


The Perp DEX Gold Rush

The Great Momentum of On-Chain Pivot





About us

Animoca Brands Research is a dedicated division within Animoca Brands, comprised of passionate Web3 and decentralization experts from diverse fields.

Our mission is to advance industry and community growth by sharing insightful, in-depth research findings.

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Key Takeaways

- **The Projected Flipping:** Perp DEX volume exploded to \$7.9 trillion in 2025, more than tripling 2024's watermark. In the conservative scenario, the DEX-to-CEX perpetual volume ratio has been in steady growth, going from 4% to 12% in 2025. We believe this trend will continue. In our opportunistic prediction scenario, Perp DEX trading volume can reach **2X** of that on CEX by the end of 2028.
- **The Strategic Advantage of "Perp-First":** Perp DEXs dominate through superior capital efficiency, supporting up to 100x leverage on stablecoin collateral. Unified Vault Architectures allow all synthetic markets to draw from a single pool, which generates significantly higher fees per dollar of liquidity.
- **Evolution of Trading Infrastructure:** Trading infrastructure has evolved from simple, high-latency liquidity pools (400ms–2s latency) to hybrid order books that moved matching into validator RAM for 1.5K–10K TPS, and finally to purpose-built L1s that integrate matching engines directly into the state machine—delivering sub-second finality (~0.2s) and performance on par with centralized exchanges.
- **The Wallet Becomes the New Perp Trading Front End:** Perp DEXs now use wallets as the primary front end, with apps like Phantom and Backpack turning self-custody wallets into seamless trading terminals for derivatives. Hyperliquid enables this through builder codes—an on-chain mechanism that lets wallets route orders and earn up to 0.1% fees on the perp volume they facilitate, creating sustainable revenue for the wallet builder and rewarding front-end improvements.
- **Emerging Trends: The "Everything Exchange":** Perp DEXs are evolving into universal financial hubs by onboarding real-world assets like gold and equities, and will also include event-based prediction markets with mass liquidity consolidation. These platforms aim to become borderless clearinghouses, dissolving the friction between on-chain tokens and legacy markets.

The Perp DEX Gold Rush

The landscape of decentralized perpetual exchanges has matured into the backbone of on-chain trading. In the last year alone, they handled \$7.9 trillion in trades. The surge is due to the enhanced execution quality, allowing traders to access leverage up to 100x on platforms rivaling centralized exchanges. As a result, the DEX-to-CEX trading ratio jumped from 2.7% to 11.7% in a single year.

Catalysts include FTX's 2022 collapse eroding CEX trust, MiCA regulations displacing EU liquidity, and crypto-natives favoring self-custody wallets. As infrastructure advances to purpose-built chains, Perp DEXs enable true permissionless risk transfer, reshaping crypto finance.

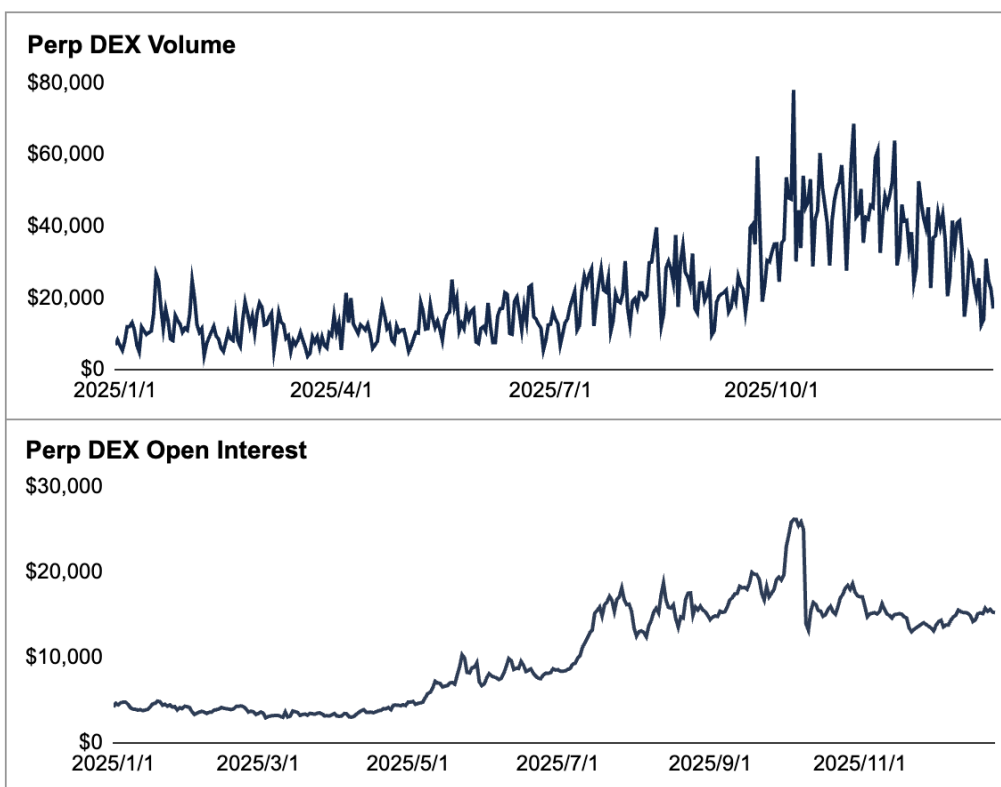
I. Perp DEXs as Trading Execution Venues

The 2024–2025 cycle is defined by a narrative pivot toward Execution Quality. PerpDEXs have matured from experimental protocols into sustainable, fee-generating businesses.

Phenomenon 1: The "Gold Rush" of PerpDEXs Trading Volume

The 2024-2025 cycle is undertaking a narrative shift toward execution quality. The PerpDEX sector has moved from the periphery to the center stage of crypto trading. Traders are utilizing leverage that was previously only available on centralized platforms to trade on decentralized perpetual exchanges. The velocity of money has increased, and the infrastructure has finally caught up to support it. Total trading volume on the top 10 decentralized perpetual protocols hit \$7.9 trillion in 2025 alone, more than tripling the previous 2024's \$1.5 trillion watermark. The true value of blockchain in finance is emerging to be not just in holding assets permissionlessly, but in exchanging risk permissionlessly.

