulatory clarity regarding perpetuals and digital asset offerings for such traditional market participants. If market participants are prohibited or deterred from participating in perpetual derivative markets despite a commercial desire to do so, this may serve as a headwind to the development and efficient operation of these markets. For example, regulatory uncertainty could impact markets’ overall depth and efficiency or result in fragmentation of trading and liquidity across markets. Despite

these headwinds, the unique attributes of perpetuals have led to dramatic growth in international markets.

VI. Conclusion

Hyperliquid Labs welcomes the CFTC's interest in learning more about the potential uses and benefits of perpetual derivatives. The innovative features of Hyperliquid discussed above have rapidly made it a widely adopted protocol for trading in perpetual derivatives. Continuous, on-chain markets like Hyperliquid already meet—and in several respects exceed—the Commission's policy objectives for resilience and customer protection in its markets. By adopting technology-neutral, principles-based rules and updates to its existing framework, the Commission can strengthen oversight, enhance market integrity, and foster cutting-edge financial innovation in the United States.

We appreciate the Commission's consideration of this submission.

Respectfully submitted,

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