DEX Perpetual Futures Metrics

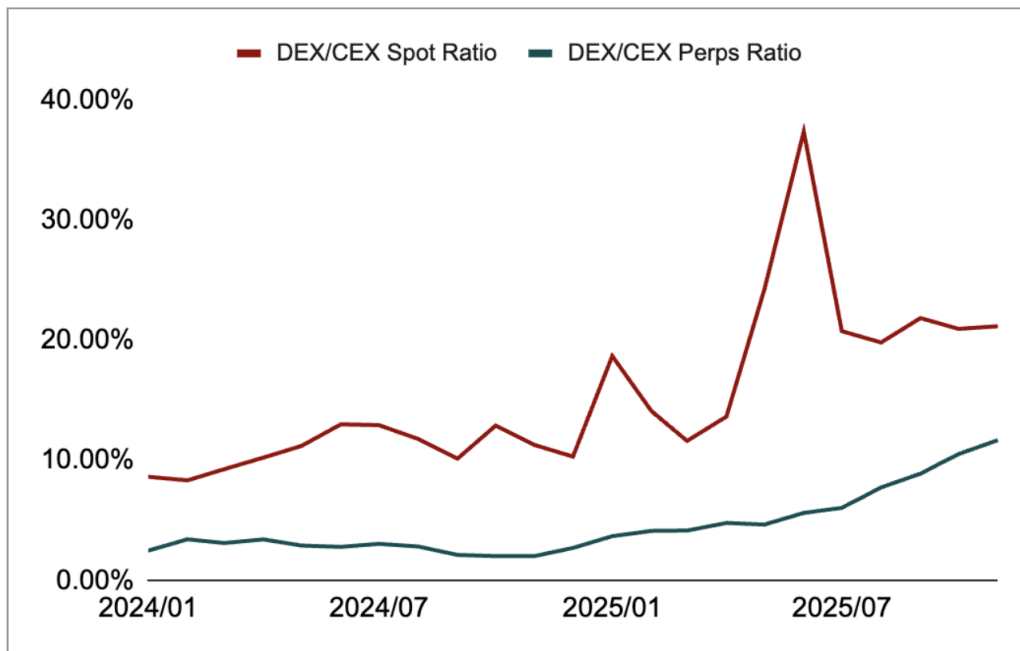


Source: Defillama; Animoca Brands Analysis

Phenomenon 2: On-Chain Spot Liquidity Creates Stickiness That Fuels Perp Trading

While Perps capture the headline leverage volume, the underlying shift is visible in Spot markets. The DEX-to-CEX ratio for spot trade volume, a key metric of on-chain adoption, broke out of its historical 10% range in 2024. By November 2025, this ratio reached 21.2%, with spikes as high as 37.4% during periods of high speculation. DEX gradually started to take a significant portion of the market.

DEX volume as % of CEX

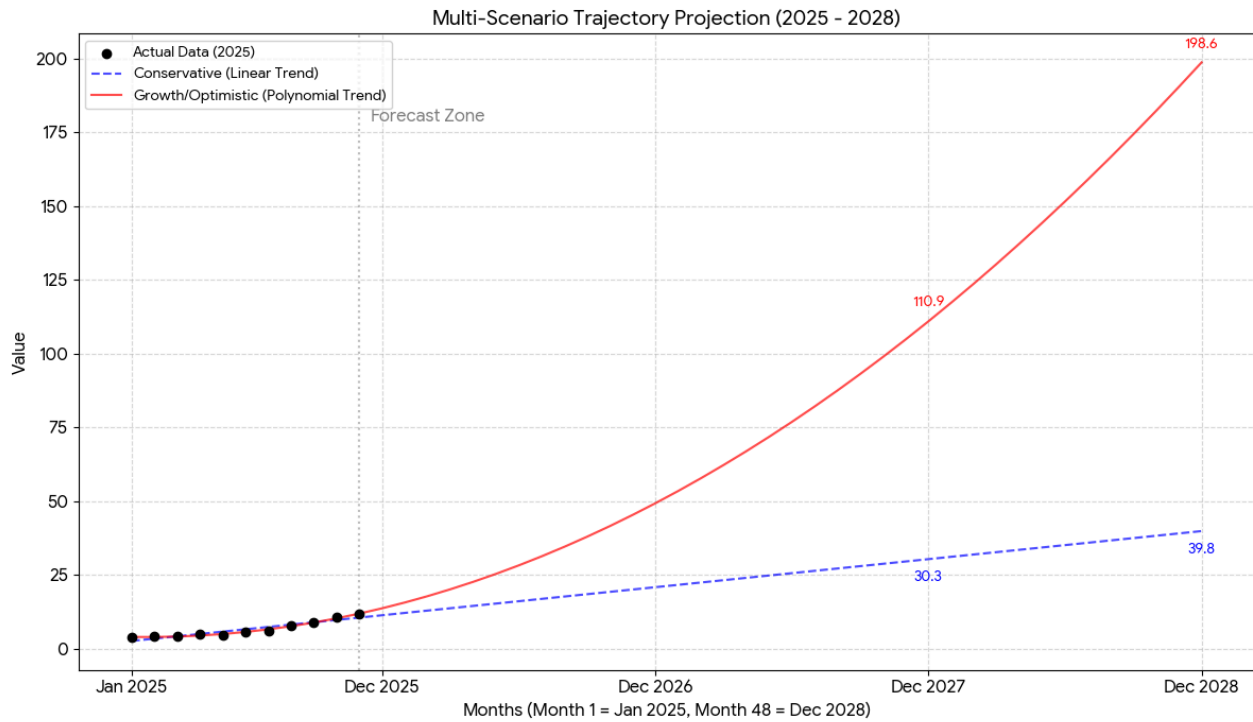


Source: DeFillama, Animoca Brands analysis

The resurgence is driven by the "long tail" of assets. Centralized exchanges, burdened by compliance overhead and listing fees, cannot list assets fast enough to satisfy market demand. DEXs, particularly on Solana, BSC, and Base, became the launchpad for thousands of new tokens daily. Users engaging in this "on-chain economy" have not much reason to move assets back to a CEX to trade perps; they seek execution where their assets already reside. The "stickiness" of this on-chain liquidity is evident: November 2025 marked the fifth consecutive month where the DEX-to-CEX ratio stayed above 20%; therefore, the shift suggests it is a longer-term trend rather than a temporary anomaly. The migration from centralized to decentralized venues is also driven by a permanent alteration in the "Custody vs. Convenience" trade-off and a deep-seated change in user psychology and behaviour.

DEX/CEX Perp Trading Ratio – Scenario Projections (Year-End)

Year-End Projection	Conservative (Linear)	Optimistic (Exponential)
2026	22%	49%
2027	30%	111%
2028	40%	199%



Source: Animoca Brands Research

Building on the momentum established in 2025, in the conservative scenario, the DEX/CEX perpetual trading volume ratio follows a linear trajectory. With such a growth rate, the DEX-to-CEX volume ratio for perpetual trading is expected to surpass 20% by year-end 2026 and reach 40% by 2028. In the exponential scenario, we expect the DEX/CEX perpetual futures volume ratio to reach **199%** by the end of 2028.

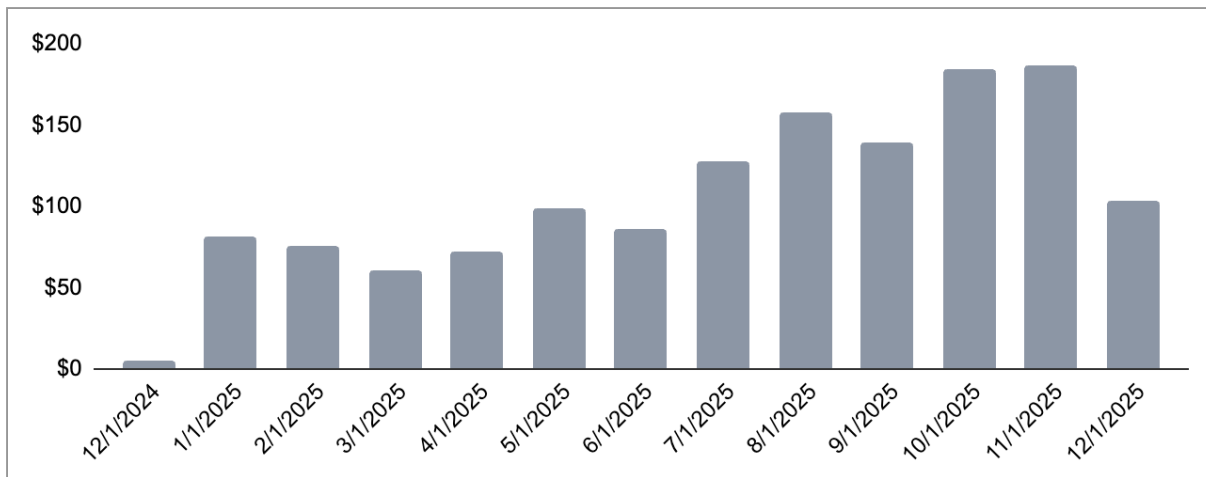
Phenomenon 3: Perp DEXs are gradually building a sustained revenue model

Perp DEXs are increasingly demonstrating the viability of sustained revenue models as they capture a larger share of global trading volume, with on-chain derivatives reaching a record cumulative volume of \$12.09 trillion by late 2025. According to data from over 80 protocols, monthly revenue has scaled from negligible levels in late 2024 to a peak of approximately \$190 million in November 2025, driven by a turning point in Q4 2024 that amplified throughout the following year.

The financial growth is driven by a multi-layered fee structure: trade execution fees, liquidation penalties, and leverage spreads. The transition from initial hype to long-term profitability is further bolstered by vault management fees and the emergence of sovereign App-Chains, which unlock secondary revenue through native gas fees and MEV capture, enabling them to evolve into self-sustaining financial ecosystems.

Perp DEX Revenue

in millions USD



Source: including 80+ protocols from Defillama

II. The Strategic Question: Why Onchain Trading Are Leaning Derivatives

The fundamental economics of perpetual contracts create asymmetric advantages for protocols prioritizing derivatives over spot trading:

A. Capital Efficiency, Leverage, and Superior Revenue Generation

Perpetual contracts greatly enhance capital efficiency compared to spot trading. While a spot DEX with \$1M in TVL supports \$1M in trading volume (a 1:1 ratio), a PerpDEX offering 20x leverage can support \$20M in notional volume, and at 100x leverage, the same \$1M in TVL enables \$100M in trading activity.

For traders, on a spot DEX, \$1 million in TVL supports exactly \$1 million in trading capacity. On a PerpDEX, that same \$1 million in collateral can support \$20-\$100 million in open interest due to leverage, up to 20x-100x.

For developers and protocol builders, this mode generates significantly higher trading volume and, consequently, fee revenue per dollar of TVL. In 2025, Perp DEXs generated 2x-5x the fees of comparable Spot DEXs relative to their liquidity base.

- \$1B in spot volume at 0.05% fees → \$500K revenue
- \$1B in perp volume (20x leverage on \$50M collateral) at 0.05% fees → \$500K revenue from just \$50M capital

Such a revenue engine allows protocols to offer generous incentives, like the airdrop or staking rewards, without diluting their treasury, creating a self-reinforcing flywheel of growth.

At the same time, Perp does not require a protocol to manage spot assets across chains.

Managing Perps is streamlined: everything settles in a single collateral asset, usually USDT/USDC, which mimics the Prime Broker (PB)¹ experience of institutional finance.

B. The Liquidity Bootstrap

Traditional spot DEXs face the "inventory problem", which means that to facilitate trading of an asset, the protocol requires actual holders of that asset to provide liquidity. There are bootstrapping challenges for new listings and fragmentation across token pairs. Perpetual contracts, on the other hand, remove the limitations of fragmented liquidity by enabling synthetic exposure.

In a spot DEX, each trading pair like BTC/USDC or ETH/USDC requires its own liquidity pool, meaning that listing 100 assets demands over 100 separate pools and splits available capital. Perp DEXs achieve superior capital efficiency by employing a Unified Vault Architecture. This design separates price exposure from the underlying asset ownership, enabling all synthetic markets—such as BTC, ETH, and SOL—to draw from a single, shared collateral pool, typically in a stablecoin like \$USDT. Consequently, a protocol can expand its asset offerings without compromising market depth.

III. The ever-evolving trading infrastructure improvement

Perp Dex, at the beginning stage, is targeting to generate CEX-like experience while maintaining a decentralized operating way. The features required are very explicit: to match CEX performance while maintaining the core decentralized benefits.

Dimension	Tier-1 CEX Performance	Professional DEX Target	Requirements for DEX Parity
Matching Latency	< 50 μ s	< 10 milliseconds	In-memory matching engines within a sovereign app-chain.
Order Throughput	1,000,000+ TPS	100,000 - 200,000+ TPS	Parallel execution (Horizontal scaling of the state machine).
Order Type Support	Market, Limit, OCO, Trailing Stop, TWAP, etc	Enable all CEX order	Conditional logic executed at the sequencer/consensus level.
Capital Efficiency	Cross-Asset / Portfolio Margin	Unified Account Margin	Real-time risk engine that calculates net delta across all positions.
Liquidity Provision	Market Making via API/FIX	Protocol-Owned / Vaults	Zero-gas order updates to allow high-frequency MM quoting.
Oracle Latency	Internal Price Feed (Instant)	Pull-based (Sub-block)	Low-latency Data Streams with 100ms updates.
Settlement Finality	Instant (Internal DB)	Sub-second (<1s)	Improved consensus mechanisms.
Withdrawal Latency	2 - 5 Minutes (Standard)	Instant to L2 / 7-day L1	ZK-Proofs for instant verifiable withdrawals to Layer 1.
API Round-Trip	30ms - 80ms (AWS)	150ms - 400ms (Public RPC)	Distributed dedicated RPC gateways to match AWS speeds.

Source: Animoca Brands Analysis

The Perp DEX sector has moved through three distinct generations of infrastructure, each solving the bottlenecks of the last. Namely, there are pool-based, hybrid orderbook, and

¹ Prime Broker: a centralized intermediary that provides institutional clients with a "master account" for consolidated clearing, custody, and collateral management.

CLOB custom Layer 1 phases of perp dex. Three phases represent the general progression, including improved matching mechanisms, execution quality, capital efficiency, liquidity provision, and others.

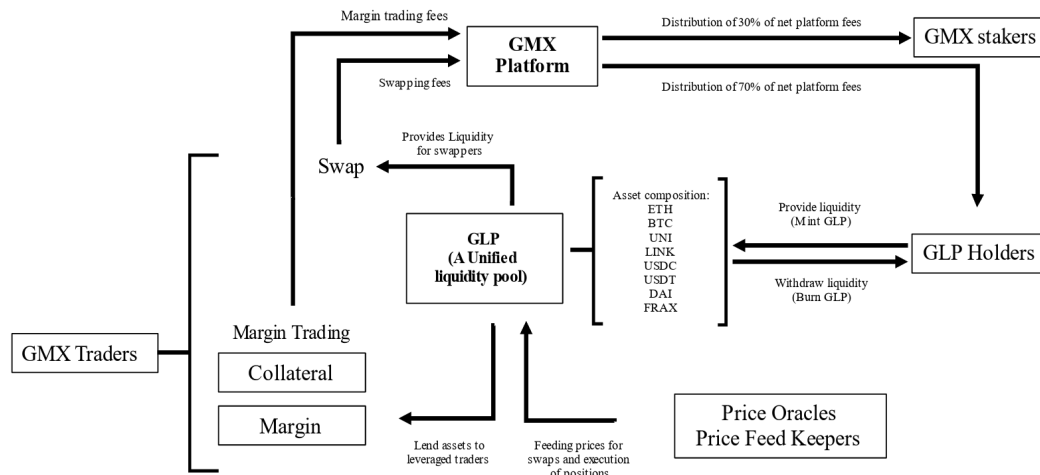
Dimension	Phase 1: Pool (GMX/Drift)	Phase 2: Hybrid (dYdX v4)	Phase 3: L1 (Hyperliquid)
Matching Latency	400ms-2s (oracle/block-tied)	~1s (off-chain match)	5-15ms (on-chain)
Order Throughput	1K-3K TPS (chain-limited)	1.5K-10K TPS (hybrid)	200K TPS (optimized)
Order Type Support	Basic (market/limit)	Advanced (OCO/TWAP)	Full CEX-like (conditionals)
Capital Efficiency	Low (locked pools)	High (unified margin)	Ultra-high (cross-margin)
Liquidity Provision	Passive (AMM/vAMM)	Active (vaults/HFT)	Native (HLP + CLOB)
Settlement Finality	1-15s (chain-dependent)	~1-2s (consensus)	~0.2s (HyperBFT)
Withdrawal Latency	5-30 min (network)	Instant L2 / 7-day L1	Instant (ZK-proofs)
API Round-Trip	300-500ms (public RPC)	150-400ms (gateways)	150-300ms (dedicated)

Source: Animoca Brands Analysis

Phase 1: The Liquidity Pool Era (GMX & Drift as examples)

The evolution of perpetual trading platforms began with Phase 1: The Liquidity Pool Era, around 2021 to 2023, a period focused on achieving functional on-chain derivatives by adapting spot AMM logic. This phase was defined by two primary architectural branches: **the Multi-Asset Basket (GMX)** and **the Dynamic vAMM (Drift)**. Both designs prioritized immediate liquidity and simplicity over high-performance execution.

In the first branch, protocols like GMX v1 introduced the GLP model, a multi-asset pool consisting of blue-chip assets and stablecoins. Under this "basket mode," the pool serves as a universal, passive counterparty to all traders, with its value determined by the total Assets Under Management (AUM) adjusted for trader PnL. The design relies heavily on external pull-based oracles to determine prices and attempt "zero-slippage" execution. However, because the system is block-tied to the underlying chain, it suffers from Matching Latency (500ms - 2s), which creates an arbitrage window where traders can exploit price differences between the pool and centralized exchanges. Furthermore, capital efficiency remains low because a large percentage of the liquidity sits unused in locked pools.



Source: From $x*y=k$ to Uniswap Hooks: A Comparative Review of Decentralized Exchanges (DEX)

The second branch, the Dynamic vAMM model popularized by Drift v1, moved away from real asset pools toward a mathematical simulation using the constant product formula ($x * y = k$). To maintain price alignment, Drift introduced re-pegging and "k-adjustment," utilizing a fee pool to incentivize rebalancers. While this allowed for more flexible liquidity, it revealed a fundamental flaw in Capital Efficiency: to reduce slippage for large trades, the virtual "k" had to be increased, which in turn required a significantly larger fee pool to correct any resulting price imbalances. Because liquidity provision in both models was fundamentally passive, professional market makers could not provide active, granular quotes, and Order Support remained restricted to basic market and limit orders. Ultimately, Phase 1 proved insufficient for the demands of high-frequency traders and professional market makers. With Order Throughput capped at 1K - 3K TPS due to the limitations of the host chain and Settlement Finality ranging from 1 - 15s, the infrastructure could not support the precise, low-impact execution required for complex perpetual futures. These fundamental flaws, like passive liquidity, oracle dependency, and network-dependent latency, created the technical necessity for the high-performance innovations found in Phase 2.

Phase 2: Orderbook Mode (dYdX as examples)

Moving towards late 2023, phase 2 represents a shift toward the Order Book matching mode, specifically utilizing a hybrid architecture that decouples high-speed matching from permanent settlement. There is a need for professional market makers and traders to constantly place bid and ask orders.

1) Hybrid mode: Off-Chain Matching + On-Chain Settlement

dYdX is best used to illustrate the hybrid implementation. dYdX v4 runs on its own Cosmos-based Layer-1 chain with a decentralized hybrid orderbook: the limit order book (LOB) lives off-chain in the memory of every validator, while only executed trades and state changes commit on-chain via CometBFT consensus.

The technical cornerstone of Phase 2 is a hybrid design that separates high-frequency matching from permanent settlement. In dYdX v4, the limit order book does not reside in the blockchain's permanent database; instead, it lives in the Random Access Memory (RAM) of every validator in the network. When a trader submits an order via API or a front-end, the signed transaction is gossiped across a peer-to-peer network. Every validator updates its local, in-memory order book, allowing for off-chain matching that is nearly instantaneous. Because these order placements, cancellations, and modifications occur in volatile memory rather than on the permanent ledger, they incur no gas costs. Such technical enablement directly addresses the API Round-Trip and matching latency dimensions, as non-executed actions never create the "friction" of a blockchain state change.

For the on-chain settlement, the dYdX utilizes a sovereign Layer-1 consensus CometBFT. Only when a match is successfully identified in the validators' memory is the resulting fill included in a proposed block. Once two-thirds of the validators approve the block, the trade outcome—including position adjustments, collateral transfers, and margin updates—is permanently recorded. The approach scales order throughput to 1.5K–10K TPS, as the blockchain is only tasked with recording final trade results rather than every individual bid and ask. Furthermore, by operating on a dedicated sovereign chain, dYdX can implement unified margin systems, which significantly increase capital efficiency by allowing users to offset risks across their entire portfolio.

From a liquidity perspective, Phase 2 fundamentally changes the role of the market maker from a passive participant to an active provider. In the previous pool-based era, market makers were forced to take the other side of toxic trades; in Phase 2, they can use algorithms to provide liquidity at specific price points with granular control. This "level playing field" is secured by the decentralized nature of the 60+ independent validators, which prevents any single sequencer from manipulating the matching sequence or censoring specific traders. The shift to this hybrid model also expands order type support to include advanced (/TWAP) orders, as the off-chain logic can handle complex conditional triggers that would be too computationally expensive for the general-purpose chains used in Phase 1.

Phase 3: Purpose-Built Chain with Prop AMMs and CLOBs

By 2025, the perpetual DEX landscape entered Phase 3: The Native Layer-1 Era, a period defined by the complete vertical integration of the trading stack. While Phase 2 successfully moved matching off-chain to achieve high speed, Phase 3 protocols like Hyperliquid take the "Purpose-Built L1" philosophy a step further by integrating the matching engine directly into its custom blockchain's State Machine. Hyperliquid managed the entire stack, from consensus mechanism to the matching engine, fully onchain.

1) Fully Onchain: CLOB

The primary technical enabler of this phase is the HyperBFT consensus mechanism, a custom-built, Byzantine Fault Tolerant protocol optimized specifically for high-frequency financial operations. Unlike general-purpose consensus, HyperBFT utilizes a pipelined

architecture to achieve sub-second Settlement Finality (median of ~0.2s) and an Order Throughput capable of handling 200k orders per second. Because the matching logic is baked into the protocol's deterministic state, participants benefit from a "level playing field" governed by strict price-time priority. This ensures that if an order is first in the consensus-ordered sequence, it is mathematically guaranteed to be filled—a feature crucial for institutional desks to commit large-scale liquidity without fear of front-running or sequencer reordering.

Hyperliquid also introduces a fundamental shift in the economics of **market making**. To lower the barrier for professional desks, the protocol removes gas fees for all trading-related actions, such as placing, modifying, or canceling orders. Instead, the system relies on a Taker Fee model where a portion of the revenue is redistributed as maker rebates, allowing high-frequency traders (HFTs) to maintain deep quotes and tight spreads without transaction overhead. Furthermore, the integration of HLP (Hyperliquidity Provider)—a protocol-level "Prop AMM"—serves as a native liquidity backstop. HLP runs automated market-making and liquidation strategies directly on the L1, providing a predictable baseline of liquidity and preventing the "bad debt" or cascading liquidations often seen in slower, pool-based models.

From a dimensional perspective, Phase 3 effectively reaches parity with centralized exchanges. By utilizing Integrated Oracles that feed data directly into the consensus layer, the system slashes Oracle Latency to 100-300ms, effectively closing the arbitrage windows that plagued early DEXs. Additionally, the adoption of ZK-proof-based bridge architectures (as seen in the withdrawal latency of Phase 3) enables "Instant" movement of capital, achieving the Ultra-high Capital Efficiency required for a truly "Universal" trading experience. This unified stack—combining high-speed consensus, state-integrated matching, and native liquidity vaults—represents the technical pinnacle of on-chain derivatives.

IV. The Catalysts: Why is Onchain Trading Exploding Now?

The explosion of on-chain trading in 2025 is not coincidental; it is the result of a movement where regulatory pressure pushes users out of CEXs while technological breakthroughs pull them into DEXs, which leads to a fundamental restructuring of the crypto market.

Catalyst 1: The Trust Deficit: The Ghost of FTX and Regulatory Capture

The trauma from the collapse of FTX remains a driving force in 2025, but the motivation has evolved. Initially, the flight to self-custody was driven by fear of insolvency. By 2026, it is driven by a rejection of "Regulatory Capture."

The landmark settlements involve: 2023 Nov, [Binance](#) was fined \$4.3B, in combined criminal penalties and forfeitures to the U.S. Department of Justice, FinCEN, and OFAC, one of the largest corporate criminal resolutions in U.S [OKX](#) agreed to pay \$504 million in penalties after pleading guilty to unlicensed money transmission and AML violations. Other exchanges like Coinbase and Kraken also accumulated global fines. These platforms were

forced to implement KYC/AML measures, delist privacy assets, and restrict leverage for users in many jurisdictions.

The "Trust Deficit" is now two-fold:

1. **Solvency Trust:** Users still remember the loss of funds on custodial platforms and prefer the transparency of on-chain vaults where proof-of-reserves is a mathematical constant, not an audit report.
2. **Neutrality Trust:** Users increasingly view CEXs as arms of state regulation. The "Regulatory On-Shoring" of Binance effectively ended its era as a haven for permissionless capital. The migration to PerpDEXs is a strategy for **neutrality**. The decentralized nature of decentralized exchanges like Hyperliquid offers a certain level of censorship resistance, albeit not entirely enough, that regulated entities can no longer legally provide.

Catalyst 2: The "Compliance Squeeze" & The Permissionless Pull

The 2024–2025 implementation of the Markets in Crypto-Assets (MiCA) regulation in the European Union served as the primary catalyst for a mass "liquidity eviction." By March 31, 2025, Binance and other Tier-1 CEXs were forced to delist non-compliant stablecoins—most notably USDT—for users within the European Economic Area (EEA). This followed the earlier March 27, 2025, removal of USDT-margined margin trading pairs, effectively stripping European traders of the liquidity and leverage options they had relied on for years. With CEXs mandated to enforce stricter surveillance, delist privacy tokens, and restrict access to high-leverage derivative products to maintain their licenses, a "Compliance Squeeze" occurred. Trillions in notional volume began seeking "Neutrality"—venues that operate via code rather than corporate compliance departments.

As CEXs narrow their offerings to a compliant "short tail" of assets, on-chain protocols have captured the "long tail" through permissionless listing primitives. The introduction of HIP-3 (Builder-Deployed Perpetuals) allowed for the independent deployment of markets like Pre-IPO token derivatives and exotic commodities. This was further expanded by HIP-4 (Outcome Trading) in early 2026, which integrated fully collateralized prediction markets and options-style contracts into a unified margin system with perpetuals. By early 2026, on-chain perpetual volume reached \$1 trillion monthly, with the DEX-to-CEX ratio of perp trading climbing from 2.1% in 2023 to over 11.7% by late 2025, proving that the "Permissionless Pull" is now a dominant force in global liquidity.

Catalyst 3: The "On-Chain Native" Generation

Demographic shifts in trader behavior are accelerating this trend. A new cohort of traders—Gen Z and "Crypto Natives"—views on-chain interactions as the default state of finance. There is a survey suggests that [48%](#) of Gen Z investors use online crypto platforms, with a strong preference for non-traditional assets and direct control. They are comfortable with private key management or use abstracted wallets and view the friction of

CEX deposits/withdrawals, while waiting for bank wires, dealing with frozen accounts is archaic.

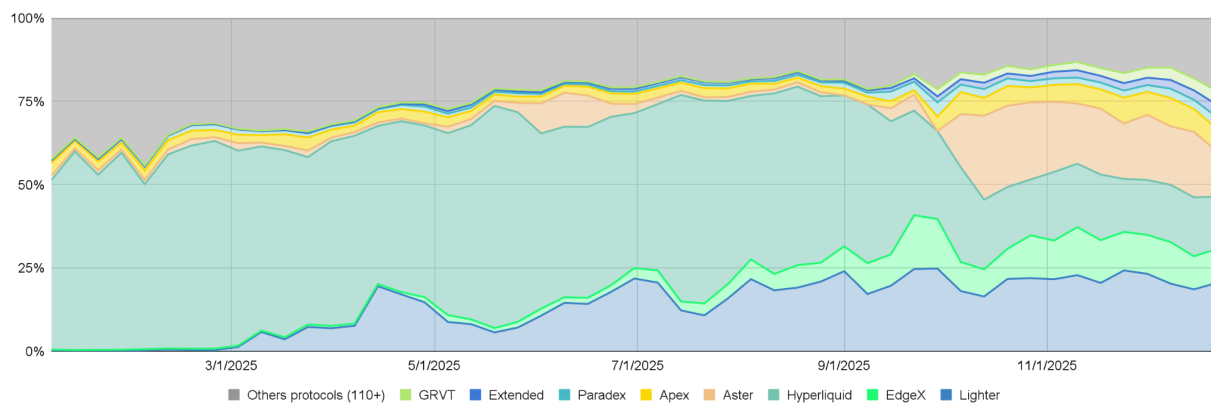
This generation is served by the rise of "Super Wallets" like **Backpack**, **Phantom**, and **Rabby**. These are no longer passive viewing tools for seed phrases; they are active trading terminals.

- **Backpack**: Integrated an exchange and wallet into a single "xNFT" experience, blurring the line between app and infrastructure.
- **Phantom**: Integrated Hyperliquid directly into the wallet interface, allowing users to trade perps with a few taps. The wallet is effectively turning into the exchange frontend.
- **Rabby**: Offers built-in transaction simulation and safety checks, lowering the anxiety barrier for on-chain interaction.

For the "On-Chain Native," the wallet is the identity, the bank account, and the brokerage all in one. The PerpDEX is simply the backend engine they plug into.

V. Outperformance and market dynamics are driven by new players

By late 2025, Hyperliquid maintained a commanding lead. However, competition intensified as challengers like **Aster**, **Lighter**, **EdgeX**, and **Grvt** entered the fray, utilizing aggressive incentive programs to capture market share.



The success of Hyperliquid sparked a new wave of next-generation Perp DEXs. EdgeX, Lighter, and Aster are carving out their distinct niches through specialized technical architectures and aggressive go-to-market strategies.

Lighter: The ZK-Rollup and Verifiable Matching Engine

Lighter is an Ethereum zk-rollup utilizing an off-chain CLOB and on-chain ZK-verification, delivering sub-10ms latency and institutional performance while ensuring total non-custodial security. Their GTM is built on a "distribution-first" strategy. By securing a strategic investment and advisory relationship with [Robinhood](#), Lighter positions itself as

the default liquidity backend for millions of retail users transitioning from traditional equities to decentralized perps. The "killer feature" for this segment is a **Zero-Fee Trading model**. It then monetized via an on-chain Payment for Order Flow (PFOF) engine, where institutional market makers and HFT firms pay for prioritized, low-latency access to trade against this predictable retail volume. Their strategic campaigns in early 2026 include a **revenue-sharing** partnership with [Circle](#), utilizing its USDC treasury to deepen the LLP's backstop.

User acquisition is accelerated through a data-centric Points Program that emphasizes trading quality over raw "wash" volume. Unlike its competitors, Lighter's algorithm rewards metrics such as Sharpe ratios and consistent liquidity provision, culminating in a high-impact 25% \$LIT airdrop on December 30, 2025.

EdgeX: Build on the High-Throughput Solana Model

EdgeX is built on an Ethereum zk-rollup (powered by StarkEx), utilizing an off-chain CLOB to deliver sub-10ms latency and 200k TPS. Incubated by Amber Group and backed by KuCoin and Ryze Labs, EdgeX merges CEX-grade execution with total non-custodial security. Its GTM strategy follows an "Institutional-to-Retail" flow, leveraging Amber Group's deep liquidity and market-making expertise to provide the tightest spreads in the DEX sector. By positioning itself as a high-performance alternative to centralized venues, EdgeX attracts professional high-frequency traders through a Tiered Fee Model and robust API infrastructure, while onboarding retail users via an "app-chain" experience that removes the complexities of traditional gas fees.

EdgeX accelerates user acquisition through its "[Open Season](#)" Points Program, a multi-stage campaign designed to reward genuine engagement over Sybil activity. Unlike flat-volume rewards, the protocol emphasizes vault deposits and maker activity, incentivizing users to contribute to the protocol's long-term liquidity depth. Those efforts culminated in the Pre-TGE Season launched in early 2026, transitioning the platform from a standalone DEX toward the **EDGE Chain**, a dedicated Layer 3 ecosystem. EdgeX also secured **Circle Ventures investment** and will integrate native USDC and the Cross-Chain Transfer Protocol (CCTP) directly into the margin system to ensure a capital-efficient venue for institutional-grade stablecoin settlement.

Aster: The Hybrid Multi-Chain Aggregator

Aster is a multi-chain DEX backed by YZi Labs, utilizing Aster Chain—a high-performance ZK-powered Layer 1. It features a dual-mode CLOB for crypto and stock perps, delivering sub-second finality and institutional performance while ensuring total non-custodial security.

Incubated by **YZi Labs** and born from the strategic merger of Astherus and APX Finance, the platform features a dual-mode CLOB that supports both crypto and **24/7 stock perpetuals**. Its GTM strategy employs a "Trojan Horse" approach, initially bootstrapping liquidity within the massive BNB Chain ecosystem before migrating users to its own

sovereign L1. The "killer feature" is its capital efficiency engine, which allows traders to use yield-bearing assets (like asBNB and USDF) as collateral to enable users to earn staking rewards while maintaining active leveraged positions.

Aster accelerates user acquisition through a multi-stage "**Rh/Au Points**" incentive program, which transitions from transaction-based airdrops to long-term staking rewards. A defining milestone was the Stage 3 "Dawn" airdrop in late 2025, followed by the "Convergence" phase in February 2026, which distributed 64 million \$ASTER tokens to reward trading quality and vault participation. Unlike competitors with flat reward structures, the protocol prioritizes MEV-resistant "hidden orders" and delta-neutral strategies, which create a professional-grade trading environment. To solidify its 2026 expansion, Aster implemented a **token buyback-and-burn mechanism** fueled by 80% of platform revenue.

Grvt: The Hybrid Institutional Exchange

Most derivatives venues compete primarily on execution speed, liquidity depth, and fee structure. Across existing platforms, collateral posted to back positions typically earns no yield, creating a measurable drag on overall portfolio efficiency. Grvt's Unified Margin system is specifically designed to address this by allowing collateral to generate returns while still supporting open positions. Grvt operates as the first Appchain on ZKsync Stack, combining an off-chain CLOB with on-chain ZK-rollup settlement to achieve sub-millisecond latency and 600,000 TPS, while maintaining full non-custodial security. This resolves the trade-off that has historically forced institutions to choose between execution quality and asset control. ZKsync's Validium layer provides Privacy-by-Default, shielding order flow from MEV risk and information leakage.

The "killer feature" is its Unified Margin system. A single collateral balance simultaneously backs active positions and generates yield. Yield currently flows from Grvt's exchange revenue. According to Grvt's latest announcement, it introduces composable external integrations beginning with Aave, enabling margin to participate in lending markets passively while remaining available for trading. In the future, eligible collateral will span stablecoins, large-cap crypto, and tokenized RWAs.

Grvt is now in phase one of perpetual offering for broader onchain brokerage. The platform is planned to extend into spot, FX, commodities, and equities, each running on the same Unified Margin logic. Distribution scales through a Brokerage-as-a-Service model through Grvt Builder Codes. Grvt Strategies further deepens engagement by opening institutional-grade products to a wider participant base. The \$GRVT TGE, planned for 2026 with 22% of supply allocated to the community, will be an early signal of organic demand.

Gate Perp DEX: The Vertically Integrated Ecosystem Play

Gate Perp DEX is a specialized decentralized derivatives platform built on Gate Layer, a high-performance Layer 2 network powered by the OP Stack. By leveraging Gate's centralized liquidity and proprietary infrastructure, it delivers a "connect-to-trade" experience that mirrors the performance of a CEX while maintaining on-chain transparency. Their GTM strategy follows a CeFi-to-DeFi Pipeline. The "killer feature" is the unified web3

ecosystem integration, allowing users to move among the Gate DEX for smooth on-chain swaps, Gate Fun launchpad for memecoin launch, and Gate Perp DEX using **GT (GateToken)** as the exclusive gas and utility asset.

User acquisition is fueled by aggressive incentive programs, such as the 20,000 USDT "Year-End Trading Journey" and multi-tier rebate systems that reward both volume and referral quality. Another operational moat is its multi-chain interoperability via LayerZero, which connects the DEXs, including Solana, Base, and Ethereum, allowing for native, frictionless deposits. To ensure long-term sustainability, Gate implemented a Dual-Burn Tokenomics model: combining quarterly CEX buybacks with automatic on-chain burns of GT gas fees, directly linking the Perp DEX's on-chain activity to the deflationary value accrual of the ecosystem's core asset.

VI. Emerging Trends Defining the Next Cycle

Looking ahead to 2026 and beyond, several key trends are expected to define the market structure:

1. **The "Everything Exchange"(RWA):** Perp DEXs transform into universal financial hubs by onboarding RWAs like gold, forex, and global equities. By dissolving the friction between on-chain tokens and legacy markets, the DEX becomes a place like a borderless clearinghouse where a single account manages a global, 24/7 portfolio.
2. **Event Markets (Prediction):** Proposals like Hyperliquid HIP-4 blur the lines between prediction market trading and Perp Dex's event-based betting. By supporting binary outcome structures without requiring continuous oracles, Perp DEXs are evolving into platforms where users can trade perpetuals on sports events, election results, and exotic indices, catering to the rising wave of prediction markets like Polymarket.
3. **Unsecured Credit and Prime Brokerage:** The integration of "Credit Layers" is the next frontier for capital efficiency. By partnering with decentralized identity solutions, protocols are beginning to offer under-collateralized loans to reputable traders. This recreates the traditional **Prime Brokerage model** on-chain, allowing sophisticated participants to trade with improved capital efficiency while maintaining a trustless settlement layer.

Liquidity Consolidation and Super-Aggregators: The era of fragmented "liquidity islands" is ending. We anticipate a period of mass consolidation where liquidity is either merged or funneled through **Super-Aggregators**. In this environment, smaller or older DEXs will likely pivot to becoming front-ends or "satellite venues" that route orders into the massive, high-speed liquidity engines of the "New Titans" like Hyperliquid or Lighter.

Perp DEX Overview

Tech Stack				
Protocol	Core Architecture	Consensus Mechanism	Primary Oracle	Killer Feature
Hyperliquid	Custom L1 (HyperCore)	HyperBFT	Native Validators / RedStone	HIP-3 Permissionless Perps
Aster	Cross-chain Hybrid (L1/L2)	ZK-Verified / PoS	Pyth / Hybrid	1001x Leverage; Yield Collateral
EdgeX	App-Specific L2 (StarkEx)	ZK-Rollups (STARKs)	Stork	Mobile-First; 200k TPS
Lighter	Ethereum ZK-Rollup (zkSync)	ZK-Rollups (SNARKs)	Stork / Chainlink	Verifiable Zero-Fee Retail
GRVT	ZKsync Validium / Appchain	ZK-Validium	ZKsync Native	Compliance; ZK-Privacy
Gate Perp DEX	Gate Layer (OP Stack L2)	Gate Layer PoS	CEX-Synced (Proprietary)	CEX Integration; GT Gas

Execution				
Protocol	Execution Model	Order Throughput	Settlement Finality	Native Gas Token
Hyperliquid	Full On-chain CLOB	200,000+ TPS	Native L1	HYPE
Aster	CLOB / AMM Dual Mode	150,000+TPS	Multi-chain / ZK-verified	ASTER
EdgeX	CLOB on StarkEx	150,000+TPS	Ethereum L1 (ZK-proofs)	ETH
Lighter	Verifiable CLOB	150,000+TPS	Ethereum L1 (ZK-proofs)	LIT
GRVT	CLOB and RFQ	60,000 TPS	Ethereum / L2 via ZK	zkSync / ARB
Gate Perp DEX	Standard + Iceberg	50,000+TPS	Gate Layer (On-chain)	GT

Performance				
Protocol	Token FDV (End Feb 2026)	Token Price (End Feb 2026)	TVL (End Feb 2026)	2025 Gross Profit
Hyperliquid L1	\$27.138b	\$29	\$4.23B	\$873.7M
Aster	\$5.451b	\$0.69	\$1.06B	\$260.5M
Lighter	\$1.419b	\$1.31	\$874.29M	\$74.6M
EdgeX	/	/	\$430M	NA
GRVT	/	/	\$93.7M	NA
Gate Perp DEX	/	/	NA	NA

Liquidity				
Protocol	Liquidity Provision	Collateral Types	Yield on Margin	Matching Latency
Hyperliquid	Native HLP / User Vaults	USDC, USDH, USDe	No (Fees to stakers)	Sub-10ms
Aster	Cross-chain ALP / Yield-bearing	USDT, ETH, BNB, SOL, USDF	Yes (USDF/asBNB)	Sub-10ms
EdgeX	Institutional MMs	USDC, USDT	Yes (eStrategy Vaults)	Sub-10ms
Lighter	LLP Vault (Zero Fees)	USDC	No	5-10ms
GRVT	Managed Trading Strategies	USDT, ETH	10%	p50 ~3ms
Gate Perp DEX	CEX-seeded liquidity	USDT, GT	No	NA

Trading Pairs				
Protocol	Perp Pairs	Spot Pairs	Max Leverage	Non-Crypto Assets
Hyperliquid	300+	50+	50x	Stocks, Gold, Commodities
Aster	300+	30+	1001x	Stocks, Gold, FX
EdgeX	100-150	20+	100x	Stocks, Indices
Lighter	150+	15+	50x	Stocks, Indices
GRVT	82	0	50x	PAXG
Gate Perp DEX	500+	100+	200x	Stocks, Metals, Indices, Forex, Commodities

Fee Level				
Protocol	Base Maker Fee	Base Taker Fee	Fee Discount / Utility	
Hyperliquid	0.015%	0.05%	Staking HYPE: Up to 40% discount	
Aster	0.01%	0.04%	Pay with ASTER: 5% discount	
EdgeX	0.01%	0.04%	VIP Volume: Down to 0.008% maker	
Lighter	0% (Retail)	0% (Retail)	Premium/HFT accounts pay fees	
GRVT	-0.0001%	0.045%	Tier-based: Based on assets or vol	
Gate Perp DEX	0.02%	0.05%	GT Token: Tiered discounts	

Appendix

Perp DEX Cheat Sheet

Category	Metric	Definition
Trading Execution	Latency	Time from order submission to execution
	TPS (Transactions Per Second)	Maximum throughput capacity
	Uptime %	Protocol availability and reliability
	Price Step	The minimum price increment allowed for a quote (tick size).
	Amount Step	The minimum increment for order size (lot size).
	Leverage	The ratio of the position size to the required collateral (e.g., 50x).
Volume	24h Trading Volume	Total notional value of all trades executed in 24 hours (includes leverage)
	Cumulative Volume	All-time total trading volume since protocol launch
	Daily/Weekly/Monthly Volume	Trading volume aggregated by time period
	Volume/OI Ratio	24h Volume divided by Open Interest
Open Interest	Total Open Interest (OI)	Sum of all outstanding perpetual contract positions (notional value)
	Long/Short OI Ratio	Ratio of long positions to short positions
	OI by Asset	Open interest breakdown per trading pair (BTC, ETH, etc.)
Liquidity	Total Value Locked (TVL)	Total value of assets deposited in protocol smart contracts
	Order Book Depth	Available liquidity at various price levels ($\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$)
	Bid-Ask Spread	Difference between best bid and ask prices
	Slippage (1bp/5bp/10bp)	Price impact at various trade sizes
Fees	Maker Fee	Fee paid by limit orders that add liquidity
	Taker Fee	Fee paid by market orders that remove liquidity
	24h Fees Generated	Total trading fees collected in 24 hours
	Annualized Revenue	24h fees \times 365 (or trailing average)
Funding	Funding Rate	Periodic payment between longs/shorts to anchor perp to spot price
	Funding Rate History	Historical funding rates over time
	Funding Interval	How often funding is paid (1h, 8h)
Liquidations	24h Liquidation Volume	Total value of positions liquidated in 24 hours
	Liquidation Price Impact	Price movement caused by liquidations
	Insurance Fund Size	Reserve pool to cover liquidation shortfalls

Risk Management	IMR (Initial Margin Rate)	The minimum percentage of collateral required to open a new position.
	MMR (Maintenance Margin Rate)	The minimum collateral percentage required to keep a position open.
	CMR (Closeout Margin Rate)	The collateral level at which a position is considered fully liquidated or taken over.
Users	Unique Traders (24h/7d/30d)	Number of distinct wallet addresses trading
	Daily Active Users (DAU)	Unique wallets interacting with the protocol daily
	New vs Returning Users	Breakdown of first-time vs repeat traders
Market Share	DEX Volume Market Share	Protocol volume as % of total perp DEX volume
	DEX/CEX Ratio	DEX perp volume vs CEX perp volume
	OI Market Share	Protocol OI as % of total perp DEX OI

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